

ASSUMPTION UNIVERSITY

Educating Intelligences and Active Minds to Change the World

UNDERGRADUATE BULLETIN

2018 - 2019

www.au.edu abac@au.edu

E-mail : abac@au.edu

Admissions Center
Assumption University

Humans of ABAC

ABAC Admissions

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Assumption University

"Educating Intelligences and Active Minds to Change the World"

Undergraduate Bulletin 2018 - 2019



TABLE OF CONTENTS

University Calendar 5

General Information 9

Facilities and Services 11

Admissions and Financial Information 15

Academic Information 20

Student Affairs 25

Office of International Affairs 32

Bachelor's Degree Programs

Matin de Tour School of Management and Economics 34

Theodore Maria School of Arts 104

School of Music 130

Albert Laurence School of Communication Arts 146

Montfort del Rosario School of Architecture and Design 176

Vincent Mary School of Engineering 194

Vincent Mary School of Science and Technology 218

Faculty of Biotechnology 228

Faculty of Law 242

Bernadette de Lourdes School of Nurse Science 248

Course Description 254

Admission Schedule 2018 - 2019 433

(The information contained in this publication is accurate at the time of its publication **July 2018**)

Undergraduate Calendar
ACADEMIC YEAR 2018

Semester 1/2018 (August 6 - December 31, 2018)

Month	Date	Activities
AUGUST 2018	1	Academic Year 2018 Semester 1/2018 begins
	6	Classes begin
	12	HM Queen's Birthday (Holiday - no classes)
	13	Substitution for HM Queen's Birthday (Holiday - no classes)
	15	Assumption Day to honour "The Seat of Wisdom"
	20	Registration Deadline: last day for late registration, withdrawal without record, and 50% refund
	22	Retrieve and download registered student namelists via internet for class attendance checklists
SEPTEMBER 2018	2	Submission of Mid-term Examination Papers
	6	Waikru Ceremony
	26	Last day of classes before Mid-term Examination
	27	Mid-term Exam (till Friday October 5, 2018)
OCTOBER 2018	8	Classes resume
	13	King Bhumibol Memorial Day (Holiday - no classes)
	19	Mid-term grades due
	23	Chulalongkorn Memorial Day (Holiday - no classes)
NOVEMBER 2018	5	Submission of Final Examination Papers
	15	Registration Deadline: Last day to withdraw with 'W'
	22	Loy Kratong Day
	27	Retrieve and download registered student namelists via internet for eGrading
	30	Last day of classes before Final Examination
DECEMBER 2018	3	Final Examination (till December 19, 2018)
	5	Birthday Anniversary of King Bhumibol (Holiday - no classes)
	10	Thai Constitutions Day (Holiday)
	23	Semester ends
	24	Christmas Eve
	25	Christmas Day (Holiday)
	31	New Year's Eve (Holiday)
	-	Semester Grades Released (January 18, 2019)



Semester 2/2018 (January 7 - May 31, 2019)

Month	Date	Activities
JANUARY 2019	1	New Year's Day (Holiday)
	7	Classes begin
	18	Registration Deadline: last day for late registration, withdrawal without record, and 50% refund
	23	Retrieve and download registered student namelists via internet for class attendance checklists
	26	Commencement Exercises of Class XLVI
FEBRUARY 2019	4	Submission of Mid-term Examination Papers
	27	Last day of classes before Midterm Examination
	28	Mid-term Examination (till March 8, 2019)
MARCH 2019	9	Classes resume
	21	Makha Bucha Day (Holiday - no classes)
	22	Mid-term grades due
APRIL 2019	6	Chakri Memorial Day (Holiday - no classes)
	13	Songkran-Festival (till April 16, 2019) (Holiday - no classes)
	14	Palm Sunday
	19	Good Friday
	17	Submission of Final Examination Papers
	21	Easter
	26	Registration Deadline: Last day to withdraw with 'W'
	28	St. Louis Marie De Monfort Feast Day
	29	Retrieve and download registered student namelists via internet for eGrading
MAY 2019	10	Last day of classes before Final Examination
	13	Final Examination (till May 27, 2019)
	18	Wisakha Bhucha Day (Holiday)
	20	Substitution for Wisakha Bhucha Day (Holiday)
	30	Ascension of Jesus
	31	Semester ends
	-	Semester Grades Released (June 21, 2019)

Summer 2018 Session (June 3 - July 31, 2019)

Month	Date	Activities
JUNE 2019	3	Classes begin
	6	Registration Deadline: last day for late registration, withdrawal without record, and 50% refund
	9	Pentecost
	10	Retrieve and download registered student namelists via internet for class attendance checklists Submission of Mid-term Examination Papers
	19	Last day of classes before Mid-term Examination
	20	Mid-term Examination (till July 21, 2019)
	22	Classes resume
	28	Mid-term grades due
JULY 2019	1	Submission of Final Examination Papers
	4	Registration Deadline: Last day to withdraw with 'W'
	8	Retrieve and download registered student namelists via internet for eGrading
	10	Last day of classes before Final Examination
	11	Final Examination (till July 15, 2019)
	16	Asalha Bhucha Day (Holiday)
	17	Buddhist Lent Day (Holiday)
	28	HM King Rama X's Birthday (Holiday)
	29	Substitution for HM King Rama X's Birthday (Holiday)
	31	Summer 2018 Session Academic Year 2018 ends
	-	Semester Grades Released (August 16, 2019)




ASSUMPTION UNIVERSITY

GENERAL INFORMATION

HISTORY & DEVELOPMENT

Assumption University was initially originated from Assumption Commercial College in 1969 as an autonomous higher education institution under the name of Assumption School of Business. In 1972, with the approval of the Ministry of Education, it was officially established as Assumption Business Administration College or ABAC. In May 1975, it was accredited by the Ministry of Education. In 1990, it was granted new status as "Assumption University" by the Ministry of University Affairs.

The University is a non-profit institution administered by the Brothers of St. Gabriel, a worldwide Catholic religious order, founded in France in 1705 by St. Louis Marie De Montfort, devoted to education and philanthropic activities. The congregation has been operating many educational institutions in Thailand since 1901.

The University is an international community of scholars, enlivened by Christian inspiration, engaged in the pursuit of truth and knowledge, serving the human society, especially through the creative use of interdisciplinary approaches and cybertechnology.

PHILOSOPHY

In loyalty to its Christian mission, Assumption University stands for

- The inculcation of respect for the three institutions of the Nation: Religion, Country, Monarchy; and a democratic way of life.
- The belief that a man justifies himself and his existence by the nobility of his work: LABOR OMNIA VINCIT
- The commitment to be a light that leads men towards the true source of all knowledge and life: LUX VERITAS

MOTTO

LABOR OMNIA VINCIT

OBJECTIVES AND POLICIES

Assumption University exists for the main purpose of serving the nation by providing scientific and humanistic knowledge, particularly in the business education and management science through research and interdisciplinary approaches.

To this end it aims at forming intellectually competent graduates who:

- Are morally sound, committed to acting justly, and open to further growth.
- Appreciate freedom of expression, imbibe right attitudes and ideologies through a carefully integrated curriculum of Ethics, Science, Languages, and Business Management.
- Achieve academic excellence through hard work, critical thinking, and informed decision-making.



ACCREDITATION

The University is fully accredited by OHEC (Office of Higher Education Commission) and ONESQA (Office for National Education Standards and Quality Assessment). Its graduates enjoy the same privileges as accorded by state university graduates. Its academic standards are accepted by the Civil Service Commission of Thailand.

Assumption University is recognized in the USA and other countries and transfer of credits from the University is accepted abroad. Graduates from the University can pursue advanced degrees anywhere in the world. Assumption University is listed in the Handbook of Universities and other Institutions of the INTERNATIONAL ASSOCIATION OF UNIVERSITIES in Paris, France.

The University is recognized by:

- The Association of Christian Universities and Colleges in Asia (ACUCA)
- The Association of Southeast Asian Institution of Higher Learning (ASAIHL)
- The International Federation of Catholic Universities (IFCU)

MEDIUM OF INSTRUCTION

English is the officially approved medium of instruction at Assumption University. Five courses are in the Thai language but only for Thai speaking students. Students whose native tongue is not Thai follow the same courses in English.

NON-DISCRIMINATION

Assumption University does not discriminate in its programs and activities against any person because of race, color, ethnic origin, ancestry, religion, age or sex. This non-discrimination policy applies to admissions, employment, treatment of individuals, and access to programs. Inquiries concerning this policy may be directed to the Office of the University Registrar.

FACILITIES AND SERVICES





CAMPUSES

Assumption University maintains two campuses: the original campus located at Hua Mak in the city, and the new campus at Suvarnabhumi, some thirty minutes from the South of the city campus and twenty minutes from Suvarnabhumi Airport on the way to the Eastern Seaboard. The original campus is a compact, vertical campus comprised of 17 buildings with the tallest having a total of 16 floors. A small lake surrounded by lush gardens and seating is a focal point of beauty and tranquility. Food, convenience, and service shops to support student needs surround the campus. This has become the home of the postgraduate faculties.

The Suvarnabhumi Campus, constructed as a "University in a Park", comprises of 200 acres of beautifully landscaped assembly of mixed architecture surrounded by lush tropical gardens and trees. Designed to host the university's undergraduate degree programs, it offers everything: a meeting/exhibition center, hotel, non-coeducational dormitories, a magnificent chapel, a museum, eleven academic halls, and much more. The centerpiece of the campus is the Cathedral of Learning, a 39-story tower, which houses student support services, the library, reception halls, seminar rooms, and offices. Transportation between the two campuses is convenient and inexpensive. Shuttles run throughout the day between various points in Bangkok and the Suvarnabhumi Campus.







LIBRARIES

Each Assumption University campus maintains a large library with over 500,000 books and periodicals. In addition to the study facilities provided for students and instructors in the main libraries, there are reading areas in many other locations. These include the Catholic Education Council library and the Catholic library.

HEATH SERVICES

Assumption University provides health services at both campuses. Students are responsible for making arrangements for their own health care, except in cases of emergency. Registered nurses are on duty Monday through Friday from 8.00 a.m. to 4.30 p.m. and are available for emergencies, first aid, and medical counseling. Students, faculty and staff members with medical problems are encouraged to keep their files active at the Health Center regarding the nature of their problems so that appropriate action can be taken in the event of an emergency.

FOOD SERVICE AND CAFETERIAS

Catering facilities are available to faculty, staff and students throughout both campuses. Contractor-operated facilities are in operation daily from 7.00 a.m. to 8.00 p.m. (Hours may change during semester breaks).



THE RESEARCH INSTITUTE ASSUMPTION UNIVERSITY (RIAU)

The Research Institute of Assumption University (RIAU), originally known as the Center for Research in Business or CRIB, has been serving the Thai business community and international corporations since it was established in 1982. Since its inception, the CRIB has continued to grow into other research areas in response to demands for services. The center began by conducting social science research and in 1993, was recognized and known as the Center for Research in Business and Social Science (CRIB & SSc.). In 1998, the center was incorporated into the Research Institute of Assumption University (RIAU). This organizational change reflects the advancement of information technology as well as the academic diversity of research work conducted by the CRIB & SSc.

Research Services: at present, the RIAU includes four major functional areas: Business Research, Social Science Research, Educational Research, and Information Systems Research.

OFFICE OF INFORMATION TECHNOLOGY SERVICES

The Assumption University ITS Center strives to acquaint students with the use of computers as tools for working with large quantities of information in high technology environments. Its general activities are supervised by the Director of the ITS Center. In addition to supplying instruction in the use of computers to students and faculty, the Center also assists with classwork and research activities involving complex computations and intricate data processing.

PUBLICATION

The AU Press prints all of the University publications such as the AU Journals, Newsletter, etc., and offers opportunities and facilities for publication of outstanding research papers as an incentive for both faculty and students to conduct research and to publish reports.



BOOKSTORES

Bookstores at both campus provide a wide range of magazines, periodicals, educational equipment, textbooks, and professional books usually not available at regular commercial bookstores. In addition, they offer a wide range of Thai style gifts for friends and visitors.

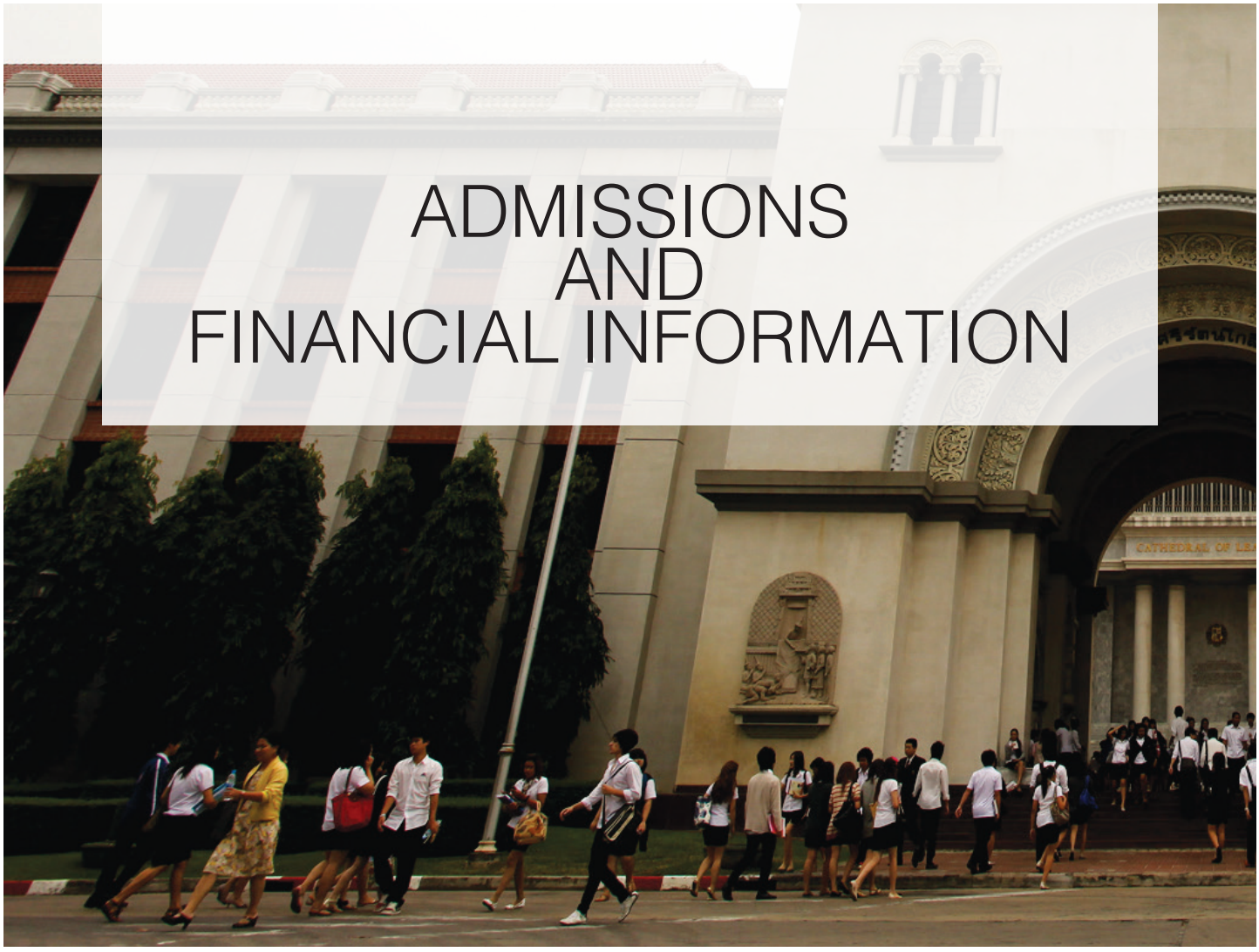
CAMPUS MINISTRY, CHAPEL, AND RELIGIOUS CENTER

The Campus Ministry at each campus is designed for the Catholic community and uses the spacious and beautiful chapels. The Religious Center is a multi-religion house of prayer, meditation, congregation, preaching, and for soul-searching pursuit of the true source of all knowledge and life. Space is provided for communities wishing to establish a house of meditation and prayer.

SECURITY

Assumption University takes its responsibility seriously when it comes to protecting its students, its instructors and its facilities. At both campuses, teams of security staff are at every gate and throughout the campus to provide aid, to monitor activities, and to provide for the well-being of everyone on campus.





ADMISSIONS AND FINANCIAL INFORMATION

WHO CAN APPLY

1. Applicants with any of the following qualifications are eligible to apply:
   - High school or grade 12 graduate diploma and transcript.
   - The person who passed the examination for O level should pass their examination with grand total of no less than 5 subjects each of which with C grade result or above. Or they must be taken the examination for the General Certificate of Education (GCE) or A level or AS level at least 3 subjects with not less than C grade.
     - The subject of 'O' level can be repeated with the 'A' or 'AS' level. Nevertheless, the subject of 'A' or 'AS' level cannot be repeated in the same level.
     - At least 8 subjects of IGCSE/GCE/GCSE total amount.
   - G.E.D. certificate and Diploma;
   - IB certificate at least 5 subjects with grades no less than 4.
   - Other equivalent certificates or diploma, as authorized by the Ministry of Education**.

   Remarks: Other equivalent high school certificates or diplomas must be translated to English and issued or certified by their own government's Ministry of Education, Foreign Ministry, or Embassy or issued in English by their graduated school confirming that graduates of these programs are eligible to apply to regular full-time programs worldwide.
2. Applicants must be free from infectious diseases, or other handicaps that can hinder their study.
3. Applicants must be able to bear all expenses related to their study.
4. Applicants must have good manners and testify to the university that they will be attentive, make fullest use of their capability in their study, and strictly conform to the university's rules and regulations.

If found lacking in any of the conditions listed above, the applicants will have his or her admission declined, or his or her student's status nullified immediately.



THE DOCUMENTS REQUIRED

Freshmen:

1. One copy of high school certificate or diploma or any other equivalent qualification as authorized by the respective country's Ministry of Education or other assigned government agency, which must be translated into English, if issued in any other language and be certified by their own government's appropriate Ministry or Embassy or issued in English by the school that issued the graduation record, diploma, or transcript.
2. High School Transcripts (Translated to English and be certified by their own Embassy or issued in English by their high school or equivalent graduated school.)
3. One copy of Identification Card and residence registration for Thai students and copy of passport for foreign applicants.
4. Two 3x4 cm. photos.
5. A copy of a name/surname change certificate, if applicable, issued by appropriate authority in English.
6. Optional Test Scores
   - TOEFL score of 60 (iBT)/500 (pBT) or above
   - IELTS score of 5.0 or above in overall bands with a validity of 2 years
   - SAT (Mathematics) score of 500 or above
   - SAT (Reading and Writing) a total score of 600 or above. Validation of 2 years

Transfer Students:

Assumption University accepts transfer students from institutions where English is the principal language of instruction. In addition to the above, transfer students must also submit:

- Latest official transcript from the University/College attended; and
- Description of courses taken at the University/ College





HOW TO APPLY

Assumption University offers three methods of application to prospective students:

1. **Walk-In application:** On arrival at Assumption University (any of the university campuses) students must
   - Submit required document at Admission Center.
   - Fill out the Admission Application form, specify the faculty/major codes, sign their names, write application date and attach one 3x4 cm. photo.
   - Submit the Admission Application form and their documents to the Admission Center and pay 500 Baht for the admission-processing fee.
2. **Email application:** To apply via email, the applicant must scan and email the required admission documents mentioned above to **abac@au.edu**

After assessment, the applicant will be informed via email the status of the application. If the documents emailed are incomplete or are not in order with the regulations as specified by the Ministry of Education, the applicant will be asked to send supplemental documents.

PLACEMENT TESTS AND INTERVIEWS

All applicants must take placement tests of English and/or Mathematics on the application date. Except applicant who submitted IELTS or TOEFL score.

School/Faculty	Major	Subject Requiring	Additional Testing /Interview
ABAC School of Music	- Music Program - Music Business	Theory and History of Music	Audition
Albert Laurence School of Communication Arts	- Advertising - Public Relations - Live Event and Creation Management - Digital Media Communication	Aptitude Test	Interview
	- Visual Communication Design - Computer Generated Imagery	- Design* - Drawing	
Montfort del Rosario School of Architecture and Design	- Architecture - Interior Architecture	- Architecture Aptitude	
Bernadette de Lourdes School of Nursing Science	Nursing	Aptitude Test	Interview**

*Remark:**
1. *Design: Students must prepare watercolor, poster color or any dexterous medium.*
2. *Drawing: Students must prepare EE grade pencil, eraser, and drawing board.*

*Remark:***
Nursing Science: Being Healthy (normal results of chest X-ray and blood test for hepatitis B; HBsAg & antiHBs report by the hospital physician).

Faculty / Department	Enrollment and Intensive Courses Fees	APPROXIMATE FEES BY SEMESTER (Undergraduate Programs)													Total (Baht)
		1st Year			2nd Year			3rd Year			4th Year		5th Year		
		1st Semester	2nd Semester	Summer 1	1st Semester	2nd Semester	Summer 2	1st Semester	2nd Semester	Summer 3	1st Semester	2nd Semester	1st Semester	2nd Semester	
Business Administration	10,500 - 31,685	60,200	67,500	-	62,450	62,800	-	57,850	57,850	-	57,850	50,800	-	-	**487,800**
Business Economics	10,500 - 31,685	64,050	68,050	-	66,900	64,900	-	55,750	57,850	-	50,800	51,800	-	-	**490,600**
Arts / Business English	10,500 - 25,085	51,050	54,700	-	62,800	58,900	-	57,850	57,850	-	57,850	57,850	-	-	**469,350**
Arts / Business French	10,500 - 38,285	57,950	65,400	-	64,800	61,500	-	57,850	55,750	-	57,850	57,850	-	-	**489,450**
Arts / Business Chinese	10,500 - 31,685	63,850	69,000	-	65,950	68,050	-	64,900	57,850	-	57,850	57,850	-	-	**515,800**
Arts / Business Japanese	10,500 - 38,285	65,250	67,750	-	65,950	70,150	-	64,900	55,750	-	57,850	49,500	-	-	**507,600**
Music / Music Business	10,500 - 36,635	77,550	79,700	-	80,600	79,400	-	62,050	54,050	9,400	62,350	55,300	-	-	**570,900**
Music / Music Program	10,500 - 36,635	80,850	79,450	-	80,900	98,150	-	85,800	81,100	-	89,300	68,050	-	-	**674,100**
Nursing Science	10,500 - 25,085	64,150	68,200	9,850	73,850	73,050	21,750	76,000	77,450	26,800	66,650	56,400	-	-	**624,650**
Science and Technology / Computer Science	10,500 - 25,085	59,450	67,800	-	70,600	70,600	-	59,650	61,450	-	66,850	35,800	-	-	**502,700**
Science and Technology / Information Technology	10,500 - 25,085	68,000	68,150	-	71,750	68,150	-	65,350	58,300	-	58,150	32,650	-	-	**501,000**
Engineering / Electrical Engineering	10,500 - 25,085	69,550	77,200	-	75,600	73,500	-	61,200	55,750	-	55,350	57,900	-	-	**536,550**
Engineering / Computer Engineering	10,500 - 25,085	74,800	69,350	-	68,550	62,300	-	60,850	63,200	-	56,850	62,900	-	-	**529,300**
Engineering / Mechatronics Engineering	10,500 - 25,085	78,200	75,600	-	81,850	75,600	-	64,400	48,700	-	57,400	57,750	-	-	**550,000**
Engineering / Commercial Pilot	35,500 - 50,085	84,200	81,600	-	72,450	73,250	7,450	222,400	1,222,350	312,650	948,950	237,400	-	-	**3,298,200**
Engineering / Aircraft Maintenance Engineering	10,500 - 25,085	84,200	81,600	-	120,400	136,200	7,450	297,450	289,250	-	244,300	194,050	-	-	**1,465,400**
Communication Arts / Advertising	11,500 - 26,085	68,100	56,500	-	58,800	65,100	-	59,850	52,800	-	56,300	42,200	-	-	**471,150**
Communication Arts / Digital Media Communication	11,500 - 26,085	66,100	65,400	-	58,800	70,100	-	71,900	65,300	9,400	58,300	62,800	-	-	**539,600**
Communication Arts / Live Event Creation and Management	11,500 - 39,285	66,000	62,900	-	62,400	69,100	-	67,850	57,800	-	64,300	53,750	-	-	**515,600**
Communication Arts / Public Relations	11,500 - 39,285	66,100	64,400	-	58,950	65,100	-	53,800	52,800	9,550	54,800	49,250	-	-	**486,250**
Communication Arts / Computer Generated Imagery	11,500 - 39,285	76,400	76,000	-	80,650	74,000	-	92,900	83,800	4,800	62,200	55,750	-	-	**618,000**
Communication Arts / Visual Communicatin Design	11,500 - 39,285	69,000	71,100	-	69,000	68,100	-	63,850	59,750	9,400	49,250	43,000	-	-	**513,950**
Law	10,500 - 25,085	60,150	65,700	-	63,600	60,750	-	67,250	62,550	-	53,150	48,450	-	-	**492,100**
Biotechnology / Food Technology	10,500 - 25,085	79,400	72,900	-	61,900	66,100	-	55,800	58,750	5,950	53,800	50,450	-	-	**515,550**
Biotechnology / Agro Industry	10,500 - 25,085	77,050	68,950	-	65,800	67,700	-	61,850	59,550	-	57,250	45,600	-	-	**514,250**
Biotechnology / Agro Industry (Double Degree)	10,500 - 25,085	69,600	75,800	16,850	70,900	70,050	13,500	67,550	62,850	9,400	65,450	45,950	-	-	**578,400**
Architecture and Design / Architecture	10,500 - 31,685	73,850	69,800	-	75,600	80,950	-	81,700	73,150	-	73,000	69,600	63,900	56,000	**728,050**
Architecture and Design / Interior Architecture	10,500 - 31,685	73,850	69,500	-	75,400	80,600	-	73,350	77,250	-	65,850	62,400	63,100	56,000	**707,800**
Architecture and Design / Interior Design	10,500 - 38,285	71,350	72,850	-	72,900	82,100	-	76,250	74,900	-	75,350	57,800	-	-	**594,000**
Architecture and Design / Produc Design	10,500 - 38,285	72,150	73,650	-	72,650	72,900	-	70,150	70,150	-	76,800	61,850	-	-	**580,800**

Remarks : 1. Non Thai students must add 12,500 Baht to Enrollment and Intensive Courses Fees to make up the difference between Matriculation amounts.
2. Non Thai students are required to pay an Annual Health Insurance fee of 3,000 Baht every academic year.
3. Fees are subject to change without prior notice.



ACADEMIC INFORMATION







ACADEMIC SYSTEM

Assumption University has adopted the semester system. An academic year is divided into two semesters and a summer session. A semester lasts for approximately sixteen weeks.

- First Semester-begins in August and ends in December.
- Second Semester-begins in January and ends in May.
- Summer Session – June and July (optional).

One credit hour requires a minimum of 15 hours of class attendance; subject of 3 credit hours will require at least 45 hours in class. To qualify for the final examination in any subject, each student must have at least 80% of class attendance. In some exceptional cases, at the discretion of the lecturer and/or the Dean of the Faculty concerned, this requirement may be waived.

NORMAL COURSE LOAD

A student's course load may vary from semester to semester. The minimum for all full-time students is four courses (12 credit hours) per semester; the maximum course load is six courses (18 credit hours) per semester. To enroll in more than six courses, written permission must be obtained from:

- The chairperson of the department concerned (if a graduating student, or junior and senior students with a cumulative G.P.A. of at least 3.25).
- In all other cases, the Dean of the Faculty concerned must be consulted.

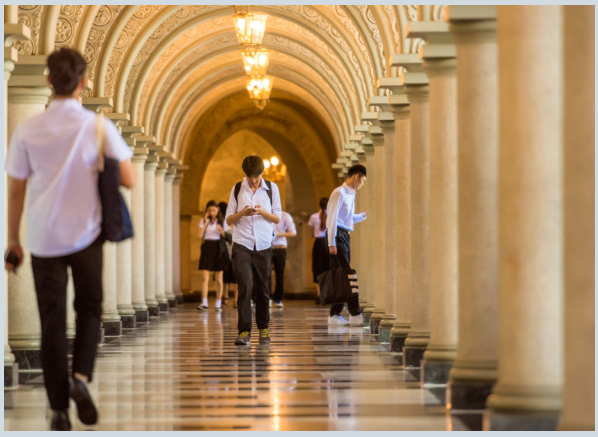
ATTENDANCE

Students are required to attend all classes regularly. To qualify for taking a final examination of any subject, a minimum of 80% class attendance is mandatory. There are no authorized cuts from classes. Irregular attendance may result in exclusion from classes. Any student who finds that he/she can no longer attend a class must officially withdraw in writing through the Office of the Registrar. Failure to withdraw officially may result in a grade of "F" for the course. In case of unavoidable absence, such as subpoena requirements, illness or death of a member of the family, all work missed must be satisfactorily made up and it is the responsibility of the student to arrange for this.

WITHDRAWAL

Students may withdraw (drop) officially from a course, or all courses during the first two weeks without any penalty. Thereafter, until the final day of withdrawals as indicated in the University calendar, students will receive "W" grades. An official withdrawal must be carried out in person at the Office of the Registrar by the student himself/herself (not by someone else on his/her behalf). Failure to withdraw officially will result in a "WF" grade.





GRADING SYSTEM

Letter grades are used to show the academic standing of all students with the following meanings and values.

GRADE	MEANING	VALUE
A	Excellent - Exceptional Achievement	4.00
A-	Almost Excellent - Extensive Achievement	3.75
B+	Very Good	3.25
B	Good - Substantial Achievement	3.00
B-	Fairly Good - Acceptable Achievement	2.75
C+	Fair	2.25
C	Satisfactory	2.00
C-	Minimal Satisfactory	1.75
D	Poor - Minimal Achievement	1.00
F	Failure - Inadequate Achievement	0.00
R	Course repeated	-
S	Satisfactory	-
U	Unsatisfactory	-
W	Withdrawal with Permission	-
WF	Withdrawal with F Withdrawal from course after time limit	0
AUD	Audit and non-credit	-
I	Incomplete, used in case a student fails to complete his/her assignment within the time limit or is absent from the examination with approval from the University due to exceptional reasons.	-
WP	Work in progress	
NR	No Report	
TR	Credits Transfer	

Student grades are computed at the end of each semester, and may include:

- Quizzes
- Term papers
- Book reports
- Assignments
- Recitation
- Class participation
- Attendance
- Midterm and final examinations

These requirements may vary with each course.

ACADEMIC ACTION

Academic action can be both favorable and disciplinary. When a student is performing well, all action on him/her in the academic area is said to be favorable to the student. For example, when a student obtains a high GPA he/she is put on the academic List of Honors; when he/she consistently achieves very high marks, he/she is given higher honors. However, if his/her achievement is below standard, disciplinary action may be taken against him/her.

PROBATION

Students who obtain a cumulative GPA of less than 2.00 (1.99-1.50) but above the limits set for dismissal from the University will be put on probation, except during the first semester of the freshman year.





DISMISSAL

Undergraduate students will be dismissed from the University under the following conditions:

- obtaining a cumulative GPA of less than 1.50 at the end of any semester except the first semester of the freshman year;
- obtaining a cumulative GPA of less than 1.75 for two consecutive semesters except the first semester of the freshman year;
- obtaining a cumulative GPA of less than 2.00 for four consecutive semesters except for the first semester of the freshman year. However, in certain cases, the President, in consideration of a student' s potential to improve his/her academic performance and eventually graduate, may grant special permission for the student to carry on his/her studies at the University on probation condition.

HONORS SYSTEM

The University, wishing to provide recognition to exceptional students, has established an Honors System. Undergraduate students are given awards for achievement measurable in grades beginning with semester grades and ending with cumulative grades until graduation.

GRADUATION WITH HONORS

Undergraduate students maintaining a high scholastic average are eligible for graduation with the following Honors:

Summa Cum Laude	Cumulative	GPA	3.80-4.00
Magna Cum Laude	Cumulative	GPA	3.50-3.79
Cum Laude	Cumulative	GPA	3.25-3.49

REQUIREMENTS FOR GRADUATION WITH HONORS

- Have fulfilled all the requirements for graduation within 4 years (5 years for Architecture).
- Have not been placed on probation in any condition.
- Have not received a grade lower than "C" for any course.
- Transfer students must have taken all the third and fourth year courses (or 72 credits) at Assumption University.
- Students who have graduated with a cumulative GPA of 3.25 or higher, regardless of a grade lower than "C" or "U" for non credit courses, or those who completed all requirements within 5 years of study for all 4-year undergraduate programs; and within 6 years for the Architecture program, are entitled to obtaining an Award of Academic Excellence.

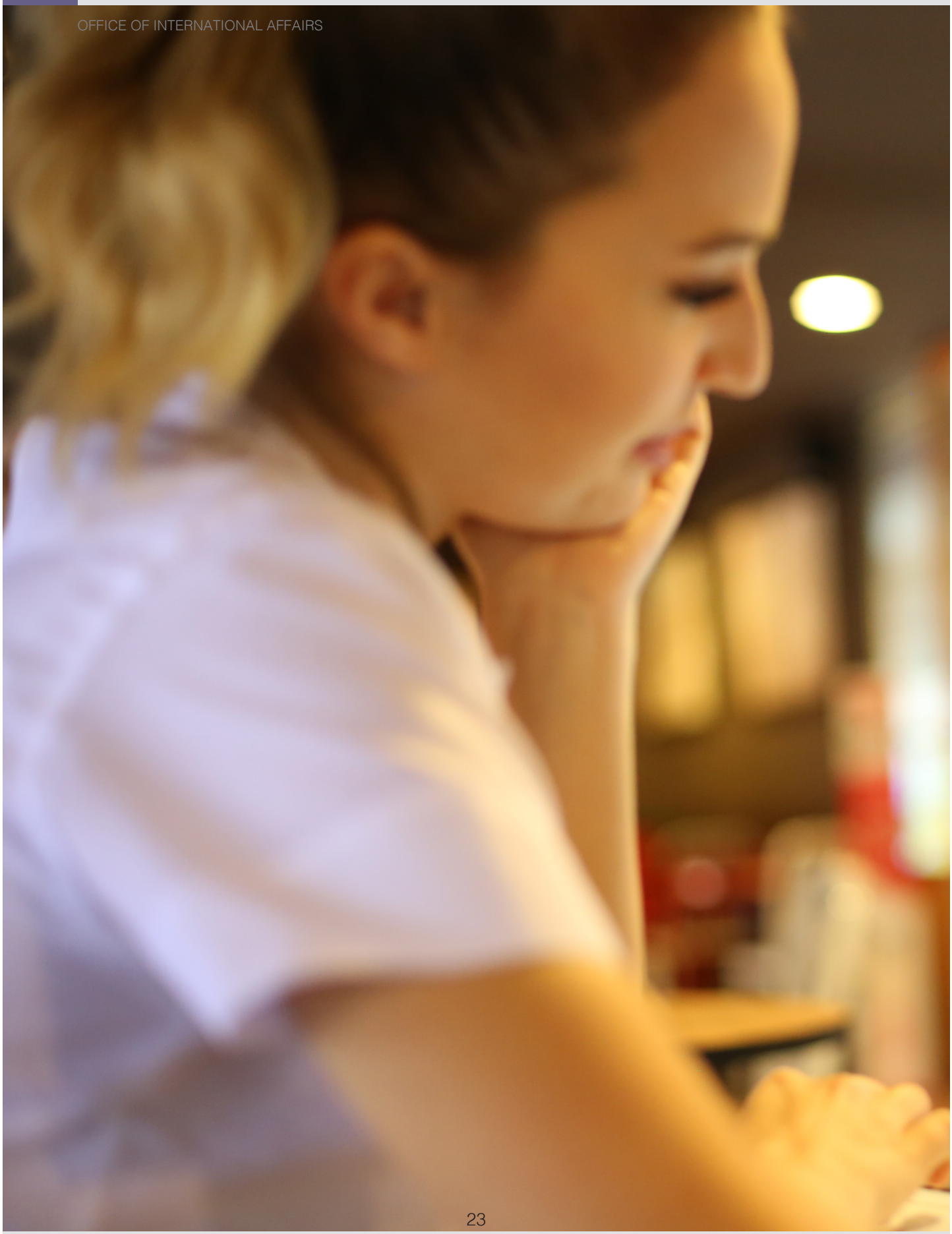
SPECIAL HONORS AND AWARDS

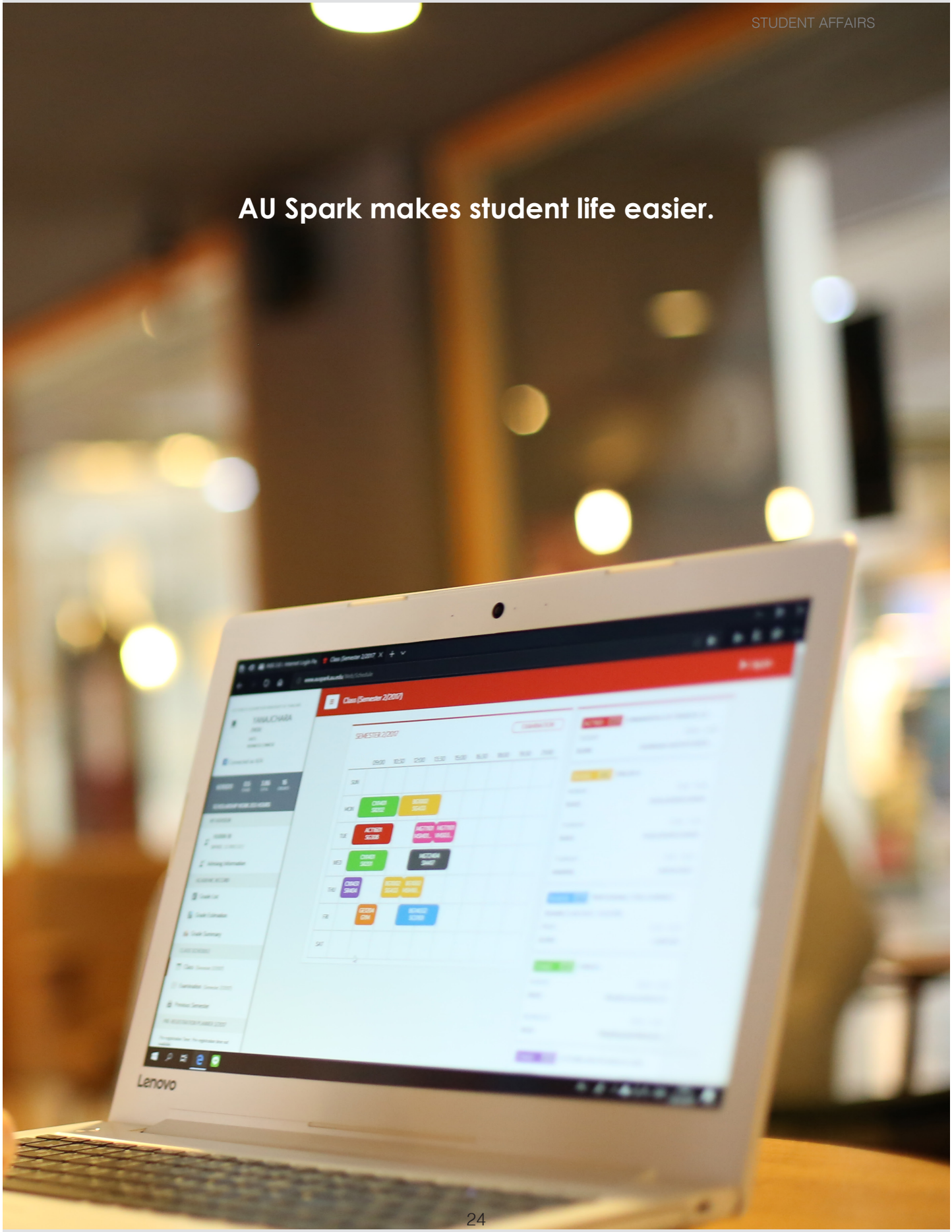
Students are given distinctions for their performance for a semester or an academic year as listed below:

- A Special Certificate of Honors from the University Council for those who obtain a 4.00 GPA for any academic year;
- A Special Certificate of Honors from the President of the University to all students who fall within the GPA range of 3.50-3.99 for any academic year;
- Students who obtain a GPA of 3.25 or above at the end of each semester will have their names published in the Academic List of Honors.

Condition:

- 15 credits per semester is required except for final semester.
- Grades must be "C" or higher.




AU Spark makes student life easier.
Lenovo

STUDENT AFFAIRS

CENTER/DIVISION	SERVICE/ACTIVITY	LOCATION & CONTACT NUMBER	WEBSITE
Career Development Center (CDC)	1. Job Placement & Services - Full-Time Jobs - Part-Time Jobs - Career Week - Job Website 2. Career Planning & Advising 3. Training/Workshop/Company Exposure 4. Leadership & Entrepreneurial Development 5. Career Resources 6. Employer & Alumni Relations	CL.13 0-2723-2131-2	www.jobcdc.au.edu
Learning Support Center (LSC)	1. Freshmen Induction Program 2. Learning Skills Development & Advising 3. Parent Relations 4. Learning resources	CL.13 0-2723- 2137	www.E4ALL.au.edu
Student Leadership & Experiential Learning Center (CSLEL)	1. Advising Monitoring and Learning Assessment for Student Organization & Student Activity Units 2. Promoting Student Out-of Classroom Learning & University Engagement 3. Student Activity Information 4. Student Leader Development	King David 0-2723-2222 ext.7292,7293	www.activity4you.au.edu
Student Personality and Campus Life Center (CSPCL)	1. Student Rights & Discipline 2. Lost and Found 3. Mental Health & Psychological Counseling 4. Residential Life 5. Student Safety & Welfare 6. R.O.T.C. and Military Services	SM 106 0-2723-2235, 0-2 723-2230, 0-2723- 2142	www.sa.au.edu www.facebook. com/CSPCL
Sports and Physical Fitness Center (CSPF)	1. Sport Teams Development 2. Sport Activities & Exercises for Health 3. Sport Event Management 4. Sport Facilities Management	Gymnasium 0-2723- 2222 ext.7977	www.sportsfocus.au.edu
Financial Assistance Division (FD)	1. Government Loan 2. Financial Assistance 3. Scholarship Facilitating and Advising	CL.14 0-2723-2277	www.sa.au.edu
St. Martin Center for Professional Ethics & Service Learning (CPEL)	1. BG 1403 Professional Ethics Seminar 2. Community Service and Service Learning 3. Advising for Professional Ethics and Service Learning	CL.14 0-2723-2140, 0-2723-2149	www.service-learning.au.edu www.ethics.au.edu
Office of Thai Arts and Culture	1. Disseminate Thai values to AU community 2. Promote Thai Arts and Culture into teaching-learning and student activities.	CL.14 0-2723-2145	www.sa.au.edu

GET TO KNOW AU FIRST EXPERIENCE PROGRAM




What is AU FYE Program?

AU FYE Program is referred to all projects and activities organized by the University for freshmen in order to pre pare and support them in their studies and university life. The main purpose of AU FYEP is to develop students' awareness in five areas i.e. academic and intellectual competence, interpersonal relationship, identity and integrated philosophy of life, career and life-style, and personal health and wellness through various initiative activities which will help them successfully live and learn during the first year of university life at Assumption University.

AU FYE Program Objectives

1. To assist first- year students to make a successful transition from high school to the university.
2. To provide essential knowledge and skills for studying and living in Assumption university.
3. To develop students' awareness in five areas namely academic and intellectual competence, interpersonal relationship, identity and integrated philosophy of life, career and life-style, and personal health and wellness.
4. To establish a strong connection between freshmen and seniors; and to become active members of Assumption University community.

Themes of AU FYE Program

AU FYE PPrograms are organized based on two basic themes illustrated in the diagram as follows:

1. Common University Experiences •7 Projects
2. Extra-Curricular Experience •5 Projects

Common University Experiences

We define the Common University Experiences as those events that are required or compulsory for all freshmen to attend.

The Aim: It is aspired that through series of introduction to the mission, values, and community life of the university, students will consider themselves as proud and active members of the unique Assumption University community, commited to shared values and expectations in both learning and way of life.

Activities:

1. Intensive Orientation
2. AU Care
3. AU Orientation
4. AU Camp
5. Meet the Registrar
6. Wai Kru Ceremony
7. Academic Advising

Extra-Curricular Experiences (ECE)

We define the Extra-Curricular Experiences as those op opportunities offered especially to freshmen so that they may receive academic support outside the classroom, become aware of the variety of resources the campus offers, and actively engage in the community life of the university.

Unlike the Common University Experiences, the Extra Curricular Experiences are optional. Students are encouraged to participate at their interests and abilities.

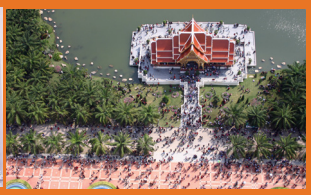
The aim of ECE is for students to become actively involved in the campus /community and receive specific support networks and information about resources that best meet their needs. Students see themselves as active participants and leaders fostering the standard and identity of Assumption University.

Activities:

1. Activity Days
2. Relationship Camp
3. English for All
4. Freshy Day & Night
5. The Smart Successor







FIRST YEAR EXPERINCE PROJECTS INFORMATION




Project 1: Intensive Orientation

This is an AU open house activity that organized for freshmen and parents. Freshmen will learn more about AU campuses, intensive courses and grading system, basic rules and regulations, services and facilities, and tips for student adjustment.

Project 2: AU Care

It is health checking up and meeting with Student Affairs advisors. Students are required to do tests covering psychological and physical aspects. They also meet advisors from Student Affairs who will be their personal advisor and supporter throughout the next 4 years.

Project 3: AU Orientation

This is an official event for warm welcoming freshmen as new members of AU community by Rector Magnificus, AU executives, faculty members and senior students. As it is said, "Well begun is half done" thus here Academic Affairs and Student Affairs put much effort to provide crucial knowledge and information concerning freshmen on the orientation day.

Project 4: AU camp

Be a part of AU community. The Assumption University Student Organization (AUSO) organizes this event to promote strong relationship between freshmen and seniors and also right attitudes towards the University. Freshmen will get to know each other and enjoy fellowships with friends and seniors through various activities.

Project 5: Wai Kru Ceremony

This event is organized by the Assumption University Student Organization (AUSO) to show appreciation and preservation of Thai cultures. The significance of this event is to show gratitude and respect towards teachers as well as to recognize the achievers and student leaders.

Project 6: Academic Advising

This is a required activity for all freshmen before registering for the new semester. To ensure students success in study, the academic advising is a mechanism for students to consult with academic advisors on their study plan and academic programs in order to choose the right subjects and minimize any registration mistakes due to inadequate academic information and also to develop strong relationship with their academic advisors.

Project 7: Activity Days

Here is a fantastic chance to discover activities of your interest! More than 50 clubs open their booths to provide freshmen with information such as music, dance, photography, environmental conservation, oratory and personality, football and many more. All clubs blow their bugles to welcome new members.

Project 8: Induction camp

Teamwork and unity behind success is the key theme in this activity. This is a time to open your mind and become one with friends, seniors and faculty members, and be proud of your faculty. Meaningful activities are lined up for fun, joy and happiness. You are not alone in AU.

Project 9: English for All

English for all offers an opportunity for freshmen to join the program for free of charge. During 7 weeks of the course, members enjoy variety of fun activities to promote English communication skills in listening, speaking, reading and writing based on the 7 steps to English Proficiency by Rev. Bro.Dr.Bancha Saenghiran, Rector Magnificus.

Project 10: Freshy Day & Night

Refresh your mind and refresh your AU spirit. Participate and vote for Prince and Princess of AU. The winners will be AU ambassadors and get valuable prizes. This is reserved for freshmen only to express their talents in performances and communication. All are invited to enjoy exquisite shows by students and special guest artist, cheer competition and many more.

Project 11: The Smart Successor

This is an opportunity to follow your dream. Student will be trained to become AU Smart Successors, be inspired to become successful entrepreneurs by alumni who are real successors in various fields of career goal setting, choosing appropriate major and career passport.

STUDENT UNIFORM

I. Student Uniform is mandatory for official and formal occasions as follows:

1. In the examination rooms.
2. In Business & Professional Ethics Seminar (BG 1403)
3. Formal occasions e.g. Wai Kru day, Orientation day , Last Orientation and Commencement day.
4. In all classrooms assigned by the faculties.

Student Uniform for male students:

1. Plain white, short or long sleeve shirt. Sleeves may not be turned up. Shirt must be tucked into trousers. A university necktie must be worn property.
2. Black trousers (slacks).
3. Black or dark brown belt with university buckle.
4. Plain black leather shoes.

Student Uniform for female students:

1. Plain white , short sleeve blouse. Blouse should fit properly. University buttons are attached and the university pin is worn on the left side of the blouse .Blouse must be tucked into skirt.
2. Black straight skirt at knee length.
3. Black or dark brown belt with university buckle.
4. Plain black leather closed shoes.





II. POLITE DRESS Polite Dress is allowed on the following occasions:

1. In the regular classrooms
2. Whenever entering the campus vicinity , except university dormitories and sports complex at Suvarnabhumi Campus.

Polite Dress for male students:

1. White or light colored short of long sleeve shirt. Shirt must be tucked into trousers neatly.
2. Plain black, grey, blue or brown slacks
3. Dark colored or white closed shoes or sport shoes(polite color).

Polite Dress for female students:

1. White or light colored short of long sleeve blouse. Blouse must be tucked into skirt neatly.
2. Black or blue knee length skirt, polite style.
3. Dark colored closed shoes, sling back court shoes, or sport shoes (polite color).

III. CASUAL DRESS

Casual dress is allowed during summer session or university holiday. However when it is scheduled as midterm, final exam or test; student is required to wear uniform.

DRESS CODE FOR EXAMINATION AND QUIZ

Student ID card must be checked before allowing students to enter the examination room. Students holding expired ID card must be instructed to obtain "a one – subject temporary ID card" at the Office of Registrar. Please note that students are expected to be aware of the regulation as well as their ID card's expiry date, and as such, irrespective of their reasons , must renew their ID cards prior to the examination period.

Ten minutes late examination:

Students arriving their examination room after the first 10 minutes of examination will not be allowed to enter examination room, instead they must be instructed to contact Director of Examination at the Office of Administrative Affairs for written permission.

No unauthorized materials on examination desks, nearby desks/chairs: any dictionaries, calculators, and notes found in the pencil boxes/ pockets, on the desks, nearby desks or chairs would subject students to the University's cheating disciplinary actions.

No communication devices and PDA(s) in the examination rooms:

- Mobile phones and personal digital assistance should not be placed on the desk, nearby desk or chairs irrespective of reasons. They could, for the time being, be placed under students' chairs/desks provided that they are turned off.

No Examination at Wrong Campus:

- Students will not be permitted to take examinations at "wrong campus" and will hence, be considered as "absent" from the exam.

ASSUMPTION UNIVERSITY
FULL UNIFORM



WHITE BLOUSE



UNIVERSITY PIN AND BUTTONS



BELT WITH BUCKLE



Knee-length black skirt
Black Leather Shoes













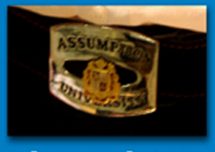
WHITE SHIRT



BLACK TROUSERS



UNIVERSITY NECKTIE



BELT WITH BUCKLE



BLACK LEATHER SHOES



ASSUMPTION UNIVERSITY

FULL UNIFORM



OFFICE OF INTERNATIONAL AFFAIRS

The Office of International Affairs reports to the Office of the President and is responsible for taking the lead in establishing international study and faculty exchanges and overseas study opportunities at both undergraduate and postgraduate level programs.

The Office provides guidance and counseling for students who wish to spend a semester overseas, to transfer as an undergraduate, or to continue postgraduate studies at other international institutions. It is also charged to collaborate with the Office of Student Affairs, the International Students Center, the Office of Thai Art and Culture, and it enhances the care of international students.

OPPORTUNITIES ON STUDENT EXCHANGE PROGRAMS

Assumption University's Student Exchange Program gives students the opportunity to experience life in another country while still earning credits towards their degree.

Assumption University has numerous agreements of cooperation with institutions in 14 countries. Most agreements include elements for student exchange, faculty exchange, sharing of research, etc,.

Twenty-Seven institutions from 14 countries send their students to AU on exchange study programs. Assumption University students can also go to these institutions on exchange study programs.

JOINT DEGREE PROGRAMS

Assumption University has several joint degree programs which allow students to study partially at Au and then to complete their degree at a joint overseas university. The degree, awarded by the overseas university, is thus obtained at a substantially lower cost than having to study at the overseas university full-time. Au Currently, has seven postgraduate joint degree programs, two undergraduate joint degree programs, and is exploring others.

ACCEPTANCE MODES BY OVERSEAS UNIVERSITIES

Assumption University has numerous agreements of cooperation with institutions in 14 countries. Most agreements include elements for student exchange, faculty exchange, sharing of research and more. Universities that have worked with AU on such arrangements include though not exhaustively, quite actively, include:

AUSTRALIA
- Southern Cross University
- University of Wollongong
- La Trobe University
- Macquarie University
- Curtin University

CHINA
- Tongji University

GERMANY
- Hochschule Wismar, University of Applied Sciences: Technology, Business and Design
- Neubrandenburg University of Applied Science

HONG KONG
- Hong Kong University

INDONESIA
- Soegijapranata Catholic University

ITALY
- Nuova Accademia di Belle Arti

JAPAN
- Kagawa University

MALAYSIA
- University of Malaya

SINGAPORE
- National University of Singapore

SOUTH KOREA
- Kookmin University
- University of Seoul

TAIWAN
- Fu Jen Catholic University
- National Chengchi University
- National Cheng Kung University

UNITED KINGDOM
- University of Essex
- University of West of England
- University of Birmingham
- St. Mary's University

USA
- University of California, Davis
- Kansas State University

VIETNAM
- Saigon Technology University
- Ho Chi Minh City University of Architecture


MUSEUM

MARTIN DE TOURS SCHOOL OF **MANAGEMENT AND ECONOMICS**





MARTIN DE TOURS SCHOOL OF MANAGEMENT AND ECONOMICS

CURRICULUM STRUCTURE

COURSES	MKT	MGT	FIN	ACT	MIS	HTM	IBM	INS	IDM	REM	ECO
A. General Education Courses	40	40	40	40	40	34	40	40	40	40	33
Language Courses	15	15	15	15	15	3	15	15	15	15	15
Social Science Courses	12	13	13	13	13	19	13	13	13	13	6
Humanities Courses	7	6	6	6	6	6	6	6	6	6	6
Science and Mathematics Courses	6	6	6	6	6	6	6	6	6	6	6
B. Specialized Courses	93	93	93	96	96	99	93	93	93	93	102
Business Core Courses	48	48	48	48	45	39	48	48	48	48	35
Major Required Courses	30	30	30	39	42	30	30	30	30	30	40
Major Elective Courses	-	-	-	-	-	-	-	-	-	-	12
Concentration Courses	15	15	15	9	9	15	15	15	15	15	15
Foreign Language Course	-	-	-	-	-	15	-	-	-	-	-
C. Free Elective Courses	9	9	9	6	6	9	9	9	9	9	6
Total	142	142	142	142	142	142	142	142	142	142	141

OBJECTIVES

Martin De Tours School of Management and Economics offers a wide range of undergraduate courses including the traditional disciplines of Marketing, Finance, Management and Accounting in conjunction with the emerging fields of study such as Business Information Systems for students wishing to work in private and public sectors. Through an innovative, practical, and high-quality teaching program, the students are allowed to:

- Develop sound knowledge and practical skills to adapt to the fast changing, highly competitive business world,
- Develop the ability to analyze and solve problems and make management decisions,
- Be equipped with communicative skills and the ability to handle advanced information and communication technology,
- Prepare themselves for a wide range of careers including working as professionals and entrepreneurs,
- Be leaders in the business community.

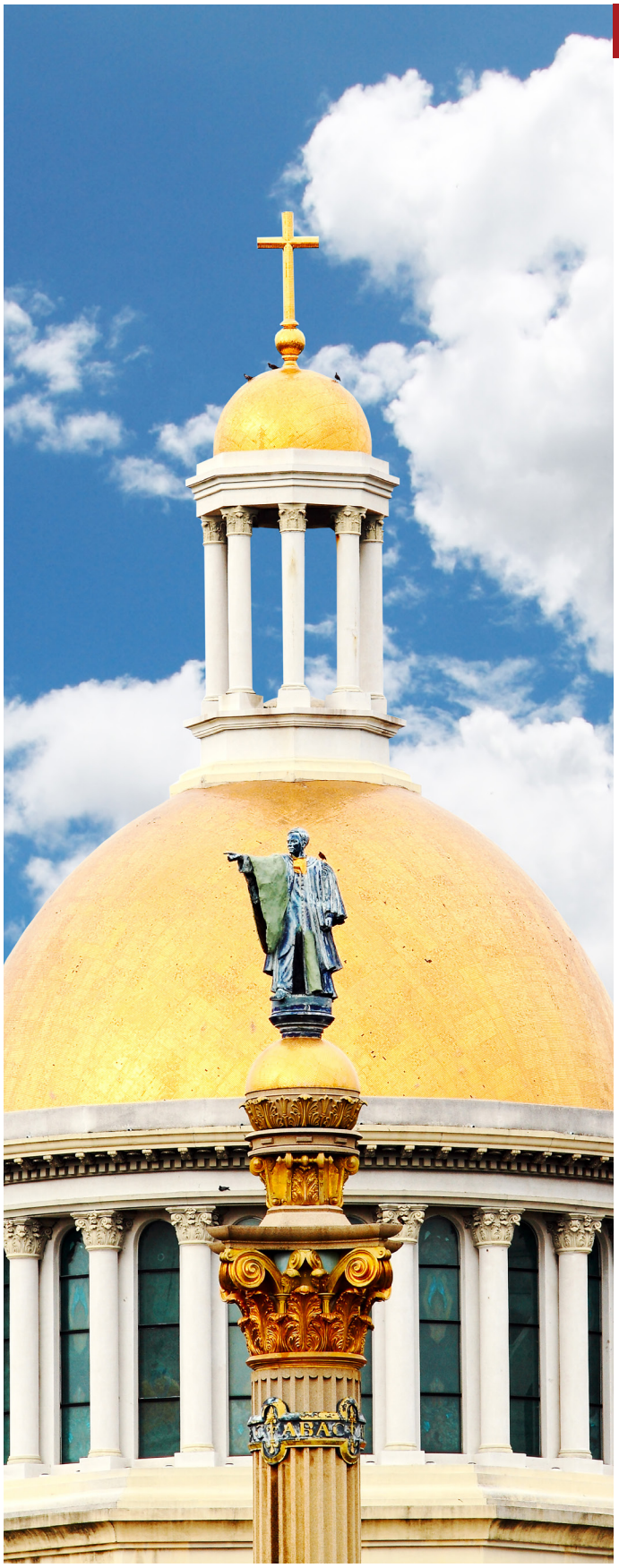
The School of Management and Economics offers Programs of study as follows:

- Marketing (MKT)
- Management-Leadership and Entrepreneurship (MGT)
- Finance (FIN)
- Accounting (ACT)
- Management Information Systems (MIS)
- Hospitality and Tourism Management (HTM)
- International Business Management (IBM)
- Insurance (INS)
- Industrial Management and Logistics (IDM)
- Real Estate (REM)
- Business Economics (ECO)

GRADUATION REQUIREMENTS

To be qualified for graduation, the student must

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



DEPARTMENT OF MARKETING

DEGREE CONFERRED
Bachelor of Business Administration (Marketing)
B.B.A. (Marketing)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Marketing Management upon students who meet all requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Complete the total number of credits of the curriculum
- Obtain a cumulative grade point average of at least 2.00
- Participate in 16 sessions of the Business Professional Ethics Seminar
- Have library and financial clearance with the University
- Have demonstrated good behavior and discipline

OBJECTIVES

To provide the graduates with the following desirable characteristics:

- Morally sound, committed to acting justly and open to further growth
- Knowledgeable of marketing principles, possess analytical tools and practical knowledge to make sound marketing decision
- Flexible competent and well-rounded in confronting and solving business problems
- Able to work as a team and motivate others to work
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills



COURSES

A. General Education Courses — **40 Credits**

Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
Social Science Courses		**12 Credits**
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**7 Credits**
GE 1204	Physical Education	1
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3
Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **93 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2700	Money, Banking and Financial Markets	3
FIN 3701	Corporate Finance	3
IBM 2702	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

MIS 3122	Principles of Electronic Commerce	3
MKT 3102	Integrated Marketing Communications	3
MKT 3515	Purchasing and Supply Chain Management	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3620	Global Marketing	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3
MKT 4829	Marketing Decision Making	3
MKT 4855	Research in Marketing	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A
Major Concentration Courses **15 Credits**
Or
Plan B:
Business Concentration Courses **15 Credits**
Or
Plan C
Major Elective Courses **15 Credits**

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select a concentration in the major area and study the five specified courses.

Digital Marketing

MKT 3867	Social Media and Online Marketing	3
MKT 3868	Content Marketing	3
MKT 3869	Digital Consumer Insights	3
MKT 4777	Communications and Digital Media Strategy	3
MKT 4887	Online Entrepreneurship	3

Integrated Marketing Communications

MKT 3627	Sales Promotion	3
MKT 3839	Event Marketing and Public Relations	3
MKT 4726	Advertising and Creative Strategy	3
MKT 4727	Integrated Media Planning	3
MKT 4849	IMC Campaign Planning	3

Strategic Marketing

MKT 3629	Pricing Strategy and Decisions	3
MKT 3823	Marketing Channel Strategy and Decisions	3
MKT 4806	Product and Brand Management	3
MKT 4811	Seminar in Marketing	3
MKT 4848	Contemporary Issues in Marketing	3



PLAN B – Business Concentration Courses 15 credits

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Advertising

AD 3106	Art Direction	3
AD 3112	Brand Communication	3
AD 3114	Interactive Advertising and Marketing Communication	3
AD 4108	Basic Copywriting (English)	3
CA 2013	Utilization of Multimedia Tools	3

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

Finance

FIN 3711	Investment	3
FIN 3724	Financial Feasibility Planning	3
FIN 3821	Valuation	3
FIN 3822	Bank Management	3
FIN 3823	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3205	Marketing for Hospitality and Tourism	3
HTM 4111	Food and Beverage Service	3
HTM 4402	Tourism Destination Management	3

International Business Management

IBM 3711	Comparative Management	3
IBM 3713	International Management	3
IBM 3714	Export-Import Policy and Strategy	3
IBM 4840	Global Supply Chain Management	3
IBM 4811	International Strategic Management	3

Industrial Management

IDM 3203	Logistics and Supply Chain Management	3
IDM 3204	Industrial Safety and Risk Management	3
IDM 4201	Manufacturing Planning and Control	3
IDM 4203	Quality Management	3
IDM 4206	Industrial Environmental Management	3

Insurance Management

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Group and Health Insurance	3



Management

MGT 3915	Project Management	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 4910	Productivity and Quality Management	3
MGT 4916	Negotiation Strategy	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3

PLAN C – Major Elective Courses **15 credits**

Students pursuing PLAN C must select any five major elective courses.

MKT 3627	Sales Promotion	3
MKT 3629	Pricing Strategy and Decisions	3
MKT 3803	Retail Management	3
MKT 3804	Fashion Marketing	3
MKT 3805	Healthcare Marketing	3
MKT 3806	Marketing in Asia	3
MKT 3807	Sport Marketing	3
MKT 3817	Sustainability Marketing	3
MKT 3823	Marketing Channel Strategy and Decisions	3
MKT 3826	Merchandising and Display Strategies	3
MKT 3837	Service and Customer Relationship Management	3
MKT 3839	Event Marketing and Public Relations	3
MKT 3867	Social Media and Online Marketing	3
MKT 3868	Content Marketing	3
MKT 3869	Digital Consumer Insights	3
MKT 4726	Advertising and Creative Strategy	3
MKT 4727	Integrated Media Planning	3
MKT 4777	Communications and Digital Media Strategy	3
MKT 4805	Business-to-Business Marketing	3
MKT 4806	Product and Brand Management	3
MKT 4808	Advanced Marketing Presentation	3
MKT 4809	Marketing for Services	3
MKT 4810	Export-Import Management	3
MKT 4811	Seminar in Marketing	3
MKT 4812	Individual Research	3
MKT 4826	Contemporary Logistics	3
MKT 4848	Contemporary Issues in Marketing	3
MKT 4849	IMC Campaign Planning	3
MKT 4856	Brand Building Strategy	3
MKT 4857	Qualitative Research in Marketing	3
MKT 4887	Online Entrepreneurship	3
MKT 4897	Marketing Internship	3
MKT 4899	IMC Internship	3
FIN 3724	Financial Feasibility Planning	3
HTM 3205	Marketing for Hospitality and Tourism	3
BIS 3348	Principles of Multimedia	3

C. Free Elective Course **9 Credits**

Students can select courses of 9 credits which are provided by their faculty or by the different faculties upon completion of the prerequisite.

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Marketing Major follow the Marketing program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1403	Business Ethics Seminar	0
BG 1001	English I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
	Total	**19**

Second Semester

BG 1403	Business Ethics Seminar	0
ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MGT 1101	Introduction to Business	3
SA 2200	Statistics II	3
	Total	**18**

SECOND YEAR
First Semester

BG 1403	Business Ethics Seminar	0
ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2201	Microeconomics	3
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 1403	Business Ethics Seminar	0
BG 2001	English IV	3
ECO 2202	Macroeconomics	3
FIN 2700	Money, Banking and Financial Markets	3
GE 2202	Ethics	3
IBM 2702	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3701	Corporate Finance	3
MIS 3122	Principles of Electronic Commerce	3
MKT 3102	Integrated Marketing Communications	3
MKT 3515	Purchasing and Supply Chain Management	3
MKT 3530	Consumer Behavior	3
	One Plan A or Plan B or Plan C Course	3
	Total	**18**

Second Semester

MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MKT 3525	Sales Management	3
MKT 3620	Global Marketing	3
	One Plan A or Plan B or Plan C Course	3
	Total	**18**

FOURTH YEAR
First Semester

MKT 4725	Competitive Analysis and Strategy	3
MKT 4855	Research in Marketing	3
	One Plan A or Plan B or Plan C Course	3
	One Plan A or Plan B or Plan C Course	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

MGT 4914	Entrepreneurship	3
MKT 4730	Marketing Management	3
MKT 4829	Marketing Decision Making	3
	One Plan A or Plan B or Plan C Course	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF MANAGEMENT - LEADERSHIP AND ENTREPRENEURSHIP

DEGREE CONFERRED
Bachelor of Business Administration
(Management – Leadership and Entrepreneurship)
B.B.A. (Management – Leadership and Entrepreneurship)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Management upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have a base of good ethical and moral values.
- Have knowledge and pragmatic managerial skills appreciated by international organizations.
- Have entrepreneurial knowledge and skills and able to apply the management knowledge in finance, marketing, human resources, and information technology.
- Have responsibility and good relationships which makes them a good team player
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills.



COURSES

A. General Education Courses — **40 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
	or	
GE 1405	Thai Language and Culture (Only for International students)	3
	or	
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **13 Credits**

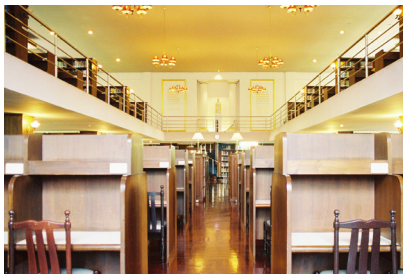
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **93 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
BG 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

MIS 3122	Principles of Electronic Commerce	3
FIN 3102	Business and Economic Analysis for Decision Making	3
MGT 4224	Corporate Wealth Management	3
MKT 4730	Marketing Management	3
MGT 3903	Leadership	3
MGT 3123	Strategic Human Capital Management	3
MGT 3945	Managerial Decision Modeling	3
MGT 4117	Entrepreneur and Innovation	3
MGT 4211	Seminar in Leadership and Entrepreneurship	3
MGT 4951	Strategic Management	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A
Major Concentration Courses **15 Credits**
Or
Plan B:
Business Concentration Courses **15 Credits**
Or
Plan C
Major Elective Courses **15 Credits**

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select a concentration in the major area and study the five specified courses.

Entrepreneurial Management

MGT 3201	Start-up and Business Development	3
MGT 3202	Leading and Sustaining the Organization	3
MGT 3915	Project Management	3
MGT 4101	Family Business Management	3
MGT 4806	Management Internship	3 (240 Hours)

Leadership and Talent Management

MGT 3102	Communication and Personality for Leaders	3
MGT 3203	Building and Leading Virtual Team	3
MGT 4104	Talent Management and Development	3
MGT 4943	Organizational Development	3
MGT 4806	Management Internship	3 (240 Hours)



ACC School of Commerce (For ACC Campus only)

MGT 4945	Cooperative Education	9 (720 Hours)
MKT 3525	Sales Management	3
MKT 4810	Export-Import Management	3

PLAN B – Business Concentration Courses 15 credits

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profits Planning and Control	3

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

Business Economics

(1) Managerial Economics

ECO 2551	Introduction to Econometrics	3
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
ECO 4761	Economics of Strategy	3

(2) Quantitative Economics

ECO 1252	Calculus 1	3
ECO 2551	Introduction to Econometrics	3
ECO 2631	Intermediate Microeconomics	3
ECO 3732	Industrial Organization	3
ECO 4751	Financial Economics	3

Finance

FIN 3201	Investment	3
FIN 3202	Financial Reporting and Analysis	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing for Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3



Industrial Management and Logistics

IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3

Insurance

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Group and Health Insurance	3

Marketing

MKT 3102	Integrated Marketing Communication	3
MKT 3525	Sales Management	3
MKT 3620	Global Marketing	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3

PLAN C – Major Elective Courses — 15 credits

Students pursuing PLAN C must select any five major elective courses.

MGT 3101	Luxury Management	3
MGT 3901	Organization Theory	3
MGT 3915	Project Management	3
MGT 3917	Innovation and Change Management	3
MGT 3918	Sport Management	3
MGT 3922	Introduction to New Venture	3
MGT 3942	Organizational Behavior	3
MGT 4101	Family Business Management	3
MGT 4102	Social Enterprise Management	3
MGT 4202	Career Management and Employability	3
MGT 4909	Communication in Management	3
MGT 4912	Individual Research	3
MGT 4916	Negotiation Strategy	3
MGT 4943	Organizational Development	3
MGT 4946	Human Resources Management Internship	3 (240 Hours)
FIN 3201	Investment	3
FIN 4101	Financial Management	3
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3

C. Free Elective Course — 9 Credits

Students can select free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Management – Leadership and Entrepreneurship Major follow the program as mentioned below:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR

First Semester

Code	Subjects	Credits
ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
1) Third and Fourth Year of Study for All Concentrations except ACC School of Commerce Concentration

First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
MGT 3903	Leadership	3
MGT 3905	Operations Management	3
MGT 3123	Strategic Human Capital Management	3
	One Plan A / Plan B / Plan C Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

MIS 3122	Principles of Electronic Commerce	3
FIN 3102	Business and Economic Analysis for Decision Making	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 3945	Managerial Decision Modeling	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

FOURTH YEAR
First Semester

MGT 4224	Corporate Wealth Management	3
MGT 4117	Entrepreneur and Innovation	3
MGT 4914	Entrepreneurship	3
MKT 4730	Marketing Management	3
	One Plan A / Plan B / Plan C Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

MGT 4211	Seminar in Leadership and Entrepreneurship	3
MGT 4951	Strategic Management	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B /Plan C Course	3
	One Free Elective Course	3
	Total	**15**

THIRD YEAR
2) Third and Fourth Year of Study for ACC School of Commerce Concentration

First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
MGT 3903	Leadership	3
MGT 3905	Operations Management	3
MGT 3123	Strategic Human Capital Management	3
MGT 3940	Business Research Methodology	3
	One Free Elective Course	3
	Total	**18**

Second Semester

MIS 3122	Principles of Electronic Commerce	3
FIN 3102	Business and Economic Analysis for Decision Making	3
MGT 3907	Business Communication	3
MGT 3945	Managerial Decision Modeling	3
MKT 3525	Sales Management	3
MGT 4117	Entrepreneur and Innovation	3
	Total	**18**

Summer Session

MKT 4810	Export-Import Management	3
	One Free Elective Course	3
	Total	**6**

FOURTH YEAR
First Semester

MGT 4945	Co-operative Education	9 (720 Hours)
	Total	**9**

Second Semester

MGT 4224	Corporate Wealth Management	3
MGT 4211	Seminar in Leadership and Entrepreneurship	3
MGT 4914	Entrepreneurship	3
MGT 4951	Strategic Management	3
MKT 4730	Marketing Management	3
	One Free Elective Course	3
	Total	**18**





DEPARTMENT OF FINANCE

DEGREE CONFERRED
Bachelor of Business Administration (Finance)
B.B.A. (Finance)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Finance upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained accumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound committed to acting justly and open to future growth
- Have knowledge of the financial principles and theories in the functional areas for making effective and ethical financial decisions
- Utilize analytical tools, logical and critical thinking, and practical knowledge in order to solve business and financial problems
- Able to work as a team as well as have leadership qualities
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills



COURSES

A. General Education Courses — **40 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
	or	
GE 1405	Thai Language and Culture (for non-Thai students)	3
	or	
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **13 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **93 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3202	Financial Reporting and Analysis	3
FIN 3203	Bank Management	3
FIN 4101	Financial Management	3
FIN 4102	International Finance	3
FIN 4103	Derivatives Securities	3
FIN 4104	Quantitative Analysis for Financial Decisions	3
FIN 4201	Special Topics in Finance	3
FIN 4202	Corporate Strategies and Financial Policies	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A
Major Concentration Courses **15 Credits**
Or
Plan B:
Business Concentration Courses **15 Credits**
Or
Plan C
Major Elective Courses **15 Credits**

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select a concentration in the major area and study the five specified courses.

Investment

FIN 3211	Fixed Income Securities	3
FIN 3212	Real Estate Investment and Entrepreneurship	3
FIN 4111	Financial Modeling	3
FIN 4112	Portfolio Management and Security Analysis	3
FIN 4211	Risk Management	3

PLAN B – Business Concentration Courses **15 credits**

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profit Planning and Control	3

Industrial Management and Logistics

IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3



Insurance

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Health and Group Insurance	3

International Business Management

IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	Global Product and Brand Planning	3
IBM 4208	International Strategic Management	3

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3

Management – Leadership and Entrepreneurship

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3





PLAN C – Major Elective Courses **15 credits**

Students pursuing PLAN C must select any five major elective courses.

MIS 3122	Principles of Electronic Commerce	3
MIS 4112	Digital Marketing Technology	3
MIS 4113	Digital Banking and Payment Systems	3
MIS 4117	Knowledge Management Systems	3
MIS 4124	Data Mining	3
MIS 4125	Data Visualization	3
MIS 4142	Big Data	3
ECO 2551	Introduction to Econometrics	3
FIN 3211	Fixed Income Securities	3
FIN 3212	Real Estate Investment and Entrepreneurs	3
FIN 3231	Financial Feasibility Planning	3
FIN 3232	Venture Capital and Entrepreneurial Finance	3
FIN 3233	Export-Import Procedure and Financing	3
FIN 3234	Central Banking System and Policy	3
FIN 3235	Managerial Economics	3
FIN 3236	Laws and Practices in Finance	3
FIN 3237	Wealth Management and Financial Planning	3
FIN 4111	Financial Modeling	3
FIN 4112	Portfolio Management and Security Analysis	3
FIN 4211	Risk Management	3
FIN 4231	Behavioral Finance	3
FIN 4232	Financial Mathematics	3
FIN 4233	Valuation	3
FIN 4234	Investment Banking	3
FIN 4235	Individual Research in Finance	3
FIN 4236	Internship in Finance	3

C. Free Elective Course **9 Credits**

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

However, they are certain courses that the Martin De Tours School of Management and Economics does not allow the students to enroll as follows:

Subject Code	Subject Name
BG 1112 or GE 1202 or GE 1207	General Psychology Fundamental Psychology
BG1203	Fundamentals of Statistics
BG1402 or GE1203	Business, Society and Government Society, Politics and Economics
ECO 2220	Introduction to Economics
ECO 2531	Principles of Microeconomics
ECO 2541	Principles of Macroeconomics
GE1101	Thai Civilization
GE1203	Society, Politics and Economics
GE1404	Thai Culture and Tradition (For Comm. Arts Students only) = BG 1405 Thai Language and Culture
PC3803 or PC3311 or PC3311	Personality and Social Interactive Acting for Personality Social Interaction
ACT1601	Fundamentals of Financial Accounting (For Arts Students)
ACT1602	Fundamentals of Financial Accounting (For Science and Technology Students)
Subject with 1 or 2 credits	GS 1000 Use of Library, MA 1101 Applied Composition I

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Finance Major follow the Finance program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
FIN 3102	Business and Economic Analysis for Decision Making	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
	Two Free Elective Courses	6
	Total	**18**

Second Semester

FIN 3201	Investment	3
FIN 3202	Financial Reporting and Analysis	3
FIN 3203	Bank Management	3
MGT 3940	Business Research Methodology	3
	Two Plan A / Plan B / Plan C Courses	6
	Total	**18**

FOURTH YEAR
First Semester

FIN 4101	Financial Management	3
FIN 4102	International Finance	3
FIN 4103	Derivatives Securities	3
FIN 4104	Quantitative Analysis for Financial Decisions	3
	Two Plan A / Plan B / Plan C Courses	6
	Total	**18**

Second Semester

FIN 4201	Special Topics in Finance	3
FIN 4202	Corporate Strategies and Financial Policies	3
MGT4914	Entrepreneurship	3
	One Plan A / Plan B / Plan C Course	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF ACCOUNTING

DEGREE CONFERRED
Bachelor of Business Administration (Accounting)
B.B.A. (Accounting)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Accounting upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Have knowledge of accounting principles, possess analytical tools and practical knowledge and skills to make sound accounting decisions.
- Flexible, competent and well-rounded in confronting and solving accounting, financing, and related business problems.
- Able to apply accounting principles in the practice of their profession.
- Able to work as a team and motivate others to work.
- Have positive attitude towards the accounting professions, interpersonal, calculation, analytical, communication and presentation skills, and IT skills.



COURSES

A. General Education Courses — **40 Credits**

Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai Students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses		**13 Credits**
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses		**6 Credits**
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **96 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **39 credits**

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3608	Financial Report and Financial Statement Analysis	3
ACT 3614	Taxation I	3
ACT 3615	Taxation II	3
ACT 3632	Cost Accounting	3
ACT 3643	Auditing	3
ACT 3644	Internal Control and Audit	3
ACT 4607	Advanced Accounting I	3
ACT 4608	Advanced Accounting II	3
ACT 4611	Seminar in Accounting	3
ACT 4646	Accounting Information Systems	3
ACT 4647	Accounting Software Packages	3

Concentration Courses

Students must choose one of the two following plans as their concentration courses and each plan choose only 3 courses out of 4 courses specified.

Plan A: Major Concentration Courses 9 Credits
or
Plan B: Business Concentration Courses 9 Credits

Plan A: Major Concentration Courses **9 Credits**

Students must choose one of the four following tracks as their major concentration courses. In each track students must choose three out of four courses.

Track A: Auditing 9 Credits
or
Track B: Financial Accounting 9 Credits
or
Track C: Managerial Accounting 9 Credits
or
Track D: Others 9 Credits

Track A: Auditing

ACT 4641	Problems in Auditing	3
ACT 4643	Seminar in Auditing	3
ACT 4648	EDP Auditing	3
ACT 4649	Accounting Internship	3 (135 Hours)

Track B: Financial Accounting

ACT 4605	International Accounting	3
ACT 4609	Accounting Theory	3
ACT 4612	Independent Study	3
ACT 4649	Accounting Internship	3 (135 Hours)

Track C: Managerial Accounting

ACT 3633	Cost Management	3
ACT 3629	Profits Planning and Control	3
ACT 4634	Seminar in Management Accounting	3
ACT 4649	Accounting Internship	3 (135 Hours)

Track D: Others

Students pursuing Track D must select three major elective courses.

ACT 3616	Public Sector and Fund Accounting	3
ACT 3633	Cost Management	3
ACT 3624	Real Estate Accounting	3
ACT 3625	Hospital Accounting	3
ACT 3626	Hotel Accounting	3
ACT 3629	Profits Planning and Control	3



ACT 4605	International Accounting	3
ACT 4609	Accounting Theory	3
ACT 4612	Independent Study	3
ACT 4634	Seminar in Management Accounting	3
ACT 4641	Problems in Auditing	3
ACT 4643	Seminar in Auditing	3
ACT 4648	EDP Auditing	3
ACT 4649	Accounting Internship	3 (135 Hours)

PLAN B: Business Concentration Courses **9 credits**

Students pursuing PLAN B must select a concentration in other business areas and choose only 3 courses out of 4 courses specified in each plan.

Management Information Systems

MIS 3121	Database System	3
MIS 4111	Information System Project Management	3
MIS 3111	Business Process Management	3
MIS 4122	Business Intelligence	3

Finance

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 4101	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3211	Food and Beverage Management	3

Marketing

MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Insurance

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3

Industrial Management and Logistics

IML 3203	Logistic and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3

C. Free Elective Course **9 Credits**

Students can take two free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select The Accounting Major follow the Accounting program of studies:

1. Thirteen Major Required Courses
2. Four Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
3. Two Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2202	Ethics	3
GE 2101	World Civilization	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3608	Financial Report and Financial Statement Analysis	3
ACT 3632	Cost Accounting	3
MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
	Total	**18**

Second Semester

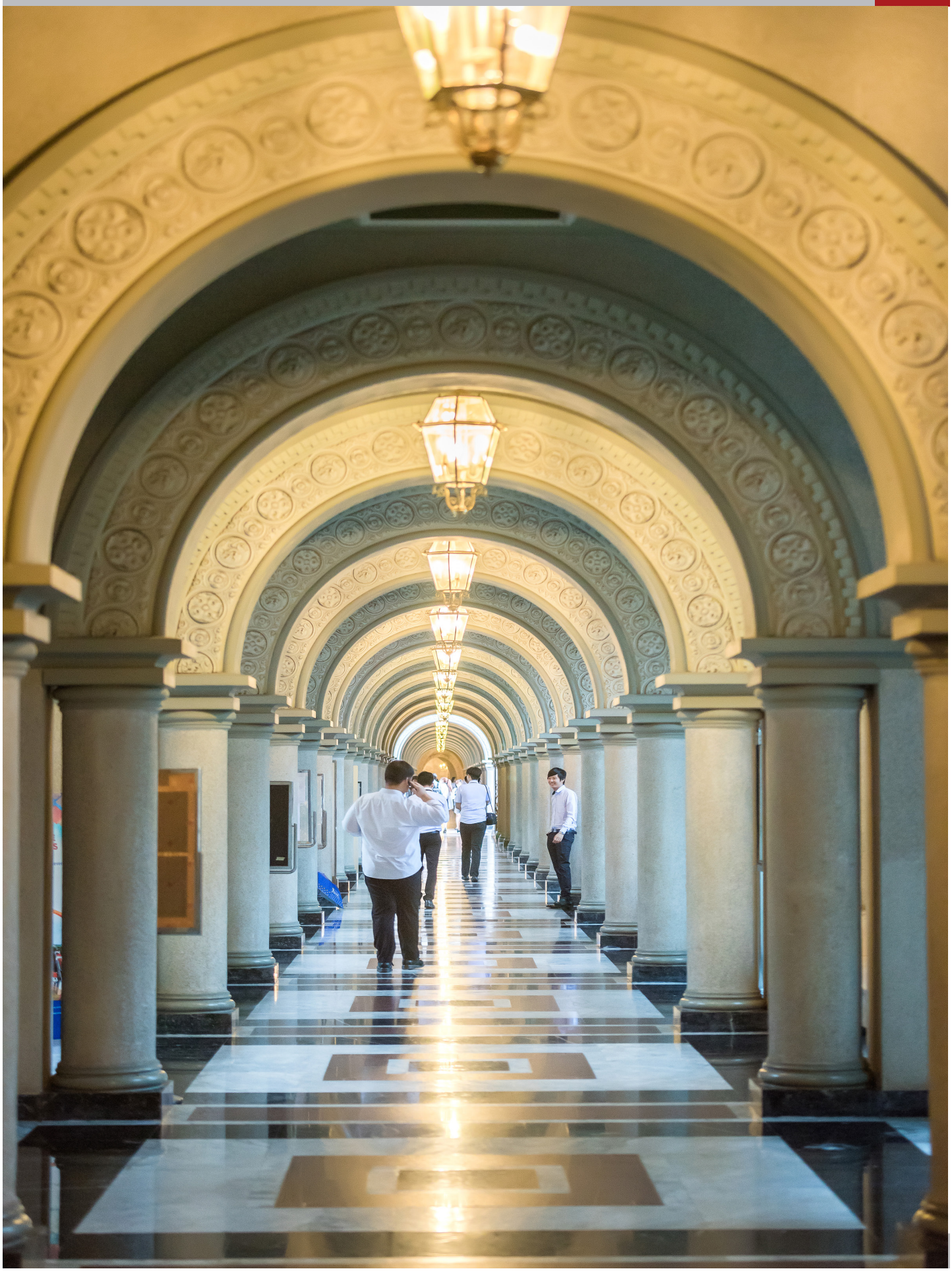
ACT 3615	Taxation II	3
ACT 3643	Auditing	3
ACT 3644	Internal Control and Audit	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
	Total	**18**

FOURTH YEAR
First Semester

ACT 4607	Advanced Accounting I	3
ACT 4608	Advanced Accounting II	3
ACT 4646	Accounting Information Systems	3
MGT 4914	Entrepreneurship	3
	One Plan A / Plan B Course	3
	One Plan A / Plan B Course	3
	Total	**18**

Second Semester

ACT 4611	Seminar in Accounting	3
ACT 4647	Accounting Software Packages	3
	One Plan A / Plan B Course	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**15**





DEPARTMENT OF MANAGEMENT INFORMATION SYSTEMS

DEGREE CONFERRED
Bachelor of Business Administration (Management Information Systems)
B.B.A. (Management Information Systems)

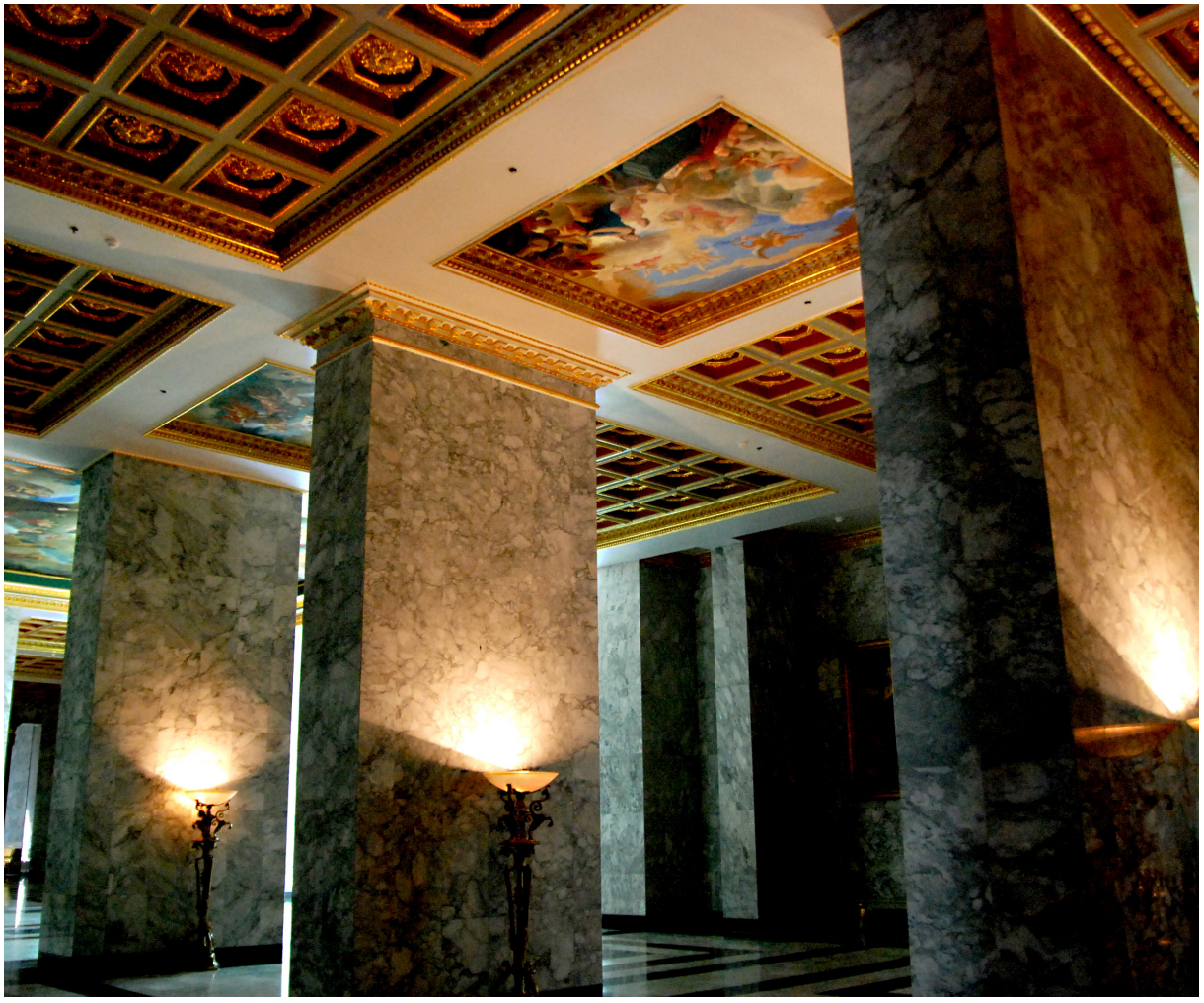
GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Management Information Systems upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Prior to graduation, students are obligated to meet the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Have knowledge and thorough understanding of concepts, frameworks, principles, theories and necessary technical skills to work as a full potential management information systems professional.
- Able to understand and apply technology knowledge to every aspect of the management and the organization.
- Able to interpret information, make business analysis and forecasting useful for business decision making.
- Flexible, competent and well-rounded in confronting and solving business problems.
- Able to work as a team and motivate others to work.
- Able to communicate effectively and have good information and technology skills.

COURSES

A. General Education Courses		40 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3
Social Science Courses		**13 Credits**
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3





Humanities Courses		**6 Credits**
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3

B. Specialized Courses **96 Credits**

Business Core Courses		**45 Credits**
ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses		**42 credits**
MIS 2111	Introduction to Management Information Systems	3
MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 3131	Programming and Data Structures	3
MIS 3141	Information Technology Infrastructure	3
MIS 3221	Systems Analysis and Design	3
MIS 3231	Object-Oriented Programming	3
MIS 3241	Enterprise Resource Planning	3
MIS 4111	Information Systems Project Management	3
MIS 4121	Information Security Management and Risk Management	3
MIS 4131	Web Design and Programming	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3
MIS 4291	MIS Senior Project	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 9 Credits
Or
Plan B: Business Concentration Courses 9 Credits
Or
Plan C: Major Elective Courses 9 Credits

PLAN A – Major Concentration Courses **9 credits**

Students pursuing PLAN A must select a concentration in the major area and study the three specified courses.

Software Design and Development

MIS 4132	Mobile Applications	3
MIS 4133	Software Engineering	3
MIS 4134	UI/UX Design	3
MIS 4231	Web Applications Development	3
MIS 4281	Selected Topic in MIS 1	3
MIS 4282	Selected Topic in MIS 2	3

Data Science

MIS 4124	Data Mining	3
MIS 4125	Data Visualization	3
MIS 4126	Machine Learning	3
MIS 4142	Big Data	3
MIS 4221	Data Science	3
MIS 4283	Selected Topic in MIS 3	3
MIS 4284	Selected Topic in MIS 4	3

PLAN B – Business Concentration Courses **9 credits**

Students pursuing PLAN B must select a concentration in the major area and study the three specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3

Finance

FIN 3201	Investment	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3





Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3211	Food and Beverage Management	3

Management-Leadership and Entrepreneurship

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Venture	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3

PLAN C – Major Elective Courses **9 credits**

Students pursuing PLAN C must select any three major elective courses.

MIS 3142	Introduction to Enterprise Resource Planning	3
MIS 3281	eSports	3
MIS 3381	Information Systems Internship	3
MIS 4112	Digital Marketing Technology	3
MIS 4113	Digital Banking and Payment Systems	3
MIS 4114	Electronic Customer Relationship Management	3
MIS 4115	Health Information Systems	3
MIS 4116	Human Resource Information Systems	3
MIS 4117	Knowledge Management Systems	3
MIS 4122	Business Intelligence	3
MIS 4123	Spreadsheet for Business	3
MIS 4124	Data Mining	3
MIS 4125	Data Visualization	3
MIS 4126	Machine Learning	3
MIS 4132	Mobile Applications Development	3
MIS 4133	Software Engineering	3
MIS 4134	UI/UX Design	3
MIS 4141	Cloud Computing	3
MIS 4142	Big Data	3
MIS 4143	Internet of Things	3
MIS 4221	Data Science	3
MIS 4231	Web Applications Development	3
MIS 4241	Enterprise Architecture	3
MIS 4281-4289	Selected Topic in MIS 1-9	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any). However, they are certain courses that the Martin De Tours School of Management and Economics does not allow the students to enroll as follows:

Subject Code	Subject Name
GE1202 or GE 1202 or GE 1207	General Psychology Fundamental Psychology
BG1203	Fundamentals of Statistics
BG1402 or GE1203	Business, Society and Government Society, Politics and Economics
ECO 2220	Introduction to Economics
ECO 2531	Principles of Microeconomics
ECO 2541	Principles of Macroeconomics
GE1101	Thai Civilization
GE1203	Society, Politics and Economics
GE1404	Thai Culture and Tradition (For Comm. Arts Students only) = BG 1405 Thai Language and Culture
PC3803 or PC3311 or PC3311	Personality Development Personality and Social Interaction Acting for Personality/Social Interaction
ACT1601	Fundamentals of Financial Accounting (For Arts Students)
ACT1602	Fundamentals of Financial Accounting (For Science and Technology Students)
Subject with 1 or 2 credits	GS 1000 Use of Library MA 1101 Applied Composition I

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursues the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select The Management Information Systems Major follow the program of studies:

1. Fourteen Major Required Courses
2. Three Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Two Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MIS 2221	Quantitative Analysis Tools	0
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 3131	Programming and Data Structures	3
MIS 3141	Information Technology Infrastructure	3
FIN 3101	Corporate Finance	3
	Total	**18**

Second Semester

MIS 3221	Systems Analysis and Design	3
MIS 3231	Object-Oriented Programming	3
MIS 3241	Enterprise Resource Planning	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
	Total	**18**

FOURTH YEAR
First Semester

MIS 4111	Information Systems Project Management	3
MIS 4121	Information Security Management and Risk Management	3
MIS 4131	Web Design and Programming	3
MGT 4914	Entrepreneurship	3
	Two Plan A / Plan B / Plan C Courses	6
	Total	**18**

Second Semester

MIS 4211	Information Systems Strategy, Management, and Acquisition	3
MIS 4291	MIS Senior Project	3
	One Plan A / Plan B / Plan C	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**15**





DEPARTMENT OF HOSPITALITY AND TOURISM MANAGEMENT

DEGREE CONFERRED
Bachelor of Business Administration
(Hospitality and Tourism Management)
B.B.A. (Hospitality and Tourism Management)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Hospitality and Tourism Management upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the university
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth
- Possess knowledge of the principles and theories of hospitality and tourism management.
- Understand and have awareness of hospitality and tourism management professional standards and ethics
- Able to apply analytical tools and practical knowledge to acquire proficiency in hospitality and tourism management from an interdisciplinary perspective.
- Equipped with necessary leadership, managerial, and technical skills needed in today's organizations
- Able to work as a team and motivate others to work
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills

COURSES

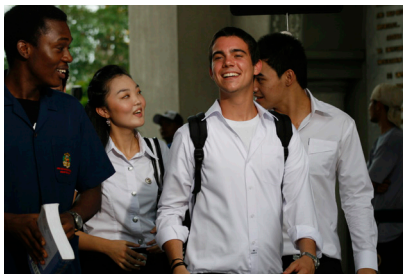
A. General Education Courses — **34 Credits**

Language Courses — **3 Credits**

GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **19 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3





Humanities Courses **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3

B. Specialized Courses **99 Credits**

Business Core Courses **39 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3204	Human Resource Management in Hospitality and Tourism	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3
HTM 4117	Information Technology in Hospitality and Tourism	3
HTM 4118	Business Operation and Leadership in Hospitality and Tourism	3
HTM 4210	Strategic Management in Hospitality and Tourism	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 15 Credits
Or
Plan B: Business Concentration Courses 15 Credits
Or
Plan C: Major Elective Courses 15 Credits

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select one of the two concentrations in the major area and study the five specified courses.

Hospitality Management

HTM 4111	Food and Beverage Service	3
HTM 4112	Kitchen Operation	3
HTM 4301	Rooms Division Management	3
HTM 4302	Event Management	3
HTM 4303	Service Management	3

Tourism Management

HTM 4401	Tourism Policy and Development	3
HTM 4402	Tourism Destination Management	3
HTM 4403	Tour Guiding and Operation in Practice	3
HTM 4406	Introduction to MICE Business Management	3
HTM 4407	Introduction to Airline Business Management	3

PLAN B – Business Concentration Courses **15 credits**

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3



International Business Management

IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4208	International Strategic Management	3
IBM 4115	Global Product and Brand Planning	3

Management – Leadership and Entrepreneurship

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3



PLAN C – Major Elective Courses 15 credits

Students pursuing PLAN C must select any five elective courses from the following list. Or they can select Business French or Business Chinese or Business Japanese or Thai (only for international students) as their Plan C.

HTM 4111	Food and Beverage Service	3
HTM 4112	Kitchen Operation	3
HTM 4301	Rooms Division Management	3
HTM 4302	Event Management	3
HTM 4303	Service Management	3
HTM 4401	Tourism Policy and Development	3
HTM 4402	Tourism Destination Management	3
HTM 4403	Tour Guiding and Operation in Practice	3
HTM 4406	Introduction to MICE Business Management	3
HTM 4407	Introduction to Airline Business Management	3
MKT 3837	Service and Customer Relationship Management	3

Business French

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 3537	Communicative skills in French	3
FR 3538	Basic business French	3

Business Chinese

CN 0400	Chinese for Beginners I	3
CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Business Japanese

JA 0723	Reading and Writing Japanese Script	3
JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

Thai (only for International Students)

TH 1500	Introduction to Thai	3
TH 1501	Thai Language I	3
TH 2501	Thai Language II	3
TH 2502	Thai Language III	3
TH 3503	Advance Reading & Writing	3

Foreign Language Courses 15 Credits

Students must take the following five courses as their major foreign language courses.

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
MGT 3907	Business Communication	3

C. Free Elective Course 9 Credits

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the pre-requisites (if any).

D. Internship (400 hours)

Students must take internship for 400 hours continuously after completing 142 credits.

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Hospitality and Tourism Management Major follow the Hospitality and Tourism Management program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   or
   Plan B: Business Concentration Courses
   or
   Plan C: Major Elective Courses
3. Five Foreign Language Courses
4. Three Free Elective Courses
5. Internship for 400 hours continuously

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
	Two Free Elective Courses	6
	Total	**18**

Second Semester

MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3
	Total	**18**

FOURTH YEAR
First Semester

HTM 3204	Human Resource Management in Hospitality and Tourism	3
HTM 4117	Information Technology in Hospitality and Tourism	3
HTM 4118	Business Operation and Leadership in Hospitality and Tourism	3
HTM 4210	Strategic Management in Hospitality and Tourism	3
	Two Plan A / Plan B / Plan C Courses	6
	Total	**18**

Second Semester

MGT 4914	Entrepreneurship	3
	Three Plan A / Plan B / Plan C Courses	9
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF INTERNATIONAL BUSINESS MANAGEMENT

DEGREE CONFERRED
Bachelor of Business Administration
(International Business Management)
B.B.A. (International Business Management)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in International Business Management upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Knowledgeable of the principles and theories in the functional areas and able to apply with respect to international business,
- Possess analytical tools and practical knowledge to acquire proficiency in international business from an interdisciplinary perspective
- Able to apply analytical tools and conceptual frameworks logical and critical thinking skills to solve business problems.
- Able to work as a team and motivate others to work.
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills.

COURSES

A. General Education Courses — **40 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **13 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3





Humanities Courses		**6 Credits**
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3

B. Specialized Courses **93 Credits**

Business Core Courses		**48 Credits**
ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses		**30 credits**
FIN 4102	International Finance	3
MKT 3620	Global Marketing	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 3204	Designing and Managing Global Operations	3
IBM 4105	Global Business Feasibility Analysis	3
IBM 4106	International Business Research	3
IBM 4207	Special Topics in International Business	3
IBM 4208	International Strategic Management	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 15 Credits
Or
Plan B: Business Concentration Courses 15 Credits
Or
Plan C: Major Elective Courses / Foreign Language Courses 15 Credits

PLAN A Major Concentration Courses 15 credits

Students pursuing PLAN A must select the concentrations in the major area and study the five specified courses.

International Marketing		
IBM 3111	International Buyer Behavior	3
IBM 3212	International Marketing Communications	3
IBM 3213	International Pricing Strategy	3
IBM 4114	Global Supply Chain Management	3
IBM 4115	Global Product and Brand Planning	3

Cross Cultural Business Studies		
Language I	Chinese (CN0400), Japanese (JA0723), French (FR1500)	3
Language II	Chinese (CN1400), Japanese (JA1700), French (FR1501)	3
IBM 3221	Cross Cultural Communication, Conflict and Negotiation	3
IBM 4122	Small Business Internationalization and Growth	3
IBM 4123	Global Context of Business	3

PLAN B Business Concentration Courses 15 credits

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting		
ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profit Planning and Control	3



Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3

Finance

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Industrial Management and Logistics

IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3






Business Economics: Managerial Track

ECO 2551	Introduction to Econometrics	3
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
ECO 4761	Economics of Strategy	3

PLAN C **Major Elective Courses / Foreign Language Courses** **15 credits**

Students pursuing PLAN C must select any five major elective/foreign language courses.

ECO 3731	International Trade	3
FIN 3231	Financial Feasibility Planning	3
IBM 3111	International Buyer Behavior	3
IBM 3131	Legal and Ethical Issues in International Business	3
IBM 3132	International Relations	3
IBM 3212	International Marketing Communications	3
IBM 3213	International Pricing Strategy	3
IBM 3221	Cross Cultural Communication, Conflict and Negotiation	3
IBM 4114	Global Supply Chain Management	3
IBM 4115	Global Product and Brand Planning	3
IBM 4122	Small Business Internationalization and Growth	3
IBM 4134	International Services Marketing	3
IBM 4235	Seminar in International Business Management	3
IBM 4236	Individual Research	3
IBM 4237	International Business Management Internship	3
MKT 3867	Social media and Online Marketing	3
MKT 4726	Advertising and Creative Strategy	3
MGT 3917	Innovation and Change Management	3
MIS 3142	Introduction to Enterprise Resource Planning	3
MIS 4112	Digital Marketing Technology	3
MIS 4114	Electronic Customer Relationship Management	3

Foreign Language Courses

Business Chinese

CN 0400	Chinese for Beginners I	3
CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Business French

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 3537	Communicative skills in French	3
FR 3538	Basic business French	3

Business Japanese

JA 0723	Reading and Writing Japanese Script	3
JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

C. Free Elective Course **9 Credits**

Students can take free elective courses of 9 credits which are offered by their faculty or by the different faculties up on completion of the prerequisites. However, they are certain courses that the Martin De Tours School of Management and Economics does not allow the students to enroll as follows:

Subject Code	Subject Name
BG 1112 or GE 1202 or GE 1207	General Psychology Fundamental Psychology
BG 1203	Fundamentals of Statistics
BG1402 or GE1203	Business, Society and Government Society, Politics and Economics
ECO 2220	Introduction to Economics
ECO 2531	Principles of Microeconomics
ECO 2541	Principles of Macroeconomics
GE1101	Thai Civilization
GE1203	Society, Politics and Economics
GE1404	Thai Culture and Tradition (For Comm. Arts Students only) = BG 1405 Thai Language and Culture
PC3803 or PC3311 or PC3311	Personality Development Personality and Social Interaction Acting for Personality/Social Interaction
ACT1601	Fundamentals of Financial Accounting (For Arts Students)
ACT1602	Fundamentals of Financial Accounting (For Science and Technology Students)
Subject with 1 or 2 credits	GS 1000 Use of Library MA 1101 Applied Composition I

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and career preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the International Business Management Major follow the International Business Management program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR

First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR

First Semester

MIS 2221	Quantitative Analysis Tools	0
MGT 3905	Operations Management	3
FIN 3101	Corporate Finance	3
MKT 3620	Global Marketing	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
	One Plan A or Plan B or Plan C Course	3
	Total	**18**

Second Semester

IBM 3203	International Management	3
IBM 3204	Designing and Managing Global Operations	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
	One Plan A or Plan B or Plan C Course	3
	One Plan A or Plan B or Plan C Course	3
	Total	**18**

FOURTH YEAR

First Semester

FIN 4102	International Finance	3
IBM 4105	Global Business Feasibility Analysis	3
IBM 4106	International Business Research	3
	One Plan A or Plan B or Plan C Course	3
	One Plan A or Plan B or Plan C Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

IBM 4207	Special Topics in International Business	3
IBM 4208	International Strategic Management	3
MGT 4914	Entrepreneurship	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF INSURANCE

DEGREE CONFERRED
Bachelor of Business Administration (Insurance)
B.B.A. (Insurance)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Insurance upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Possess knowledge of the principles and theories of insurance and able to apply them to insurance business.
- Understand and have awareness of insurance professional standards and ethics.
- Able to apply analytical tools and conceptual frameworks to solve business problems.
- Able to work as a team and motivate others to work.
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills.



COURSES

A. General Education Courses — **40 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **13 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3






B. Specialized Courses **93 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

INS 3101	Principles of Risk Management and Insurance	3
INS 3102	Insurance Law	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4104	Reinsurance	3
INS 4105	Seminar in Insurance	3
INS 4203	Marine and Aviation Insurance	3
INS 4206	Essentials of Risk Management	3
INS 4302	Accident, Health and Group Insurance	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 15 Credits
Or
Plan B: Business Concentration Courses 15 Credits
Or
Plan C: Major Elective Courses 15 Credits

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select one of the following concentrations in the major area and study the five specified courses.

Property and Casualty Insurance

INS 3203	Engineering Insurance	3
INS 4103	Insurance Marketing	3
INS 4204	Property and Casualty Insurance Accounting and Finance	3
INS 4205	Survey and Claim Management in Property and Casualty Insurance	3
INS 4207	Insurance Management	3

Life Assurance

INS 4303	Life Assurance Underwriting	3
INS 4304	Life Assurance Mathematics	3
INS 4305	Claim Administration in Life Assurance	3
INS 4307	Life Assurance Agency Administration	3
INS 4311	Financial Concepts for Life Assurance	3

PLAN B – Business Concentration Courses **15 credits**

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profit Planning and Control	3

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3

Finance

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3



Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

International Business Management

IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4208	International Strategic Management	3
IBM 4115	Global Product and Brand Planning	3

Industrial Management and Logistics

IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3

Management- Leadership and Entrepreneurship

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3






Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3

Business Economics

(1) Managerial Economics

ECO 2551	Introduction to Econometrics	3
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
ECO 4761	Economics of Strategy	3

(2) Quantitative Economics

ECO 1252	Calculus 1	3
ECO 2551	Introduction to Econometrics	3
ECO 2631	Intermediate Microeconomics	3
ECO 3732	Industrial Organization	3
ECO 4751	Financial Economics	3

PLAN C – Major Elective Courses **15 credits**

Students pursuing PLAN C must select any five major elective courses.

INS 3203	Engineering Insurance	3
INS 4103	Insurance Marketing	3
INS 4106	Information Management in Insurance	3
INS 4204	Property and Casualty Insurance Accounting and Finance	3
INS 4205	Survey and Claim Management in Property and Casualty Insurance	3
INS 4207	Insurance Management	3
INS 4208	Internship in Property and Casualty Insurance	3 (240 Hours)
INS 4209	Directed Studies in Property & Casualty Insurance	3
INS 4210	Risk Control and Risk Financing	3
INS 4303	Life Assurance Underwriting	3
INS 4304	Life Assurance Mathematics	3
INS 4305	Claim Management in Life Assurance	3
INS 4306	Life Assurance and Financial Planning	3
INS 4307	Life Assurance Agency Administration	3
INS 4309	Internship in Life Assurance	3 (240 Hours)
INS 4310	Directed Studies in Life Assurance	3
INS 4311	Financial Concepts for Life Assurance	3
MIS 3122	Principles of Electronic Commerce	3
MIS 4142	Big Data	3
FIN 3235	Managerial Economics	3
FIN 3231	Financial Feasibility Planning	3

C. Free Elective Course **9 Credits**

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and career preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Insurance Major follow the Insurance program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
INS 3101	Principles of Risk Management and Insurance	3
INS 3102	Insurance Law	3
MGT 3905	Operations Management	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

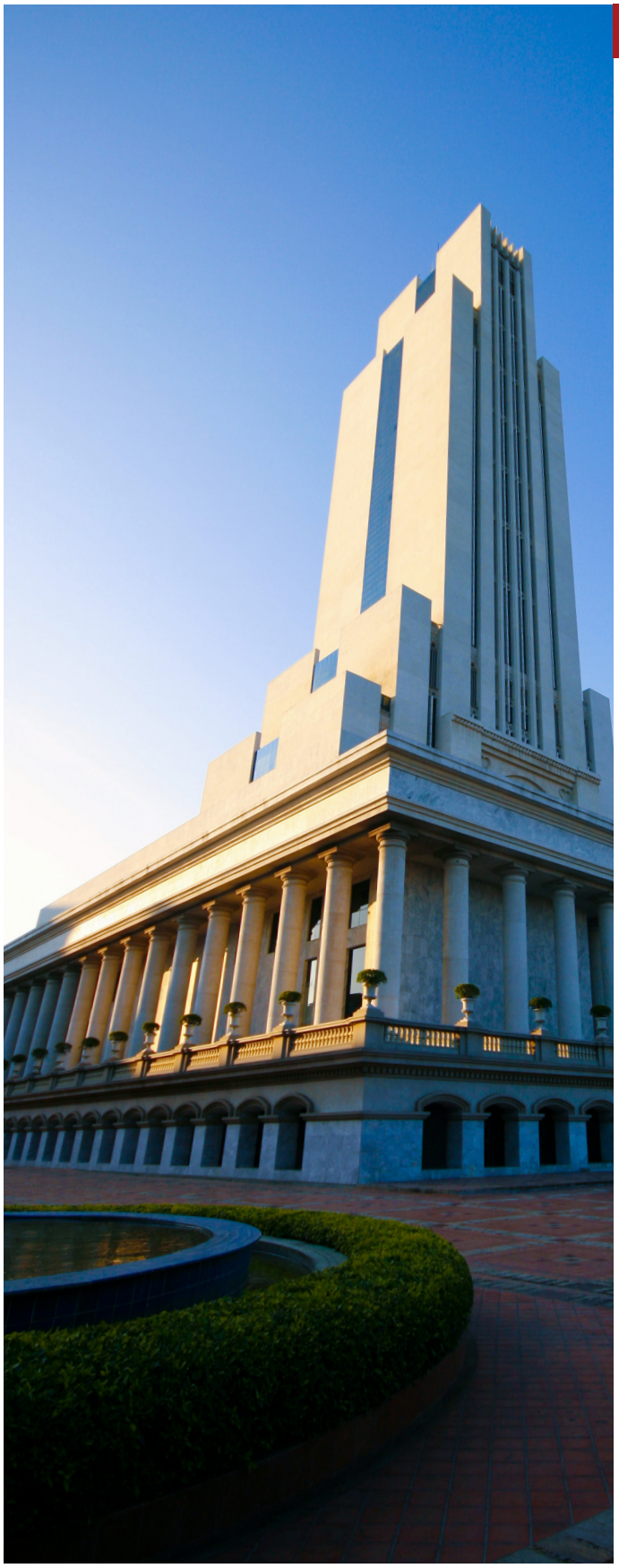
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

FOURTH YEAR
First Semester

INS 4203	Marine and Aviation Insurance	3
INS 4302	Accident, Health and Group Insurance	3
INS 4104	Reinsurance	3
MGT 4914	Entrepreneurship	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

Second Semester

INS 4105	Seminar in Insurance	3
INS 4206	Essential of Risk Management	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF INDUSTRIAL MANAGEMENT AND LOGISTICS

DEGREE CONFERRED
Bachelor of Business Administration
(Industrial Management and Logistics)
B.B.A. (Industrial Management and Logistics)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Industrial Management and Logistics upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows

- Morally sound committed to acting justly and open to future growth
- Posses knowledge of the principles and theories in the functional areas and able to apply with respect to industrial management and logistics.
- Utilize analytical tools, logical and critical thinking, and practical knowledge in order to solve business and industrial problems.
- Able to work as a team as well as have leadership qualities.
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills

COURSES

A. General Education Courses		40 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3





Social Science Courses		**13 Credits**
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses		**6 Credits**
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3

B. Specialized Courses **93 Credits**

Business Core Courses		**48 Credits**
ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses		**30 credits**
IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 3307	International Transportation and Distribution Management	3
IML 3309	Procurement and Supply Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3
IML 4301	Information Technology in Supply Chain	3
IML 4302	Industrial Strategic Management	3
IML 4501	Seminar in Industrial Management and Logistics	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 15 Credits
Or
Plan B: Business Concentration Courses 15 Credits
Or
Plan C: Major Elective Courses 15 Credits

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must study the five specified courses.

Manufacturing Management

IML 3202	Motion and Time Study	3
IML 3403	Industrial Engineering Management	3
IML 4206	Industrial Environmental Management	3
IML 4207	Internship in Industrial Management and Logistics	3 (300 Hours)
IML 4401	Technology and Innovation Management	3



PLAN B – Business Concentration Courses 15 credits

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profit Planning and Control	3

Finance

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

Insurance

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Health, and Group Insurance	3





International Business Management

IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4208	International Strategic Management	3
IBM 4115	Global Product and Brand Planning	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3

PLAN C – Major Elective Courses **15 credits**

Students pursuing PLAN C must select any five major elective courses.

IML 3200	Quantitative Analysis	3
IML 3202	Motion and Time Study	3
IML 3306	Warehousing and Material Handling	3
IML 3308	Supply Chain Relationship Management	3
IML 3402	Facility Management	3
IML 3403	Industrial Engineering Management	3
IML 4202	Production Costing and Budgeting	3
IML 4206	Industrial Environmental Management	3
IML 4207	Internship in Industrial Management and Logistics	3 (300 Hours)
IML 4208	Project Analysis and Management	3
IML 4401	Technology and Innovation Management	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	Global Product and Brand Planning	3
MGT 3922	Introduction to New Venture	3
MGT 3942	Organizational Behavior	3
MGT 4916	Negotiation Strategy	3
MKT 3530	Consumer Behavior	3
MKT 4730	Marketing Management	3

Foreign Language Courses

Business Chinese

CN 0400	Chinese for Beginners I	3
CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Business French

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 3537	Communicative skills in French	3
FR 3538	Basic business French	3

Business Japanese

JA 0723	Reading and Writing Japanese Script	3
JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

C. Free Elective Course **9 Credits**

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and career preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Industrial Management and Logistics Major follow the Industrial Management and Logistics program of studies:

1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
	Total	**18**

Second Semester

IML 3307	International Transportation and Distribution Management	3
IML 3309	Procurement and Supply Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
MGT 3940	Business Research Methodology	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

FOURTH YEAR
First Semester

IML 4203	Quality Management	3
IML 4301	Information Technology in Supply Chain	3
	One Free Elective Course	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

Second Semester

MGT 4914	Entrepreneurship	3
IML 4302	Industrial Strategic Management	3
IML 4501	Seminar in Industrial Management and Logistics	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF REAL ESTATE

DEGREE CONFERRED
Bachelor of Business Administration (Real Estate)
B.B.A. (Real Estate)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Business Administration in Real Estate upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Possess knowledge of real estate principles and essential methods, analytical minds and practical knowledge to make sound real estate business decision
- Demonstrate flexibility in different situations and competence in confronting and solving business problems.
- Able to work as a team and motivate others to work.
- Have positive attitude, interpersonal, communication and presentation skills, IT skills and entrepreneurial skills.



COURSES

A. General Education Courses — **40 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses — **13 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **93 Credits**

Business Core Courses **48 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
MIS 2221	Quantitative Analysis Tools	0
FIN 2201	Principles of Finance	3
FIN 3101	Corporate Finance	3
IBM 2201	International Business Environment	3
MGT 2900	Principles of Management	3
MGT 3905	Operations Management	3
MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3
MKT 2280	Principles of Marketing	3

Major Required Courses **30 credits**

REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3
REM 3212	Real Estate Finance	3
REM 3213	Real Estate Appraisal	3
REM 3214	Principles of Real Estate Investment Analysis	3
REM 4112	Computer Applications in Real Estate	3
REM 4113	Principles of Property Management	3

Concentration Courses

Students must choose one of the three following plans as their concentration courses.

Plan A: Major Concentration Courses 15 Credits
Or
Plan B: Business Concentration Courses 15 Credits
Or
Plan C: Major Elective Courses 15 Credits

PLAN A – Major Concentration Courses **15 credits**

Students pursuing PLAN A must select one of the three following concentrations in the major area and study the five specified courses.

Real Estate Development

REM 4131	Real Estate Project Management	3
REM 4132	Advanced Real Estate Investment Analysis	3
REM 4191	Seminar in Real Estate Business	3
REM 4231	Real Estate Marketing and Brokerage Management	3
REM 4381	Internship in Real Estate Business	3 (300 hrs)

Property Valuation

REM 4141	Advanced Real Estate Appraisal	3
REM 4142	Professional Appraisal Practice and Ethics	3
REM 4192	Seminar in Property Valuation	3
REM 4241	Valuation for Special Purposes	3
REM 4382	Internship in Real Estate Appraisal	3 (300 hrs)

Property Management

REM 4151	Corporate Real Estate Management	3
REM 4152	Facilities Operations and Maintenance	3
REM 4193	Seminar in Property Management	3
REM 4251	Income-producing Property Management	3
REM 4383	Internship in Property Management	3 (300 hrs)

PLAN B – Business Concentration Courses **15 credits**

Students pursuing PLAN B must select a concentration in other business areas and study the five specified courses.

Accounting

ACT 3602	Intermediate Accounting I	3
ACT 3603	Intermediate Accounting II	3
ACT 3614	Taxation I	3
ACT 3632	Cost Accounting	3
ACT 3629	Profit Planning and Control	3



Management Information Systems

MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management and Acquisition	3

Business Economics

(1) Managerial Economics

ECO 2551	Introduction to Econometrics	3
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
ECO 4761	Economics of Strategy	3

(2) Quantitative Economics

ECO 1252	Calculus 1	3
ECO 2551	Introduction to Econometrics	3
ECO 2631	Intermediate Microeconomics	3
ECO 3732	Industrial Organization	3
ECO 4751	Financial Economics	3

Finance

FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

Hospitality and Tourism Management

HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

International Business Management

IBM 2201	International Business Environment	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	Global Product and Brand Planning	3
IBM 4208	International Strategic Management	3



Industrial Management and Logistics

IML 3201	Business Analytics	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3

Insurance

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Health, and Group Insurance	3

Management- Leadership and Entrepreneurship

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

PLAN C – Major Elective Courses **15 credits**

Students pursuing PLAN C must select any five major elective courses.

REM 4131	Real Estate Project Management	3
REM 4132	Advanced Real Estate Investment Analysis	3
REM 4141	Advanced Real Estate Appraisal	3
REM 4142	Professional Appraisal Practice and Ethics	3
REM 4151	Corporate Real Estate Management	3
REM 4152	Facilities Operation and Maintenance	3
REM 4191	Seminar in Real Estate Business	3
REM 4192	Seminar in Property Valuation	3
REM 4193	Seminar in Property Management	3
REM 4221	Directed Study in Real Estate	3
REM 4222	Capital Markets Related to Real Estate Business	3
REM 4231	Real Estate Marketing and Brokerage Management	3
REM 4241	Valuation for Special Purposes	3
REM 4251	Income-producing Property Management	3
REM 4381	Internship in Real Estate Business	3 (300 hours)
REM 4382	Internship in Real Estate Appraisal	3 (300 hours)
REM 4383	Internship in Property Management	3 (300 hours)

C. Free Elective Course **9 Credits**

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Martin de Tours School of Management and Economics pursue the same study plan consisting of general education courses and business core courses, which provide them with the basic knowledge on all the disciplines in business. The study plan also prepares the students with adequate knowledge to select a concentration that suits his/her ability, background, and career preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, students who select the Real Estate Major follow the Real Estate program of studies:
1. Ten Major Required Courses
2. Five Concentration Courses
   Plan A: Major Concentration Courses
   Or Plan B: Business Concentration Courses
   Or Plan C: Major Elective Courses
3. Three Free Elective Courses

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
SA 1201	Statistics I	3
BG 1400	Business Law I	3
GE 1204	Physical Education	1
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BG 1401	Business Law II	3
SA 2200	Statistics II	3
ECO 2201	Microeconomics	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2404	Managerial Psychology	3
MGT 2900	Principles of Management	3
	Total	**18**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
IBM 2201	International Business Environment	3
MKT 2280	Principles of Marketing	3
	Total	**18**

THIRD YEAR
First Semester

MIS 2221	Quantitative Analysis Tools	0
FIN 3101	Corporate Finance	3
MGT 3905	Operations Management	3
REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
	Total	**18**

Second Semester

MGT 3907	Business Communication	3
MGT 3940	Business Research Methodology	3
REM 3211	Principles of Real Estate Development	3
REM 3212	Real Estate Finance	3
REM 3213	Real Estate Appraisal	3
REM 4113	Principles of Property Management	3
	Total	**18**

FOURTH YEAR
First Semester

REM 3214	Principles of Real Estate Investment Analysis	3
REM 4112	Computer Applications in Real Estate	3
	One Free Elective Course	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	One Plan A / Plan B / Plan C Course	3
	Total	**18**

Second Semester

MGT 4914	Entrepreneurship	3
	One Plan A / Plan B / Plan C Course	3
	One Plan B / Plan C Course*	3
	One Free Elective Course	3
	One Free Elective Course	3
	Total	**15**

** Plan A – Internship in Summer Session*

Summer Session (Only for Plan A)

REM 4381	Internship in Real Estate Business	3 (300 hours)
Or		
REM 4382	Internship in Real Estate Appraisal	3 (300 hours)
Or		
REM 4383	Internship in Property Management	3 (300 hours)
	Total	**3 (300 hours)**



DEPARTMENT OF BUSINESS ECONOMICS

DEGREE CONFERRED
Bachelor of Economics (Business Economics)
B.Econ. (Business Economics)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Economics in Business Economics upon students who meet all of the following requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Complete the total number of credits of the curriculum
- Obtain a cumulative grade point average of at least 2.00
- Participate in 16 sessions of the Business and Professional Ethics Seminar
- Have library and financial clearance with the University
- Have demonstrated good behavior and discipline

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Morally sound, committed to acting justly and open to further growth.
- Have essential concepts, frameworks, core body of knowledge, and necessary technical skills to work as a full potential economic professional.
- Able to understand and apply economic reasoning to every aspect of the management and the organization.
- Able to interpret economic information, make economic analysis and forecasting useful for business decision making.
- Flexible, competent and well-rounded in confronting and solving economic problems.
- Able to work as a team and motivate others to work.
- Able to communicate effectively and have good IT skills.



COURSES

A. General Education Courses **33 Credits**

Language Courses **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1408	Thai Usage (For International students)	3

Social Science Courses **6 Credits**

GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses **6 Credits**

GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **102 Credits**

Business Core Courses **35 Credits**

ACT 1600	Fundamentals of Financial Accounting	3
ACT 2620	Fundamentals of Managerial Accounting	3
BIS 1141	Business Software Applications	0
BIS 2180	Information Technology	3
BIS 3340	Computer Tools in Research	0
ECO 1231	Principles of Economics	3
ECO 2531	Principles of Microeconomics	4
ECO 2541	Principles of Macroeconomics	4
ECO 3251	Business Economics Writing	3
ECO 3252	Information Literacy Skills	3
FIN 3101	Corporate Finance	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **40 credits**
Plan A : Managerial Economics

ECO 1251	Statistics for Economists	4
ECO 2551	Introduction to Econometrics	3
ECO 2561	Economy, Society and Government	3
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
ECO 3732	Industrial Organization	3
ECO 3741	Monetary Economics	3
ECO 4551	History of Economics Thoughts	3
ECO 4761	Economics of Strategy	3
ECO 4961	Managerial Economic Research	3
MGT 3940	Business Research Methodology	3
MGT 4914	Entrepreneurship	3

Major Required Courses **40 credits**
Plan B : Quantitative Economics

ECO 1251	Statistics for Economists	4
ECO 1252	Calculus I	3
ECO 1253	Calculus II	3
ECO 2551	Introduction to Econometrics	3
ECO 2631	Intermediate Microeconomics	3
ECO 2641	Intermediate Macroeconomics	3
ECO 3741	Monetary Economics	3
ECO 3771	Advanced Microeconomics	3
ECO 3772	Intermediate Econometrics	3
ECO 3773	Mathematical Economics	3
ECO 4551	History of Economics Thoughts	3
ECO 4971	Quantitative Economic Research	3
ECO 4972	Independent Study	3

Major Elective Courses **12 credits**
Plan A : Managerial Economics

ECO 3733	Economics of Human Resources	3
ECO 3734	Agriculture Economics and Agri - business	3
ECO 3735	Public Economics	3
ECO 3751	Business Cycle and Forecasting	3
ECO 3771	Advanced Microeconomics	3
ECO 4731	Economics of Sustainability	3
ECO 4741	International Finance	3
REM 3113	Real Estate Economics	3

Major Elective Courses **12 credits**
Plan B : Quantitative Economics

ECO 3731	International Trade	3
ECO 3732	Industrial Organization	3
ECO 3733	Economics of Human Resources	3
ECO 3734	Agriculture Economics and Agri-business	3
ECO 3735	Public Economics	3
ECO 3751	Business Cycle and Forecasting	3
ECO 4731	Economics of Sustainability	3
ECO 4741	International Finance	3
ECO 4751	Financial Economics	3
ECO 4761	Economics of Strategy	3

Business Concentration Courses **15 credits**

Student must choose one of the following groups of concentration as their business concentration:

Finance and Banking

FIN 3201	Investment	3
FIN 3202	Valuation	3
FIN 3203	Bank management	3
FIN 3221	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

Management Information Systems

BIS 3115	Programming and Algorithms	3
BIS 3348	Principles of Multimedia	3
BIS 3617	Web Design and Programming	3
BIS 3635	Database systems	3
BIS 3666	Information systems Analysis and Design	3



International Business Management

IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	International Product and Brand Planning	3
IBM 4208	International Strategic Management	3

Industrial Management

IDM 3203	Logistics and Supply Chain Management	3
IDM 3204	Industrial Safety and Risk Management	3
IDM 4201	Manufacturing Planning and Control	3
IDM 4203	Quality Management	3
IDM 4206	Industrial Environmental Management	3

Insurance Management

INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4302	Accident, Group and Health Insurance	3

Management

MGT 3901	Organization Theory	3
MGT 3917	Innovation and Change Management	3
MGT 3922	Introduction to New Ventures	3
MGT 3942	Organization Behavior	3
MGT 4916	Negotiation Strategy	3

Marketing

MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4730	Marketing Management	3

Real Estate

REM 3111	Principles of Real Estate	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3
REM 3212	Real Estate Finance	3
REM 3213	Real Estate Appraisal	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any)

STUDY PLAN

First and Second Years (Freshmen and Sophomore)
During the freshmen year, all students in Business Economics pursue the same study plan consisting of general education courses and business core courses, which provides them with the basic knowledge on all the disciplines in Economics and Business. The study plan also prepares the students with adequate knowledge to select a business concentration that suits his/her ability, background, and preferences.

Third and Fourth Years (Junior and Senior)
During the junior and senior years, Business Economics students follow the Economics program of studies:

1. Thirteen Major Required Courses
2. Four Major Electives Courses
3. Five Business Concentration Courses
4. Two Free Elective Courses

PLAN A : MANAGERIAL ECONOMICS

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
BIS 1141	Business Software Appliucations	0
ECO 1231	Principles of Economics	3
ECO 1251	Statistics for Economists	4
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
MA 1200	Mathematics for Business	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BIS 2180	Information Technology	3
ECO 2531	Principles of Microeconomics	4
ECO 2561	Economy, Society and Government	3
MGT 1101	Introduction to Business	3
	Total	**19**

SECOND YEAR
First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 2541	Principles of Macroeconomics	4
ECO 2551	Introduction to Econometrics	3
GE 2101	World Civilization	3
MKT 2280	Principles of Marketing	3
	Total	**19**

Second Semester

BG 2001	English IV	3
BIS 3340	Computer Tools in Research	0
ECO 2641	Intermediate Macroeconomics	3
ECO 2661	Managerial Economics	3
ECO 3731	International Trade	3
GE 2202	Ethics	3
MGT 2900	Principles of Management	3
	Total	**18**

THIRD YEAR
First Semester

ECO 3251	Business Economics Writing	3
ECO 3252	Information Literacy Skills	3
ECO 3741	Monetary Economics	3
FIN 3101	Corporate Finance	3
MGT 2404	Managerial Psychology	3
MGT 3940	Business Research Methodology	3
	Total	**18**

Second Semester

ECO 3732	Industrial Organization	3
ECO 4761	Economics of Strategy	3
	Two Major Elective Courses	6
	Two Business Concentration Courses	6
	Total	**18**

FOURTH YEAR
First Semester

ECO 4551	History of Economic Thoughts	3
MGT 4914	Entrepreneurship	3
	Two Business Concentration Course	6
	One Major Elective Course	3
	Total	**15**

Second Semester

ECO 4961	Managerial Economic Research	3
	One Business Concentration Course	3
	One Major Elective Course	3
	Two Free Elective Courses	6
	Total	**15**

PLAN B : QUANTITATIVE ECONOMICS

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
BIS 1141	Business Software Applications	0
ECO 1231	Principles of Economics	3
ECO 1251	Statistics for Economists	4
GE 1301	Environmental Science	3
GE 1403	Communication in Thai (for Thai students)	3
MA 1200	Mathematics for Business	3
	Total	**19**

Second Semester

ACT 1600	Fundamentals of Financial Accounting	3
BG 1002	English II	3
BIS 2180	Information Technology	3
ECO 1252	Calculus I	3
ECO 2531	Principles of Microeconomics	4
MGT 1101	Introduction to Business	3
	Total	**19**

SECOND YEAR

First Semester

ACT 2620	Fundamentals of Managerial Accounting	3
BG 2000	English III	3
ECO 1253	Calculus II	3
ECO 2541	Principles of Macroeconomics	4
ECO 2551	Introduction to Econometrics	3
MKT 2280	Principles of Marketing	3
	Total	**19**

Second Semester

BG 2001	English IV	3
BIS 3340	Computer Tools in Research	0
ECO 2631	Intermediate Microeconomics	3
ECO 2641	Intermediate Macroeconomics	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
MGT 2900	Principles of Management	3
	Total	**18**

THIRD YEAR

First Semester

ECO 3251	Business Economics Writing	3
ECO 3252	Information Literacy Skills	3
ECO 3741	Monetary Economics	3
ECO 3773	Mathematical Economics	3
FIN 3101	Corporate Finance	3
MGT 2404	Managerial Psychology	3
	Total	**18**

Second Semester

ECO 3771	Advanced Microeconomics	3
ECO 3772	Intermediate Econometrics	3
	Two Major Elective Courses	6
	Two Business Concentration Courses	6
	Total	**18**

FOURTH YEAR

First Semester

ECO 4551	History of Economic Thoughts	3
ECO 4971	Quantitative Economic Research	3
	Two Business Concentration Courses	6
	One Major Elective Course	3
	Total	**15**

Second Semester

ECO 4972	Independent Study	3
	One Business Concentration Course	3
	One Major Elective Course	3
	Two Free Elective Courses	6
	Total	**15**

THEODORE MARIA SCHOOL OF **ARTS**





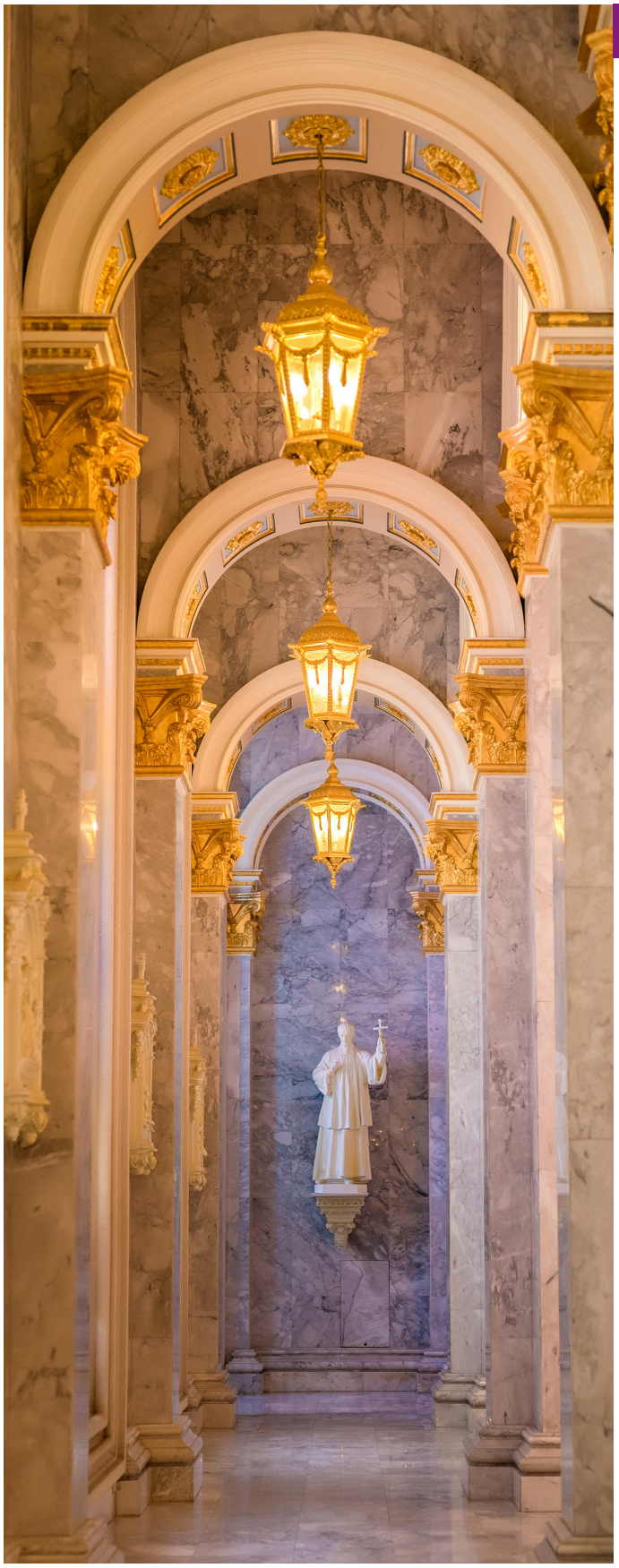
THEODORE MARIA SCHOOL OF ARTS

CURRICULUM STRUCTURE

COURSES	BUSINESS ENGLISH	BUSINESS FRENCH	BUSINESS CHINESE	BUSINESS JAPANESE
A. General Education Courses	40	40	37	40
Language Courses	15	15	15	15
Social Science Courses	16	13	10	13
Humanities Courses	3	6	6	6
Science and Mathematics Courses	6	6	6	6
B. Specialized Courses	96	96	99	96
Required Core Courses	18	30	15	24
Elective Core Courses	9	-	-	-
Major Required Courses	36	39	48	39
Major Elective Courses	15	9	18	15
Minor Courses	18	18	18	18
C. Free Elective Courses	6	6	6	6
Total	**142**	**142**	**142**	**142**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts upon students who meet all the following requirements:
- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



DEPARTMENT OF BUSINESS ENGLISH

DEGREE CONFERRED
Bachelor of Arts (Business English)
B.A. (Business English)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts in Business English upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows :

- Have a sense of social and self-responsibility and become an ethical citizen of the society
- Have English proficiency necessary for business executions and be well-rounded in terms of intercultural communication.
- Demonstrate skills and expertise in applying knowledge to real life context and solving problems creatively and efficiently.
- Be able to work and communicate effectively with both Thai and international people with respect and courtesy.
- Be able to use computer and technologies in communicating and presenting information.



COURSES

A. General Education Courses — 40 Credits

Language Courses — 15 Credits

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses — 16 Credits

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1204	Physical Education	1
GE 1205	ASEAN Ways	3
GE 2202	Ethics	3
MGT 2404	Managerial Psychology	3

Humanities Courses — 3 Credits

GE 2101	World Civilization	3

Science and Mathematics Courses — 6 Credits

BG 1301	Fundamentals of Statistics	3
GE 1301	Environmental Science	3





B. Specialized Courses **96 Credits**

Required Core Courses **18 Credits**

MIS 1221	Computer Literacy	0
GE 2103	Art of Reasoning	3
GL 1101	Elements of Spoken Language	3
GL 3102	Introduction to Linguistics	3
GL 3104	Language, Culture, and Society	3
GL 3105	Integrated English Skills	3
MGT 1101	Introduction to Business	3

Elective Core Courses **9 credits**

ACT 1601	Fundamentals of Financial Accounting	3
FIN 2201	Principles of Finance	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3
MIS 2111	Introduction to Management Information Systems	3

Major Required Courses **36 credits**

EN 2230	Listening and Speaking	3
EN 3212	Communicative Writing Development	3
EN 3213	Business Communication in English	3
EN 3240	Reading in Business English	3
EN 3270	Translation: English-Thai	3
or		
EN 4254	Academic Writing (only for foreign students)	3
EN 3271	Translation: Thai-English	3
or		
EN 4292	Business Article Writing (only for foreign students)	3
EN 4232	Business Conversation	3
EN 4233	Public Speaking in English	3
EN 4241	Critical and Analytical Reading	3
EN 4256	Introduction to Business Research Writing	3
EN 4257	Understanding and Note-taking in Business Context	3
EN 4258	Reading in English Journalism	3

Major Elective Courses **15 credits**

EN 3234	English Pronunciation	3
EN 3281	English for Tourism	3
EN 3282	English for Hotels	3
EN 3283	English for International Trade	3
EN 3287	English for Office Management	3
EN 3288	English for Airline Business	3
EN 3289	English for Music Business	3
EN 3290	English for Entrepreneurship	3
EN 3291	Intercultural Business Communication	3
EN 3292	Grammar Essentials for Professional Life	3
EN 3293	English for Human Resources	3
EN 4254	Academic Writing	3
EN 4262	Reading of Modern Viewpoints	3
EN 4272	Translation in Business English	3
EN 4291	Seminar in Business English	3
EN 4292	Business Article Writing	3
EN 4293	Business English Internship	3

Minor Courses **18 Credits**

(1) Business Chinese

Minor Required Courses **12 Credits**

CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Chinese upon completion of the prerequisites (if any).

(2) Business French

Minor Required Courses **12 Credits**

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 2502	French III	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business French upon completion of the prerequisites (if any).

(3) Business Japanese

Minor Required Courses **12 Credits**

JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Japanese upon completion of the prerequisites (if any).





(4) Thai (Only for international students)

Minor Required Courses		18 Credits
TH 1500	Introduction to Thai	3
TH 1501	Thai Language I	3
TH 2501	Thai Language II	3
TH 2502	Thai Language III	3
TH 3501	Advanced Reading	3
TH 3502	Advanced Thai Writing	3

(5) Management Information Systems

Minor Required Courses		18 Credits
MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

(6) Finance

Minor Required Courses		18 Credits
FIN 3101	Corporate Finance	3
FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

(7) Hospitality and Tourism Management

Minor Required Courses		18 Credits
HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

(8) International Business Management

Minor Required Courses		18 Credits
IBM 2201	International Business Environment	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	International Product and Brand Planning	3
IBM 4208	International Strategic Management	3

(9) Industrial Management and Logistics

Minor Required Courses		18 Credits
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3
IML 3309	Procurement and Supply Management	3
MGT 3905	Operations Management	3

(10) Management-Leadership and Entrepreneurship

Minor Required Courses		18 Credits
MGT 3901	Organization Theory	3
MGT 3903	Leadership	3
MGT 3917	Innovation and Change Management	3
MGT 3923	Strategic Human Resources Management	3
MGT 3942	Organizational Behaviour	3
MGT 4916	Negotiation Strategy	3



(11) Marketing

Minor Required Courses		18 Credits
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3837	Service and Customer Relationship Management	3
MKT 4730	Marketing Management	3
MKT 4809	Marketing for Services	3

(12) Music Business

Minor Required Courses		18 Credits
MS 1301	Musical Skills I	2
MS 1302	Musical Skills II	2
MS 2301	Musical Skills III	2
MB 2433	Computer Application for Musicians	3
MB 2531	Music Business	3
MB 2532	Music Industry	3
MB 3512	Legal Aspects of Music Business	3

(13) Real Estate Management

Minor Required Courses		18 Credits
REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3
REM 4113	Principles of Property Management	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
MGT 1101	Introduction to Business	3
GE 1205	ASEAN Ways	3
GE 1404	Physical Education	1
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3
GE 1301	Environmental Science	3
	Total	**16**

Second Semester

BG 1002	English II	3
BG 1301	Fundamentals of Statistics	3
GE 2101	World Civilization	3
GE 2103	Art of Reasoning	3
ECO 2201	Microeconomics	3
GL 1101	Elements of Spoken Language	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2202	Macroeconomics	3
MIS 1221	Computer Literacy	0
MGT 2404	Managerial Psychology	3
EN 2230	Listening and Speaking	3
	One Elective Core Course	3
	One Elective Core Course	3
	Total	**18**

Second Semester

BG 2001	English IV	3
GE 2202	Ethics	3
EN 3212	Communicative Writing Development	3
	One Free Elective Course	3
	One Elective Core Course	3
	One Minor Course	3
	Total	**18**

THIRD YEAR

First Semester

GL 3102	Introduction to Linguistics	3
EN 3213	Business Communication in English	3
EN 3270	Translation: English-Thai	3
or		
EN 4254	Academic Writing (only for foreign students)	3
EN 3240	Reading in Business English	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

Second Semester

GL 3104	Language, Culture and Society	3
GL 3105	Integrated English Skills	3
EN 3271	Translation: Thai-English	3
or		
EN 4292	Business Article Writing (only for foreign students)	3
EN 4232	Business Conversation	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

FOURTH YEAR

First Semester

EN 4257	Understanding and Note-taking in Business Context	3
EN 4258	Reading in English Journalism	3
	One Major Elective Course	3
	One Minor Course	3
	One Minor Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

EN 4233	Public Speaking in English	3
EN 4241	Critical and Analytical Reading	3
EN 4256	Introduction to Business Research Writing	3
	One Major Elective Course	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**



DEPARTMENT OF BUSINESS FRENCH

DEGREE CONFERRED
Bachelor of Arts (Business French)
B.A. (Business French)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts Program in Business French upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline.
- Have obtained the English proficiency specified in one of the following criteria :

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have a sense of social and self responsibility and become ethical citizens of the society.
- Have up-to-date and business language skills both in French and in English for listening, speaking, reading and writing.
- Demonstrate skills and expertise in applying the knowledge to real life context and solving problems creatively and efficiently.
- Be able to work and communicate effectively with both Thai and international people with respect and courtesy.
- Be able to use computer and other technologies in communicating and presenting information.



COURSES

A. General Education Courses **40 Credits**

Language Courses **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3

Social Science Courses **13 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1201	Information Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 2404	Managerial Psychology	3

Humanities Courses **6 Credits**

GE 1101	Thai Civilization	3
GE 2101	World Civilization	3

Science and Mathematics Courses **6 Credits**

MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3






B. Specialized Courses **96 Credits**

Core Courses **30 Credits**

ACT 1601	Fundamentals of Financial Accounting	3
BG 1301	Fundamentals of Statistics	3
FIN 2201	Principle of Finance	3
GE 2103	Art of Reasoning	3
GL 1101	Elements of Spoken Language	3
GL 3102	Introduction to Linguistics	3
GL 3103	Language, Culture and Behavior	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MIS 1221	Computer Literacy	0
MKT 2280	Principles of Marketing	3

Major Required Courses **39 credits**

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 2502	French III	3
FR 3501	Business French I	3
FR 3512	Business Communication in French	3
FR 3530	Oral Comprehension and Expression	3
FR 3534	French Phonetics	3
FR 3570	Translation: French-Thai	3
or		
FR 3532	French Conversation and Discussion (for foreign students)	3
FR 4502	Business French II	3
FR 4542	Reading French Magazines and Newspapers	3
FR 4573	Aspects of French-Speaking Countries	3
FR 4574	French for Academic and Professional Purposes	3

Major Elective Courses **9 credits**

FR 3532	French Conversation and Discussion	3
FR 3537	Communicative Skills in French	3
FR 3581	French for Tourism	3
FR 3582	French for Hotels	3
FR 4540	Reading in Business French	3
FR 4572	Translation in Business French	3
FR 4590	Seminar	3
FR 4591	Selected Topics in French Studies	3

Minor Courses **18 Credits**

(1) Business Chinese

Minor Required Courses **12 Credits**

CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Chinese upon completion of the prerequisites (if any).

(2) Business English

Minor Required Courses **12 Credits**

EN 2230	Listening and Speaking	3
EN 3212	Communicative Writing Skill Development	3
EN 3213	Business Communication in English	3
EN 4232	Business Conversation	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business English upon completion of the prerequisites (if any).

(3) Business Japanese

Minor Required Courses **12 Credits**

JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

Minor Elective Courses **6 Credits**

Students can choose any courses from the Department of Business Japanese upon completion of the prerequisites (if any).

(4) Finance

Minor Required Courses **18 Credits**

FIN 3101	Corporate Finance	3
FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3





(5) Hospitality and Tourism Management

Minor Required Courses		18 Credits
HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

(6) International Business Management

Minor Required Courses		18 Credits
IBM 2201	International Business Environment	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	Global Product and Brand Planning	3
IBM 4208	International Strategic Management	3

(7) Industrial Management and Logistics

Minor Required Courses		18 Credits
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 3309	Procurement and Supply Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3
MGT 3905	Operations Management	3

(8) Music Business

Minor Required Courses		18 Credits
MS 1301	Musical Skills I	2
MS 1302	Musical Skills II	2
MS 2301	Musical Skills III	2
MB 2433	Computer Application for Musicians	3
MB 2531	Music Business	3
MB 2532	Music Industry	3
MB 3512	Legal Aspects of Music Business	3

(9) Management Information Systems

Minor Required Courses		18 Credits
MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

(10) Management-Leadership and Entrepreneurship

Minor Required Courses		18 Credits
MGT 3901	Organization Theory	3
MGT 3903	Leadership	3
MGT 3917	Innovation and Change Management	3
MGT 3923	Strategic Human Resources Management	3
MGT 3942	Organizational Behavior	3
MGT 4916	Negotiation Strategy	3

(11) Marketing

Minor Required Courses		18 Credits
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3837	Service and Customer Relationship Management	3
MKT 4730	Marketing Management	3
MKT 4809	Marketing for Services	3

(12) Real Estate

Minor Required Courses		18 Credits
REM 3111	Principles of Real Estate	3
REM 3112	Real Estate Law	3
REM 3113	Real Estate Economics	3
REM 3114	Building Design and Construction Techniques	3
REM 3211	Principles of Real Estate Development	3
REM 4113	Principles of Property Management	3

C. Free Elective Course — 6 Credits

Students can choose free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1201	Information Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
GE 1101	Thai Civilization	3
FR 1500	Introduction to French	3
MGT 1101	Introduction to Business	3
	Total	**16**

Second Semester

BG 1002	English II	3
FR 1501	French I	3
GE 1301	Environmental Science	3
GE 2202	Ethics	3
GL 1101	Elements of Spoken Language	3
MA 1200	Mathematics for Business	3
MIS 1221	Computer Literacy	0
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2201	Microeconomics	3
FR 2501	French II	3
FIN 2201	Principle of Finance	3
GE 2101	World Civilization	3
MKT 2280	Principles of Marketing	3
	Total	**18**

Second Semester

BG 2001	English IV	3
ECO 2202	Macroeconomics	3
FR 2502	French III	3
GE 2103	Art of Reasoning	3
MGT 2900	Principles of Management	3
MGT 2404	Managerial Psychology	3
	Total	**18**

THIRD YEAR

First Semester

FR 3501	Business French I	3
FR 3512	Business Communication in French I	3
FR 3530	Oral Comprehension and Expression	3
GL 3102	Introduction to Linguistics	3
	One Minor Course	3
	One Major Elective Course	3
	Total	**18**

Second Semester

BG 1301	Fundamental of Statistics	3
FR 3534	French Phonetics	3
FR 3570	Translation : French-Thai	3
or		
FR 3532	French Conversation and Discussion (for foreign students)	3
GL 3103	Language, Culture and Behavior	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

FOURTH YEAR

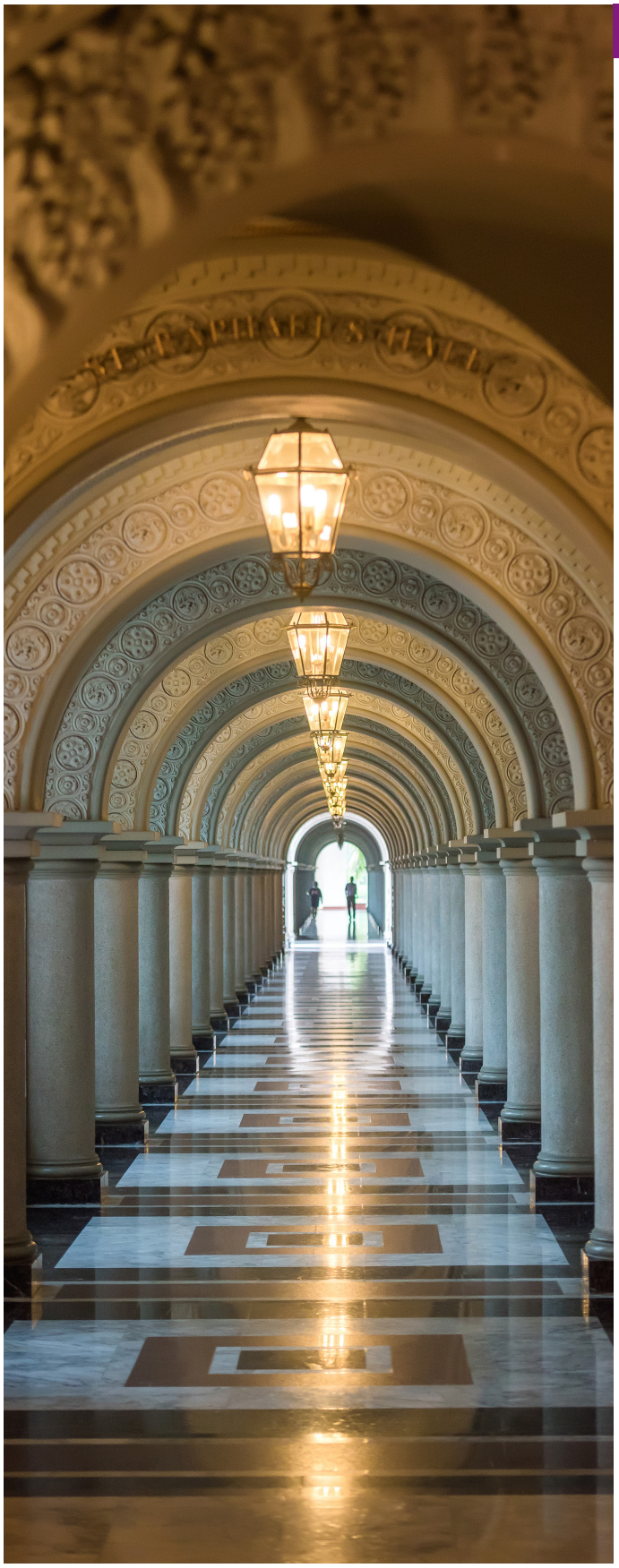
First Semester

ACT 1601	Fundamental of Financial Accounting	3
FR 4542	Reading French Magazines and Newspapers	3
FR 4573	Aspects of French-Speaking Countries	3
	One Major Elective Course	3
	One Minor Course	3
	One Free Elective Course	3
	Total	**18**

Second Semester

FR 4502	Business French II	3
FR 4574	French for Academic and Professional Purposes	3
	One Free Elective Course	3
	Three Minor Courses	9
	Total	**18**





DEPARTMENT OF BUSINESS CHINESE

DEGREE CONFERRED
Bachelor of Arts (Business Chinese)
B.A. (Business Chinese)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts in Business Chinese upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have personal integrity, positive attitude and a sense of social and self responsibility.
- Have Chinese and English proficiency necessary for business executions.
- Have analytical and critical skills, initiative and ability to apply knowledge to real practice.
- Have ability to work and communicate with both Thai and international people with respect and courtesy
- Have computer and information technology skills.



COURSES

A. General Education Courses — **37 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3

Social Science Courses — **10 Credits**

ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1201	Information Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 2202	Ethics	3

Humanities Courses — **6 Credits**

GE 1101	Thai Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — **6 Credits**

BG 1301	Fundamentals of Statistics	3
GE 2301	Lifestyles in Dynamic World	3





B. Specialized Courses **99 Credits**

Required Core Courses **15 Credits**

ACT 1601	Fundamentals of Financial Accounting	3
GL 1101	Elements of Spoken Language	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **48 credits**

CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 1430	Listening and Speaking in Chinese I	1
CN 1431	Listening and Speaking in Chinese II	1
CN 2401	Chinese II	3
CN 2402	Chinese III	3
CN 2431	Chinese Oral Comprehension and Expression I	2
CN 2432	Chinese Oral Comprehension and Expression II	2
CN 3403	Chinese IV	3
CN 3436	Chinese Business Conversation I	3
CN 3437	Chinese Business Conversation II	3
CN 3450	Introduction to Chinese Writing	3
CN 3451	Communicative Writing in Chinese	3
CN 3463	Introduction to Chinese Culture	3
CN 3470	Translation I: Chinese-Thai	3
or		
CN 3441	Chinese Reading and Oral Report (Only for foreign students)	3
CN 4442	Reading in Chinese Newspapers	3
CN 4452	Business Writing in Chinese	3
CN 4471	Translation II: Thai-Chinese	3
or		
CN 4440	Reading in Business Chinese (Only for foreign students)	3

Major Elective Courses **18 credits**

CN 3420	Integrated Chinese Skills	3
CN 3433	Chinese from Audio-Visual Media	3
CN 3441	Chinese Reading and Oral Report	3
CN 3481	Chinese for Tourism	3
CN 3482	Chinese for Hotels	3
CN 3483	Chinese for Service Industries	3
CN 3484	Chinese for Office Management	3
CN 4433	Public Speaking in Chinese	3
CN 4436	Advanced Business Conversation in Chinese	3
CN 4440	Reading in Business Chinese	3
CN 4460	Survey of Chinese Literature	3
CN 4491	Seminar on Selected Topics	3
CN 4492	Chinese Internship	3

Minor Courses **18 Credits**

(1) Business English

Minor Required Courses **12 Credits**

EN 2230	Listening and Speaking	3
EN 3212	Communicative Writing Skill Development	3
EN 3213	Business Communication in English	3
EN 4232	Business Conversation	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business English upon completion of the prerequisites (if any).

(2) Business French

Minor Required Courses **12 Credits**

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 2502	French III	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business French upon completion of the prerequisites (if any).

(3) Business Japanese

Minor Required Courses **12 Credits**

JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Japanese upon completion of the prerequisites (if any).

(4) Finance

Minor Required Courses **18 Credits**

FIN 3101	Corporate Finance	3
FIN 3102	Business and Economic Analysis for Decision Making	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3



(5) Hospitality and Tourism Management

Minor Required Courses		18 Credits
HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

(6) International Business Management

Minor Required Courses		18 Credits
IBM 2201	International Business Environment	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4208	International Strategic Management	3
IBM 4115	Global Product and Brand Planning	3

(7) Insurance

Minor Required Courses		18 Credits
INS 3101	Principles of Risk Management and Insurance	3
INS 3201	Property Insurance	3
INS 3202	Casualty Insurance	3
INS 3301	Principles of Life Assurance	3
INS 4206	Essentials of Risk Management	3
INS 4302	Accident, Health and Group Insurance	3

(8) Management - Leadership and Entrepreneurship

Minor Required Courses		18 Credits
MGT 3901	Organization Theory	3
MGT 3903	Leadership	3
MGT 3917	Innovation and Change Management	3
MGT 3923	Strategic Human Resources Management	3
MGT 3942	Organizational Behavior	3
MGT 4916	Negotiation Strategy	3

(9) Management Information Systems

Minor Required Courses		18 Credits
MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

(10) Marketing

Minor Required Courses		18 Credits
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3837	Service and Customer Relationship Management	3
MKT 4730	Marketing Management	3
MKT 4809	Marketing for Services	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

Free elective courses of the Department which are offered to non Business Chinese Major:

CN 0400	Chinese for Beginners I	3
CN 0401	Chinese for Beginners II	3

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1101	Thai Civilization	3
GE 1201	Information and Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 2301	Lifestyles in Dynamic World	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
CN 1400	Introduction to Chinese	3
CN 1430	Listening and Speaking in Chinese I	1
	Total	**17**

Second Semester

BG 1002	English II	3
BG 1301	Fundamentals of Statistics	3
ECO 2201	Microeconomics	3
GL 1101	Elements of Spoken Language	3
MIS 1221	Computer Literacy	0
MGT 1101	Introduction to Business	3
CN 1401	Chinese I	3
CN 1431	Listening and Speaking in Chinese II	1
	Total	**19**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2202	Macroeconomics	3
MGT 2404	Managerial Psychology	3
MKT 2280	Principles of Marketing	3
CN 2401	Chinese II	3
CN 2431	Chinese Oral Comprehension and Expression I	2
	Total	**17**

Second Semester

ACT 1601	Fundamentals of Financial Accounting	3
BG 2001	English IV	3
GE 2202	Ethics	3
MGT 2900	Principles of Management	3
CN 2402	Chinese III	3
CN 2432	Chinese Oral Comprehension and Expression II	2
	Total	**17**

THIRD YEAR

First Semester

CN 3403	Chinese IV	3
CN 3436	Chinese Business Conversation	3
CN 3450	Introduction to Chinese Writing	3
CN 3470	Translation I: Chinese-Thai	3
or		
CN 3441	Chinese Reading and Oral Report (only for foreign students)	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

Second Semester

CN 3437	Chinese Business Conversation II	3
CN 3451	Communicative Writing in Chinese	3
CN 3463	Introduction to Chinese Culture	3
	Two Major Elective Courses	6
	One Minor Course	3
	Total	**18**

FOURTH YEAR

First Semester

CN 4452	Business Writing in Chinese	3
CN 4471	Translation II: Thai-Chinese	3
or		
CN 4440	Reading in Business Chinese (only for foreign students)	3
	One Major Elective Courses	3
	One Minor Course	3
	Two Free Elective Courses	6
	Total	**18**

Second Semester

CN 4442	Reading in Chinese Newspapers	3
	Two Major Elective Courses	6
	Three Minor Courses	9
	Total	**18**





DEPARTMENT OF BUSINESS JAPANESE

DEGREE CONFERRED
Bachelor of Arts (Business Japanese)
B.A. (Business Japanese)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts in Business Japanese upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- English proficiency standard for undergraduate level Prior to graduation, undergraduate students are obligated to meet the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have a sense of social and self responsibility and become an ethical citizen of the society.
- Have up-to-date and business language skills both in Japanese and in English for listening, speaking, reading and writing through technologies.
- Demonstrate skills and expertise in applying knowledge to real life context and solving problems creatively and efficiently.
- Be able to work and communicate effectively with both Thai and international people with respect and courtesy.
- Be able to use information technology and other technologies in communicating and presenting information.

COURSES

A. General Education Courses		40 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3
Social Science Courses		**13 Credits**
ECO 2201	Microeconomics	3
ECO 2202	Macroeconomics	3
GE 1201	Information Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 2404	Managerial Psychology	3
Humanities Courses		**6 Credits**
GE 1101	Thai Civilization	3
GE 2101	World Civilization	3
Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3





B. Specialized Courses **96 Credits**

Required Core Courses **24 Credits**

BG 1301	Fundamentals of Statistics	3
MIS 1221	Computer Literacy	0
MIS 2111	Introduction to Management Information Systems	3
FIN 2201	Principles of Finance	3
GL 1101	Elements of Spoken Language	3
GL 3102	Introduction to Linguistics	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **39 credits**

JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3
JA 2703	Basic Reading and Writing in Japanese I	3
JA 2704	Basic Reading and Writing in Japanese II	3
JA 3701	Intermediate Japanese Grammar	3
JA 3702	Business Japanese I	3
JA 3704	Oral Comprehension and Expression	3
JA 4701	Reading in Business Japanese I	3
JA 4702	Business Writing in Japanese I	3
JA 4703	Translation I: Japanese-Thai	3
or		
JA 4721	Japanese Conversation and Discussion	3
or		
JA 4726	Public Speaking in Japanese (for international students)	3
JA 4704	Translation II: Thai-Japanese	3
or		
JA 4725	Translation in Business Japanese (for international students)	3

Major Elective Courses **15 credits**

JA 3721	Introduction to Japanese Linguistics	3
JA 3722	Japanese Reading and Oral Report	3
JA 3723	Introduction to Japanese Phonetics	3
JA 3724	Aspects of Japan	3
JA 3725	Japanese for Secretaries	3
JA 3726	Japanese for Tourism	3
JA 3727	Japanese for Hotels	3
JA 3728	Japanese for Airline Services	3
JA 3729	Survey of Japanese Literature	3
JA 4721	Japanese Conversation and Discussion	3
JA 4722	Reading in Business Japanese II	3
JA 4723	Business Writing in Japanese II	3
JA 4724	Business Japanese II	3
JA 4725	Translation in Business Japanese	3
JA 4726	Public Speaking in Japanese	3
JA 4727	Seminar	3
JA 4728	Internship	6

Minor Courses **18 Credits**

(1) Business English

Minor Required Courses **12 Credits**

EN 2230	Listening and Speaking	3
EN 3212	Communicative Writing Skill Development	3
EN 3213	Business Communication in English	3
EN 4232	Business Conversation	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business English upon completion of the prerequisites (if any).

(2) Business French

Minor Required Courses **12 Credits**

FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 2502	French III	3

Minor Elective Courses **6 Credits**

Students can take any course from the Department of Business French upon completion of the prerequisites (if any).

(3) Business Chinese

Minor Required Courses **12 Credits**

CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Chinese upon completion of the prerequisites (if any).





(4) Thai (Only for international students)

Minor Required Courses		18 Credits
TH 1501	Introduction to Thai	3
TH 1502	Thai Language I	3
TH 2501	Thai Language II	3
TH 2502	Thai Language III	3
TH 3501	Advanced Reading	3
TH 3502	Advanced Thai Writing	3

(5) Management Information Systems

Minor Required Courses		18 Credits
MIS 3111	Business Process Management	3
MIS 3121	Database Systems	3
MIS 3122	Principles of Electronic Commerce	3
MIS 4111	Information Systems Project Management	3
MIS 4122	Business Intelligence	3
MIS 4211	Information Systems Strategy, Management, and Acquisition	3

(6) Finance

Minor Required Courses		18 Credits
FIN 3101	Corporate Finance	3
FIN 3102	Business and Economic Analysis for Making Decision	3
FIN 3201	Investment	3
FIN 3203	Bank Management	3
FIN 3231	Financial Feasibility Planning	3
FIN 4101	Financial Management	3

(7) Hospitality and Tourism Management

Minor Required Courses		18 Credits
HTM 3101	Introduction to Hospitality Management	3
HTM 3102	Introduction to Tourism Management	3
HTM 3103	Consumer Behavior in Hospitality and Tourism Industry	3
HTM 3205	Marketing in Hospitality and Tourism	3
HTM 3206	Personality and Communication Management in Hospitality and Tourism	3
HTM 3211	Food and Beverage Management	3

(8) International Business Management

Minor Required Courses		18 Credits
IBM 2201	International Business Environment	3
IBM 3101	Cross Cultural Human Resource Management	3
IBM 3102	Export-Import Policy and Strategy	3
IBM 3203	International Management	3
IBM 4115	Global Product and Brand Planning	3
IBM 4208	International Strategic Management	3

(9) Industrial Management and Logistics

Minor Required Courses		18 Credits
MGT 3905	Operations Management	3
IML 3203	Logistics and Supply Chain Management	3
IML 3204	Industrial Safety and Risk Management	3
IML 4201	Lean Manufacturing and Agile Supply Chain	3
IML 4203	Quality Management	3
IML 3309	Procurement and Supply Management	3

(10) Management – Leadership and Entrepreneurship

Minor Required Courses		18 Credits
MGT 3901	Organization Theory	3
MGT 3903	Leadership	3
MGT 3917	Innovation and Change Management	3
MGT 3923	Strategic Human Resources Management	3
MGT 3942	Organizational Behaviour	3
MGT 4916	Negotiation Strategy	3

(11) Marketing

Minor Required Courses		18 Credits
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3837	Service and Customer Relationship Management	3
MKT 4730	Marketing Management	3
MKT 4809	Marketing for Services	3

(8) Music Business

Minor Required Courses		18 Credits
MS 1301	Musical Skills I	2
MS 1302	Musical Skills II	2
MS 2301	Musical Skills III	2
MB 2433	Computer Application for Musicians	3
MB 2531	Music Business	3
MB 2532	Music Industry	3
MB 3512	Legal Aspects of Music Business	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

Business Japanese

JA 0721	Japanese for Beginners I	3
JA 0722	Japanese for Beginners II	3
JA 0723	Reading and Writing Japanese Scripts	3

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
or		
GE 1408	Thai Usage (for international students)	3
BG 1001	English I	3
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3
JA 1700	Introduction to Japanese	3
GE 1201	Information Literacy Skills	1
or		
GE 1204	Physical Education	1
GE 1101	Thai Civilization	3
	Total	**19**

Second Semester

BG 1002	English II	3
MGT 1101	Introduction to Business	3
BG 1301	Fundamentals of Statistics	3
ECO 2201	Microeconomics	3
JA 1701	Japanese I	3
GL 1101	Elements of Spoken Language	3
MIS 1221	Computer Literacy	0
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2202	Macroeconomics	3
MGT 2404	Managerial Psychology	3
MKT 2280	Principles of Marketing	3
JA 2701	Japanese II	3
JA 2703	Basic Reading and Writing I	3
	Total	**17**

Second Semester

BG 2001	English IV	3
FIN 2201	Principles of Finance	3
MIS 2111	Introduction to Management Information Systems	3
MGT 2900	Principles of Management	3
JA 2702	Japanese III	3
JA 2704	Basic Reading and Writing II	3
	Total	**18**

THIRD YEAR

First Semester

GL 3102	Introduction to Linguistics	3
JA 3701	Intermediate Japanese Grammar	3
JA 3702	Business Japanese I	3
JA 3704	Oral Comprehension and Expression	3
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

Second Semester

JA 4703	Translation I: Japanese-Thai	3
or		
JA 4721	Japanese Conversation and Discussion	3
or		
JA 4726	Public Speaking in Japanese (for international students)	3
GE 2101	World Civilization	3
	Two Major Elective Courses	6
	One Minor Course	3
	One Free Elective Course	3
	Total	**18**

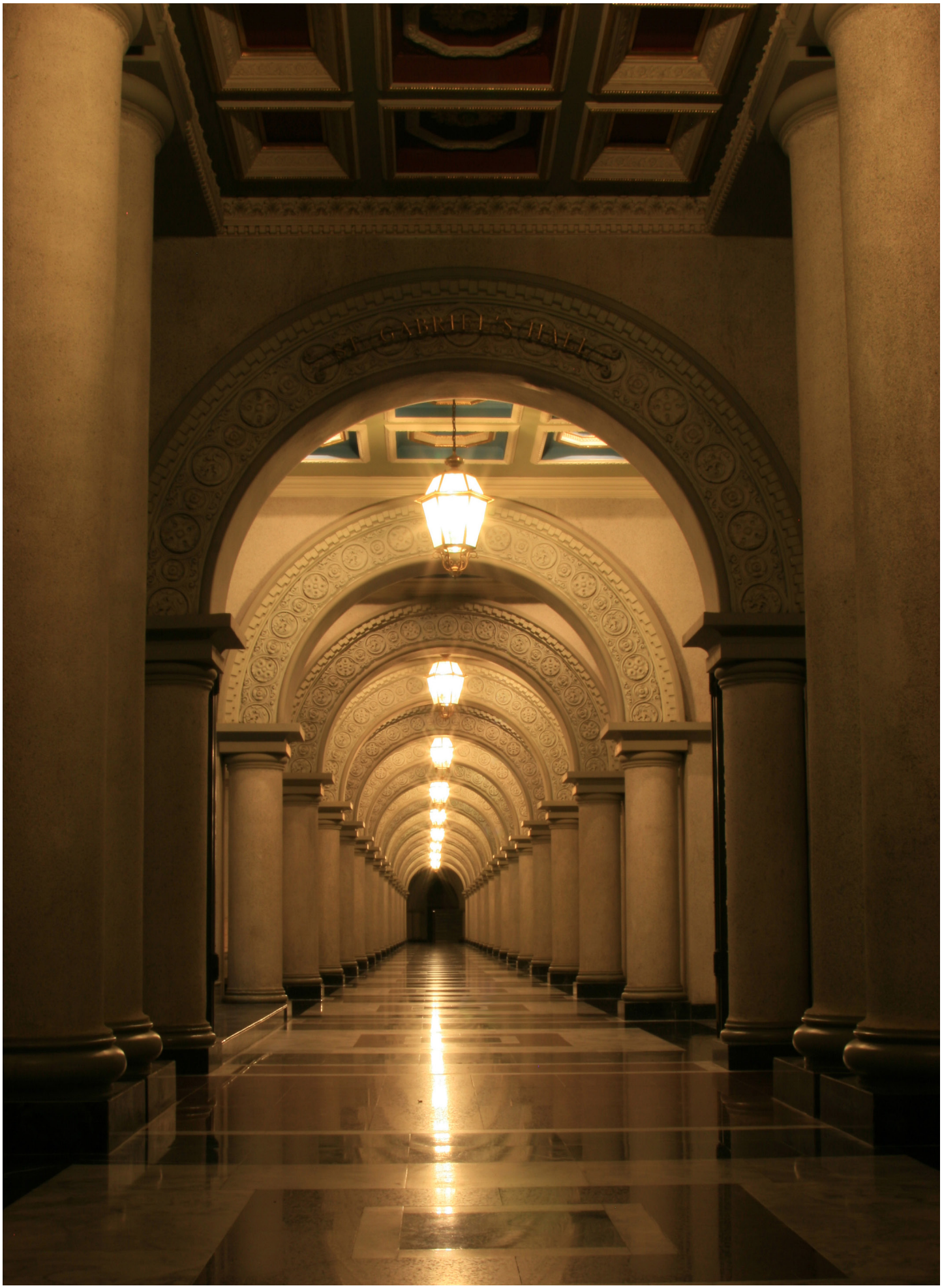
FOURTH YEAR

First Semester

JA 4701	Reading in Business Japanese I	3
JA 4702	Business Writing in Japanese I	3
	One Major Elective Course	3
	Two Minor Courses	6
	One Free Elective Course	3
	Total	**18**

Second Semester

GE 2202	Ethics	3
JA 4704	Translation II: Thai-Japanese	3
or		
JA 4725	Translation in Business Japanese (for international students)	
	One Major Elective Course	3
	Two Minor Courses	6
	Total	**15**



SCHOOL OF MUSIC





SCHOOL OF MUSIC

CURRICULUM STRUCTURE

COURSES	MUSIC BUSINESS	MUSIC PROGRAM
A. General Education Courses	34	34
Language Courses	15	15
Social Science Courses	7	7
Humanities Courses	6	6
Science and Mathematics Courses	6	6
B. Specialized Courses	103	100
Core Courses	33	38
Major Required Courses	37	34
Technology and Support Courses	15	28
Major Elective Courses	12	-
Minor Required Courses	6	-
C. Free Elective Courses	6	9
Total	**143**	**143**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts in Music Business / Bachelor of Music upon students who meet all of the following requirements:

- Have completed the total number of 143 credits required for the curriculum with accumulative grade point average (average GPA) of at least 2.00.
- Have passed at least 70% of AU English Proficiency Assessment, or score 90 on TOEFL (iBT), or score 575 on TOEFL (P), or score 6.5 on IELTS.
- Have completed MB 3532 Internship in Music Industry with at least 240 hr. (For Music Business Students)
- Have participated in 16 music events stipulated in MU 7101-8 Concert Attendance I-VIII.
- Have participated in 16 sessions of the BG 14031- BG 14038 Professional Ethics Seminar.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.



DEPARTMENT OF MUSIC BUSINESS

DEGREE CONFERRED
Bachelor of Arts (Music Business)
B.A. (Music Business)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Arts in Music Business upon students who meet all of the following requirements:

- Have completed the total number of 143 credits required for the curriculum with accumulative grade point average (GPA) of at least 2.00.
- Have passed at least 70% of AU English Proficiency Assessment, or score 90 on TOEFL (iBT), or score 575 on TOEFL (P), or score 6.5 on IELTS.
- Have completed MB 3532 Internship in Music Industry with at least 240 hrs.
- Have participated in 16 music events stipulated in MU 7101-8 Concert Attendance I-VIII.
- Have participated in 16 sessions of the BG 14031- BG 14038 Professional Ethics Seminar.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Understand the code of ethics in the music industry.
- Have awareness of the impact of music on society and community well-being.
- Have knowledge in business and skills in performance, composition, arrangement and music technology with individual creativity essential for musician careers as performers, writers, teachers, producers, and entrepreneurs.
- Have social understanding and appreciation of the value of musical service to community and culture, as well as the necessity of continuous improvement in their careers.
- Integrate their professional growth and intellectual development with their interpersonal skills.
- Able to interact with people in the music business and with the audience during music performance.
- Able to use information technology and other technologies in communicating and presenting information.



COURSES

A. General Education Courses **34 Credits**

Language Courses **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3

Social Science Courses **7 Credits**

ECO 2200	Introduction to Economics	3
GE 1201	Information Literacy Skills	1
GE 2202	Ethics	3

Humanities Courses **6 Credits**

GE 2103	Arts of Reasoning	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses **6 Credits**

GE 1301	Environmental Science	3
MA 1200	Mathematics for Business	3





B. Specialized Courses **103 Credits**

Core Courses **33 Credits**

MB 1231	History and Literature of Music	3
MB 2131	Basic Songwriting	2
MB 2431	Music Technology	2
MB 2531	Music Business	3
MB 2532	Music Industry	3
MB 3512	Legal Aspects of Music Business	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3
MU 0111	Ear Training I	1
MU 0112	Ear Training II	1
MU 1151	Theory of Music I	3
MU 1152	Theory of Music II	3
MU 7111-8	Concert Attendance I-VIII	Non-Credit

Major Required Courses **37 credits**

MA 0610	Music Ensemble	1
MA 2501	Chorus I	1
MB 2432	Visual Media for Music Business	2
MB 2433	Computer Applications for Musician	3
MB 3231	Music Genre Studies	3
MB 3431	Basic Audio Recording	2
MB 3432	Song Demo Production	2
MB 3531	Music Research Writing and Methodology	3
MB 3532	Internship in Music Industry	0 (240 hrs.)
MB 4531	Senior Project I	3
MB 4532	Senior Project II	3
MB 4536	Career Options in Music Business	2
MB 4537	Music Business Seminar	3
MS 1301	Musical Skills I	2
MS 1302	Musical Skills II	2
MS 2301	Musical Skills III	2
MS 2302	Musical Skills IV	2
MU 2331	Basic Keyboard Skill	1

Major Elective Courses **15 credits**

EN 3289	English for Music Business	3
MA 2502	Chorus II	1
MA 2503	Chorus III	1
MA 2504	Chorus IV	1
MB 3133	Commercial Songwriting	3
MB 3134	Jingle Writing	3
MB 3135	Jazz Songwriting	3
MB 3435	Electronic Music Production	2
MB 3436	Digital DJ	2
MB 3437	Virtual Band in Globalization Era	2
MB 3535	Music Licensing	3
MB 3536	Viral Music Marketing	3
MB 3537	Music Career Exposure	3
MB 3538	History of Music Industry in Thailand	3
MB 4135	Advanced Songwriting	3
MB 4435	Pro Tools	2
MB 4436	Logic	2
MB 4437	Cubase	2
MB 4438	Drum Beat Programming	2
MB 4439	Computer Graphic for Musician	3
MB 4512	Music in Film Industry	3
MB 4538	Concert Management	3
MB 4539	Music Cognition	3
MC 2511	Vocal Diction I	1
MC 2512	Vocal Diction II	1
MC 3241	Vocal Literature	3
MC 3351	Conducting	2
MC 3513	Vocal Diction III	1
MC 3514	Vocal Diction IV	1
MC 4750	Music Pedagogy	2
MGT 3922	Introduction to New Venture	3
MGT 3924	Human Resources Development	3
MKT 3627	Sales Promotion	3
MKT 3628	Public Relations	3
MKT 3629	Pricing Strategy and Decision	3
MKT 3823	Marketing Channel Strategy and Decision	3
MKT 4725	Competitive Analysis and Strategy	3
MKT 4726	Advertising and Creative Strategies	3
MKT 4806	Product and Brand Management	3
MS 3301	Musical Skills V	2
MA 3302	Musical Skills VI	2
MU 2151	Orchestration I	2
MU 2152	Orchestration II	2
MU 2153	Theory of Music III	3
MU 2154	Theory of Music IV	3
MU 2211	History of Thai Music	3
MU 2221	Popular Music Literature	3
MU 3121	Composition	3
MU 3731	Introduction to Music Education	3
MU 4103	Form and Analysis	3
MU 4112	Arranging	3
MU 4223	Music in Human Life	3



Minor Courses

(1) Music Production Technology

Minor Required Courses		**18 Credits**
MB 3433	Critical Listening	3
MB 3434	Music Production Analysis	3
MB 4431	Sound Design	3
MB 4432	Microphone Techniques	3
MB 4433	Mixing and Mastering	3
MB 4434	Music Production for Visual Media	3

(2) Digital Music Entrepreneur

Minor Required Courses		**18 Credits**
MB 3533	Online Music Marketing and Distribution	3
MB 3534	Music Management and Entrepreneurship	3
MB 4434	Music Production for Visual Media	3
MB 4533	Digital Music Publishing	3
MB 4534	Music Industry Simulation	3
MB 4535	Digital Creativity in Music Promotion	3

(3) Songwriting

Minor Required Courses		**18 Credits**
MB 3131	Melody Writing	3
MB 3132	Lyrics Writing	3
MB 4131	Theory of Jazz and Popular Music	3
MB 4132	Harmony Writing	3
MB 4133	Arranging for Songwriter	3
MB 4134	Songwriting for Film, TV, and Games	3

(4) Marketing

Minor Required Courses		**18 Credits**
MKT 3102	Integrated Marketing Communications	3
MKT 3525	Sales Management	3
MKT 3530	Consumer Behavior	3
MKT 3837	Service and Customer Relationship Management	3
MKT 4730	Marketing Management	3
MKT 4809	Marketing for Services	3

(5) Management – Leadership Enterpreneurship

Minor Required Courses		**18 Credits**
MGT 3901	Organization Theory	3
MGT 3903	Leadership	3
MGT 3917	Innovation and Change Management	3
MGT 3923	Strategic Human Resources Management	3
MGT 3942	Organizational Behavior	3
MGT 4916	Negotiation Strategy	3

(6) Business English

Minor Required Courses		**12 Credits**
EN 2230	Listening and Speaking	3
EN 3212	Communicative Writing Skill Development	3
EN 3213	Business Communication in English	3
EN 4232	Business Conversation	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business English upon completion of the prerequisites (if any).



(7) Business French

Minor Required Courses		**12 Credits**
FR 1500	Introduction to French	3
FR 1501	French I	3
FR 2501	French II	3
FR 2502	French III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business French upon completion of the prerequisites (if any).

(8) Business Chinese

Minor Required Courses		**12 Credits**
CN 1400	Introduction to Chinese	3
CN 1401	Chinese I	3
CN 2401	Chinese II	3
CN 2402	Chinese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Chinese upon completion of the prerequisites (if any).

(9) Business Japanese

Minor Required Courses		**12 Credits**
JA 1700	Introduction to Japanese	3
JA 1701	Japanese I	3
JA 2701	Japanese II	3
JA 2702	Japanese III	3

Minor Elective Courses **6 Credits**

Students can take any courses from the Department of Business Japanese upon completion of the prerequisites (if any).

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

Free Elective Courses open to non-music students
Free elective courses which are offered by the Department of Music Business of School of Music:

MB 1131	Pop Songwriting	3
MU 1231	History and Literature of Music	3
MA 1300	Introduction to Applied Music	1

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 14031	Ethics Seminar I	Non-credit
GE 1201	Information Literacy Skills	1
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (only non-Thai students)	3
GE 2103	The Art of Reasoning	3
MA 1200	Mathematics for Business	3
MS 1301	Musical Skills I	2
MU 0111	Ear Training I	1
MU 1151	Theory of Music I	3
MU 7101	Concert Attendance I	Non-credit
	Total	**19**

Second Semester

BG 1002	English II	3
BG 14032	Ethics Seminar II	Non-credit
GE 1301	Environment Science	3
MB 1231	History and Literature of Music	3
MGT 1101	Introduction to Business	3
MS 1302	Musical Skills II	2
MU 0112	Ear Training II	1
MU 1152	Theory of Music II	3
MU 7102	Concert Attendance II	Non-credit
	Total	**19**

SECOND YEAR

First Semester

BG 2000	English III	3
BG 14033	Ethics Seminar III	Non-credit
MB 2131	Basic Songwriting	2
MB 2431	Music Technology	2
MB 2531	Music Business	3
MGT 2900	Principles of Management	3
MS 2301	Musical Skills III	2
MU 2331	Basic Keyboard Skill	1
MU 7103	Concert Attendance III	Non-credit
	Total	**19**

Second Semester

BG 2001	English IV	3
BG 14034	Ethics Seminar IV	Non-credit
MB 2432	Visual Media for Music Business	2
MB 2433	Computer Applications for Musician	3
MB 2532	Music Industry	3
MGT 2404	Managerial Psychology	3
MKT 2280	Principles of Marketing	3
MS 2302	Musical Skills IV	2
MU 7104	Concert Attendance IV	Non-credit
	Total	**19**

THIRD YEAR

First Semester

BG 14035	Ethics Seminar V	Non-credit
MA 0160	Music Ensemble	1
MB 3231	Music Genre Studies	3
MB 3431	Basic Audio Recording	2
MB 3512	Legal Aspects of Music Business	3
MB 3531	Music Research Writing and Methodology	3
MU 7105	Concert Attendance V	Non-credit
	One Major Elective Course	3
	One Minor Course	3
	Total	**18**

Second Semester

BG 14036	Ethics Seminar VI	3
GE 2202	Ethics	Non-credit
MB 3432	Song Demo Production	2
MB 4536	Career Options in Music Business	2
MU 7106	Concert Attendance VI	Non-credit
	One Minor Course	3
	Two Major Elective Courses	6
	Total	**19**

Summer Session

MB 3532	Internship in Music Industry	0
	Total	**0 (240 hours)**

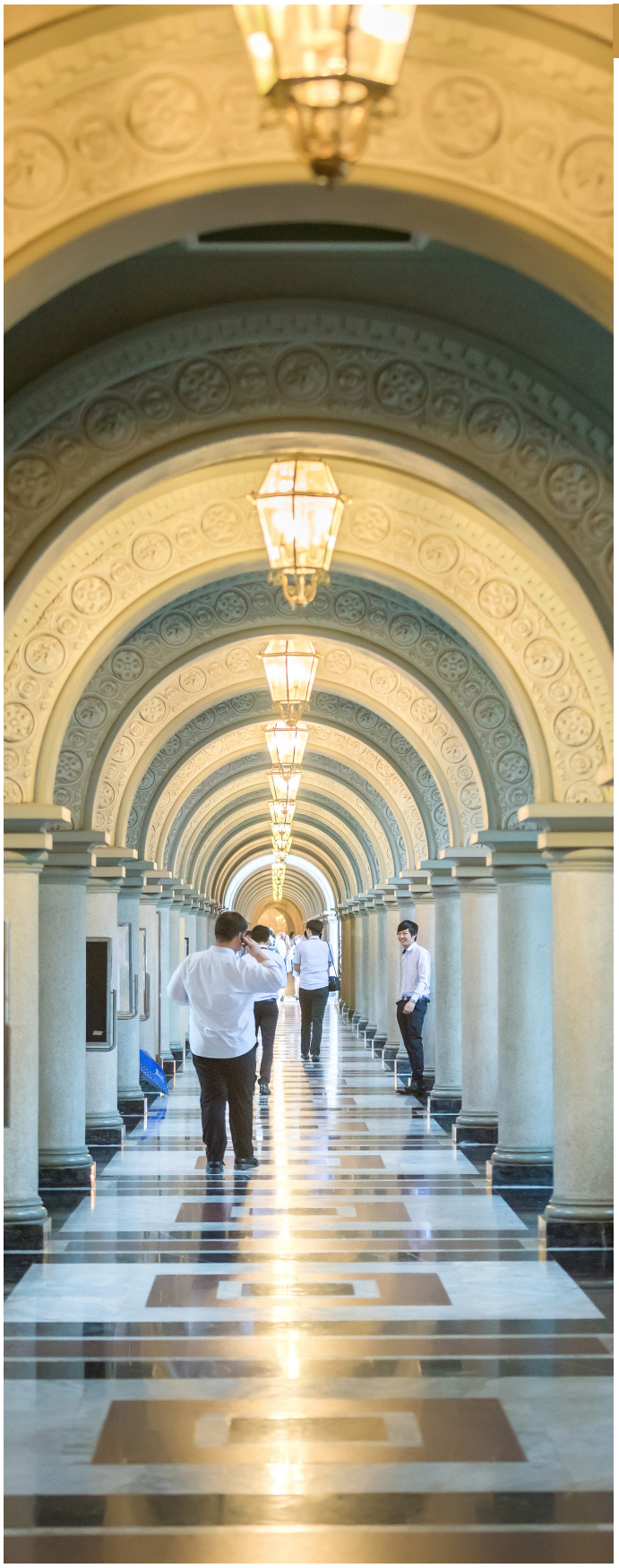
FOURTH YEAR

First Semester

BG 14037	Ethics Seminar VII	Non-credit
MB 4531	Senior Project I	3
MU 7107	Concert Attendance VII	Non-credit
	Two Major Elective Courses	6
	Two Minor Elective Courses	6
	One Free Elective Courses	3
	Total	**18**

Second Semester

BG 14038	Ethics Seminar VIII	Non-credit
MB 4532	Senior Project II	3
MB 4537	Music Business Seminar	3
MU 7108	Concert Attendance VIII	Non-credit
	One Major Elective Course	3
	Two Minor Courses	3
	One Free Elective Course	3
	Total	**15**



DEPARTMENT OF MUSIC PROGRAM

DEGREE CONFERRED
Bachelor of Music
B.M.

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Music upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have participated in 16 music events stipulated in MU7101-8 Concert Attendance I-VIII
- Have passed at least 70% of AU English Proficiency Assessment, or score 90 on TOEFL (iBT), or score 575 on TOEFL (P), or score 6.5 on IELTS.

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Understand the code of ethics in the music.
- Have awareness of the impact of music on society and community well-being.
- Have knowledge and skills in performance, composition, arrangement and music technology with individual creativity essential for musician careers as performers, writers, teachers, and producers.
- Have social understanding and appreciation of the value of musical service to community and culture, as well as the necessity of continuous improvement in their careers.
- Integrate their professional growth and intellectual development with their interpersonal skills.
- Able to interact with people in the music business and with the audience during music performance.
- Able to use information technology and other technologies in communicating and presenting information.



COURSES

A. General Education Courses		34 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai Students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
Social Science Courses		**7 Credits**
GE 1201	Information Literacy Skills	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**6 Credits**
GE 2103	Arts of Reasoning	3
MGT 2404	Managerial Psychology	3
Science and Mathematics Courses		**6 Credits**
GE 1301	Environmental Science	3
MA 1200	Mathematics for Business	3





B. Specialized Courses **100 Credits**

Core Courses **38 Credits**

MA 2501	Chorus I	1
MA 2502	Chorus II	1
MA 2503	Chorus III	1
MA 2504	Chorus IV	1
MB 2431	Fundamental of Music Technology	2
MB 3512	Legal Aspects of Music Business	3
MB 3531	Music Research Writing and Methodology	3
MU 0020	Fundamentals of Music Theory	Non-credit
MU 1151	Theory of Music I	3
MU 1152	Theory of Music II	3
or		
CMP 1151	Jazz Theory I	3
MU 1251	Ear Training I	1
MU 1252	Ear Training II	1
MU 2153	Theory of Music III	3
or		
CMP 2152	Jazz Theory II	3
MU 2154	Theory of Music IV	3
or		
CMP 2153	Jazz Theory III	3
MU 2253	Ear Training III	1
MU 2254	Ear Training IV	1
MU7101-8	Concert Attendance I-VIII	Non-Credit

Choose 10 credits from the list below

MU 0151	Keyboard Lab I	1
MU 0152	Keyboard Lab II	1
MU 0153	Keyboard Techniques I	1
MU 0154	Keyboard Techniques II	1
MC 2351	Piano Accompaniment I	1
MC 2352	Piano Accompaniment II	1
CEL 1651	Jazz Ensemble I	1
CEL 1652	Jazz Ensemble II	1
MU 1651	Ensemble I	1
MU 1652	Ensemble II	1
MC 2511	Vocal Diction I	1
MC 2512	Vocal Diction II	1
CMP 1251	Jazz Arranging I	3
CMP 1252	Jazz Arranging II	3
MU 4103	Form and Analysis	3
MC 3151	Counterpoint I	3

Major Required Courses **34 credits**

Performance Major

MA 1301	Applied Music I	2
MA 1302	Applied Music II	2
MA 2301	Applied Music III	2
MA 2302	Applied Music IV	2
MA 3301	Applied Music V	2
MA 3302	Applied Music VI	2
MU 3251	History of Music I	3
MU 3252	History of Music II	3
MB 2433	Computer Application for Musicians	3
MC 3351	Conducting	3
MC 3355	Junior Recital	4
MC 4311	Senior Recital	4

Choose 2 credits from the list below

CEL 2651	Jazz Ensemble III	1
CEL 2652	Jazz Ensemble IV	1
MU 2651	Ensemble III	1
MU 2652	Ensemble IV	1
MC 3513	Vocal Diction III	1
MC 3514	Vocal Diction IV	1

Composition Major

MA 1301	Applied Music I	2
MA 1302	Applied Music II	2
MA 1101	Applied Composition I	2
MA 1102	Applied Composition II	2
MA 2101	Applied Composition III	2
MA 2102	Applied Composition IV	2
MB 2433	Computer Application for Musicians	3
MC 3350	Junior Composition Recital	4
MC 4351	Senior Composition Recital	4
MU 2151	Orchestration I	2
MU 3251	History of Music I	3
MU 3252	History of Music II	3
MC 3150	20th Century Music	3



Major Elective Courses **28 credits**

Performance Major

CEL 1101	Sight Reading Lab I	1
CEL 1102	Sight Reading Lab II	1
CEL 3651	Jazz Ensemble V	1
CEL 3652	Jazz Ensemble VI	1
CEL 4651	Jazz Ensemble VII	1
CEL 4652	Jazz Ensemble VIII	1
CMP 2250	Jazz History	3
CMP 3250	Evolution of Blues-Rock	2
CMP 3251	Evolution of Popular Music	2
CMP 4110	Jazz Composition	2
CPS 1151	Jazz Improvisation I	1
CPS 1152	Jazz Improvisation II	1
CPS 2151	Jazz Improvisation III	1
CPS 3051	Jazz Repertoire I	2
CPS 3052	Jazz Repertoire II	2
CPS 3451	Jazz Ear Training I	2
CPS 3452	Jazz Ear Training II	2
MA 1101	Applied Composition I	2
MA 1102	Applied Composition II	2
MA 2101	Applied Composition III	2
MA 2102	Applied Composition IV	2
MA 1351	Secondary Applied Music I	2
MA 1352	Secondary Applied Music II	2
MA 2351	Secondary Applied Music III	2
MA 2352	Secondary Applied Music IV	2
MA 2555	Chorus V	1
MA 2556	Chorus VI	1
MA 2557	Chorus VII	1
MA 2558	Chorus VIII	1
MA 3501	Flamenco Techniques	2
MB 2131	Basic Songwriting	2
MB 2531	Introduction to Music Business	3
MB 3131	Melody Writing	3
MB 3132	Lyrics Writing	3
MB 3431	Basic Audio Recording	2
MB 4432	Microphone Techniques	3
MB 4435	Pro Tools	2
MB 4436	Logic	2
MC 2242	Opera Staging	2
MC 2351	Piano Accompaniment I	1
MC 2352	Piano Accompaniment II	1
MC 2353	Piano Accompaniment III	1



MC 2511	Vocal Diction I	1
MC 2512	Vocal Diction II	1
MC 3513	Vocal Diction III	1
MC 3514	Vocal Diction IV	1
MC 3150	20th Century Music	3
MC 3152	Counterpoint II	3
MC 3241	Vocal Literature	3
MC 3242	Opera Literature	3
MC 3251	Music Literature I	3
MC 3252	Music Literature II	3
MC 4212	Lute Tablature	2
MC 4750	Music Pedagogy	2
MU 2151	Orchestration I	2
MU 2152	Orchestration II	2
MU 2211	History of Thai Music	3
MU 2251	Cultural History of Southeast Asian Music	3
MU 3731	Introduction to Music Education	3
MU 3651	Ensemble V	1
MU 3652	Ensemble VI	1
MU 4651	Ensemble VII	1
MU 4652	Ensemble VIII	1

Composition Major

MA 1351	Secondary Applied Music I	2
MA 1352	Secondary Applied Music II	2
MA 2351	Secondary Applied Music III	2
MA 2352	Secondary Applied Music IV	2
MA 2301	Applied Music III	2
MA 2302	Applied Music IV	2
MA 3301	Applied Music V	2
MA 3302	Applied Music VI	2
MA 2555	Chorus V	1
MA 2556	Chorus VI	1
MA 2557	Chorus VII	1
MA 2558	Chorus VIII	1
MB 2531	Introduction to Music Business	3
MC 3355	Junior Recital	4
MU 2152	Orchestration II	2
MU 2211	History of Thai Music	3
MU 2251	Cultural History of Southeast Asian Music	3
MU 2651	Ensemble III	1
MU 2652	Ensemble IV	1
MU 3651	Ensemble V	1
MU 3652	Ensemble VI	1
MU 4651	Ensemble VII	1
MU 4652	Ensemble VIII	1
MU 3731	Introduction to Music Education	3
MA 3501	Flamenco Techniques	2
MC 4212	Lute Tablature	2
MC 2351	Piano Accompaniment I	1
MC 2352	Piano Accompaniment II	1
MC 2353	Piano Accompaniment III	1
MC 2511	Vocal Diction I	1
MC 2512	Vocal Diction II	1
MC 3513	Vocal Diction III	1
MC 3514	Vocal Diction IV	1
MC 3152	Counterpoint II	3
MC 3351	Conducting	3
MB 2131	Basic Songwriting	2
MB 2432	Photography & Videography for Musicians	2
MB 3431	Basic Audio Recording	2
MB 3432	Song Demo Production	2
MB 4431	Sound Design	3
MB 4432	Microphone Techniques	3
MB 4433	Mixing and Mastering	3
MB 4435	Pro Tools	2
MB 4436	Logic	2
MB 4437	Cubase	2

C. Free Elective Course — 9 Credits

Students can take free elective courses of 9 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN Performance Major

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1201	Information Literacy Skills	1
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
MA 1200	Mathematics for Business	2
MA 1301	Applied Music I	2
MA 2501	Chorus I	1
MU 1151	Theory of Music I	3
MU 1251	Ear Training I	1
MU 7101	Concert Attendance I	Non-credit
BG 14031	Ethics Seminar 1	Non-credit
	Core Course(s)	2
	Total	**19**

Second Semester

BG 1002	English II	3
GE 1301	Environmental Science	3
MA 1302	Applied Music II	2
MA 2502	Chorus II	1
MC 3351	Conducting	3
CMP 1151	Jazz Theory I	3
or		
MU 1152	Theory of Music II	3
MU 1252	Ear Training II	1
MU 7102	Concert Attendance II	Non-credit
BG 14032	Ethics Seminar 2	Non-credit
	Core Course(s)	2
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
GE 2202	Ethics	3
MA 2301	Applied Music III	2
MA 2503	Chorus III	1
MB 2431	Fundamental of Music Technology	2
MGT 1101	Introduction to Business	3
CMP 2152	Jazz Theory II	3
or		
MU 2153	Theory of Music III	3
MU 2253	Ear Training III	1
MU 7103	Concert Attendance III	Non-credit
BG 14033	Ethics Seminar 3	Non-credit
	Major Required Course	1
	Total	**19**

Second Semester

BG 2001	English IV	3
MA 2302	Applied Music IV	2
MA 2504	Chorus IV	1
MB 2433	Computer Application for Musicians	3
CMP 2153	Jazz Theory III	3
or		
MU 2154	Theory of Music IV	3
MU 2254	Ear Training IV	1
MU 7104	Concert Attendance IV	Non-credit
BG 14034	Ethics Seminar 4	Non-credit
	Major Required Course	1
	Major Elective Course(s)	5
	Total	**19**

THIRD YEAR

First Semester

MA 3301	Applied Music V	2
MB 3531	Music Research Writing and Methodology	3
MB 3512	Legal Aspects of Music Business	3
MU 3251	History of Music I	3
MU 7105	Concert Attendance V	Non-credit
BG 14035	Ethics Seminar 5	Non-credit
	Core Course(s)	3
	Major Elective(s)	3
	Total	**17**

Second Semester

MC 3355	Junior Recital	4
MGT 2404	Managerial Psychology	3
MU 3252	History of Music II	3
MU 7106	Concert Attendance VI	Non-credit
BG 14036	Ethics Seminar 6	Non-credit
	Major Elective Course(s)	6
	Total	**16**

FOURTH YEAR

First Semester

MA 3302	Applied Music VI	2
MU 7107	Concert Attendance VII	Non-credit
BG 14037	Ethics Seminar 7	Non-credit
	Core Course(s)	3
	Major Elective Course(s)	11
	Free Elective Course(s)	3
	Total	**19**

Second Semester

GE 2103	Art of Reasoning	3
MC 4311	Senior Recital	4
MU 7108	Concert Attendance VIII	Non-credit
BG 14038	Ethics Seminar 8	Non-credit
	Major Elective Course(s)	3
	Free Elective Course(s)	6
	Total	**16**

STUDY PLAN Composition Major

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1201	Information Literacy Skills	1
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
MA 1200	Mathematics for Business	3
MA 1301	Applied Music I	2
MA 2501	Chorus I	1
MU 1151	Theory of Music I	3
MU 1251	Ear Training I	1
MU 7101	Concert Attendance I	Non-credit
BG 14031	Ethics Seminar 1	Non-credit
	Core Course(s)	2
	Total	**19**

Second Semester

BG 1002	English II	3
MA 1302	Applied Music II	2
MA 2502	Chorus II	1
MGT 1101	Introduction to Business	3
MU 1152	Theory of Music II	3
MU 1252	Ear Training II	1
MU 7102	Concert Attendance II	Non-credit
BG 14032	Ethics Seminar 2	Non-credit
	Core Course(s)	2
	Major Elective(s)	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
MA 1101	Applied Composition I	2
MA 2503	Chorus III	1
MB 2431	Fundamental of Music Technology	2
MU 2151	Orchestration I	2
MU 2153	Theory of Music III	3
MU 2253	Ear Training III	1
MU 7103	Concert Attendance III	Non-credit
BG 14033	Ethics Seminar 3	Non-credit
	Core Course(s)	3
	Major Elective Course(s)	2
	Total	**19**

Second Semester

BG 2001	English IV	3
MA 1102	Applied Composition II	2
MB 2433	Computer Application for Musicians	3
MU 2154	Theory of Music IV	3
MU 2254	Ear Training IV	1
MU 7104	Concert Attendance IV	Non-credit
BG 14034	Ethics Seminar 4	Non-credit
	Core Course(s)	3
	Major Elective Course(s)	5
	Total	**20**

THIRD YEAR

First Semester

MA 2101	Applied Composition III	2
MB 3531	Music Research Writing and Methodology	3
MB 3512	Legal Aspects of Music Business	3
MC 3150	20th Century Music	3
MU 3251	History of Music I	3
MU 7105	Concert Attendance V	Non-credit
BG 14035	Ethics Seminar 5	Non-credit
	Major Elective Course(s)	3
	Total	**17**

Second Semester

MA 2504	Chorus IV	1
MC 3350	Junior Composition Recital	4
MGT 2404	Managerial Psychology	3
MU 3252	History of Music II	3
MU 7106	Concert Attendance VI	Non-credit
BG 14036	Ethics Seminar 6	Non-credit
	Major Elective Course(s)	3
	Free Elective Course(s)	3
	Total	**17**

FOURTH YEAR

First Semester

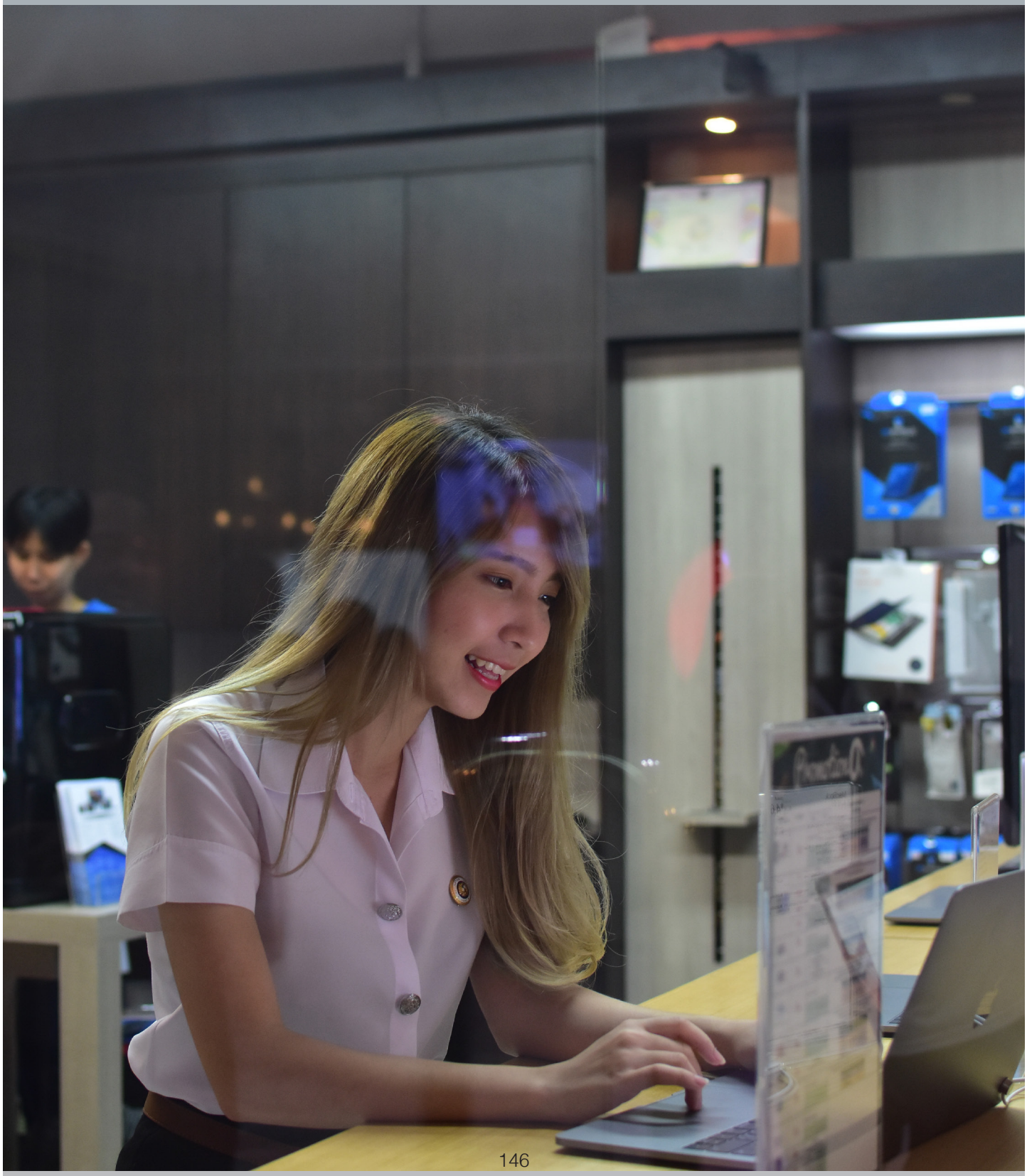
GE 2202	Ethics	3
MA 1200	Mathematics for Business	3
MA 2102	Applied Composition IV	2
MU 7107	Concert Attendance VII	Non-credit
BG 14037	Ethics Seminar 7	Non-credit
	Major Elective Courses	6
	Free Elective Course(s)	3
	Total	**17**

Second Semester

GE 2103	Art of Reasoning	3
MC 4351	Senior Composition Recital	4
MU 710 8	Concert Attendance VIII	Non-credit
BG 14038	Ethics Seminar 8	Non-credit
	Major Elective Course(s)	6
	Free Elective Courses	3
	Total	**16**



ALBERT LAURENCE SCHOOL OF **COMMUNICATION ARTS**





ALBERT LAURENCE SCHOOL OF COMMUNICATION ARTS

CURRICULUM STRUCTURE

COURSES	AD	DM	LV	PR	CGI	VCD
A. General Education Courses	30	30	30	30	31	34
Language Courses	15	15	15	15	12	12
Social Science Courses	6	6	6	6	7	7
Humanities Courses	6	6	6	6	9	12
Science and Mathematics Courses	3	3	3	3	3	3
B. Specialized Courses	93	99	102	96	97	93
Core Courses	36	36	36	36	33	39
Major Required Courses	42	48	45	45	49	45
Major Elective Courses or Minor Course	15	15	15	15	15	9
C. Free Elective Courses	6	6	6	6	6	6
Total	**129**	**135**	**132**	**132**	**134**	**133**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Communication Arts upon students who meet all the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have participated in 8 sessions of the CA Seminar Series
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



DEPARTMENT OF ADVERTISING

DEGREE CONFERRED
Bachelor of Communication Arts (Advertising)
B.Com. Arts (Advertising)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Communication Arts in Advertising upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum.
- Have not been placed on probation in any categories.
- Have obtained a cumulative grade point average of at least 2.00.
- Have participated in 16 sessions of the Professional Ethics Seminar.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have morals, ethics, public consciousness, and social responsibility in accordance with professional code of ethics.
- Have well-grounded academic knowledge, skills, and practical experiences in the field of advertising, communication arts, management and business and able to work in the field of advertising business and communication in the society.
- Have the skill to analyze situations by appropriately applying their knowledge, reasoning, and judgment when they encounter situations in different social contexts, and cultures.
- Have a good personality with good social manners and able to appropriately work with people at all levels.
- Able to continuously develop themselves academically and professionally.
- Have knowledge and ability to use basic mathematics to interpret data and analyze information for planning, management, and development.
- Make efficient use of information technology and foreign languages, especially English and able to communicate cross-culturally.
- Have creativity and communication skills for presentation.

COURSES

A. General Education Courses		**30 Credits**
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
Social Science Courses		**6 Credits**
CA 4010	Law and Ethical Concerns for Communication	3
GE 2202	Ethics	3
Humanities Courses		**6 Credits**
GE 1102	Introduction to Philosophy	3
GE 2101	World Civilization	3
Science and Mathematics Courses		**3 Credits**
BG 1301	Fundamentals of Statistics	3





B. Specialized Courses **93 Credits**

Core Courses **36 Credits**

CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising and Branding	3
CA 2003	Presentation Technique	3
CA 1022	Introduction to Public Relations	3
CA 1024	Introduction to Digital Media Communication	3
CA 1025	Computer Graphic Design	3
CA 1023	Introduction to Live Event Creation and Management	3
CA 2019	Communication Arts Research	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **42 credits**

AD 2100	Consumer Insight	3
AD 2101	Idea Generation in Advertising	3
AD 2102	Principles of Marketing Communication	3
AD 3102	Advertising Media Planning	3
AD 3103	Advertising Creative Strategy (English)	3
or		
AD 3104	Advertising Creative Strategy (Thai)	3
AD 3112	Brand Communication	3
AD 3113	Customer Relationship Management	3
AD 3114	Interactive Advertising and Marketing Communication	3
AD 3119	Advertising and Marketing Communication Research	3
AD 4100	Seminar in Advertising	3
AD 4116	Advertising Workshop I	6
AD 4117	Advertising Workshop II	6

Major Elective Courses **15 credits**

Students can choose one of the two plans in the following.

Plan A: Major Concentration Courses

Students can choose one of three concentrations in the following.

- Concentration in Strategic Integrated Marketing Communication
- Concentration in Brand Communication
- Concentration in Advertising Creative and Production

Or

Plan B: Major Elective Courses

Plan A Major Concentration Courses

Advertising students pursuing PLAN A must select a concentration in the major area below. Then, students must study three mandatory courses in the selected concentration and two major elective courses from Advertising to fulfill 15 credits.

Concentration in Strategic Integrated Marketing Communication

AD 3120	Integrated Marketing Communication Planning and Strategy	3
AD 3121	Strategic Situation Analysis	3
AD 3122	Presentation Design for Campaign Planning	3
	Advertising Major Elective Course	
	Advertising Major Elective Course	

Concentration in Brand Communication

AD 3120	Integrated Marketing Communication Planning and Strategy	3
AD 3123	Corporate Brand Communication	3
AD 3124	Strategic Brand Positioning	3
	Advertising Major Elective Course	
	Advertising Major Elective Course	



Concentration in Advertising Creative and Production

AD 3106	Art Direction	3
AD 3107	Copywriting (Thai)	3
or		
AD 3108	Copywriting (English)	3
AD 3125	Production Design for Advertising and Brand Communication	3
	Advertising Major Elective Course	
	Advertising Major Elective Course	

PLAN B Major Elective Courses

Advertising students pursuing PLAN B must select any advertising major elective courses with any major requirement courses or major elective courses from Digital Media Communication, Live Event Creation and Management and Public Relations courses as major elective courses upon completion of the prerequisites (if any) to fulfill 15 credits.

AD 3106	Art Direction	3
AD 3107	Copywriting (in Thai)	3
or		
AD 3108	Copywriting (in English)	
AD 3117	Advertising and Popular Culture	3
AD 3126-30	Selected Topics in Advertising I	3
AD 3131-35	Selected Topics in Advertising II	3
AD 3120	Integrated Marketing Communication Planning and Strategy	3
AD 3121	Strategic Situation Analysis	3
AD 3122	Presentation Design for Campaign Planning	3
AD 3123	Corporate Brand Communication	3
AD 3124	Strategic Brand Positioning	3
AD 3125	Production Design for Advertising and Brand Communication	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
or		
CA 1025	Computer Graphic Design	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction to Digital Media Communication	3
GE 1403	Communication in Thai	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
	Total	**18**

Second Semester

BG 1002	English II	3
CA 1002	Introduction to Photography and Cinematography	3
or		
CA 1025	Computer Graphic Design	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction to Digital Media Communication	3
GE 2101	World Civilization	3
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
BG 1301	Fundamentals of Statistics	3
MKT 2280	Principles of Marketing	3
or		
MGT 2900	Principles of Management	3
GE 2202	Ethics	3
CA 2003	Presentation Technique	3
GE 1102	Introduction to Philosophy	3
	Total	**18**

Second Semester

BG 2001	English IV	3
AD 2102	Principles of Marketing Communication	3
MKT 2280	Principles of Marketing	3
or		
MGT 2900	Principles of Management	3
AD 2100	Consumer Insight	3
AD 2101	Idea Generation in Advertising	3
CA 2019	Communication Arts Research	3
	Total	**18**

THIRD YEAR

First Semester

AD 3102	Advertising Media Planning	3
AD 3103	Advertising Creative Strategy (English)	3
or		
AD 3104	Advertising Creative Strategy (Thai)	3
AD 3112	Brand Communication	3
AD 3113	Customer Relationship Management	3
AD 3114	Interactive Advertising and Marketing Communication	3
AD 3119	Advertising and Marketing Communication Research	3
	Total	**18**

Second Semester

	Major Elective Course from Plan A or B	3
	Major Elective Course from Plan A or B	3
	Major Elective Course from Plan A or B	3
	Major Elective Course from Plan A or B	3
	Major Elective Course from Plan A or B	3
	Total	**15**

FOURTH YEAR

First Semester

AD 4100	Seminar in Advertising	3
AD 4116	Advertising Workshop I	6
CA 4010	Law and Ethical Concerns for Communication	3
	Free Elective	3
	Total	**15**

Second Semester

AD 4117	Advertising Workshop II	6
	Free Elective	3
	Total	**9**


CATHEDRAL OF LEARNING



DEPARTMENT OF DIGITAL MEDIA COMMUNICATION

DEGREE CONFERRED
Bachelor of Communication Arts (Digital Media Communication)
B.Com.Arts (Digital Media Communication)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Communication Arts in Digital Media Communication upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum.
- Have obtained a cumulative grade point average of at least 2.00.
- Have participated in 16 sessions of the Professional Ethics Seminar.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have morals, ethics, public consciousness, and social responsibility in accordance with professional code of ethics.
- Have well-grounded academic knowledge, skills, and practical experiences in the field of digital media and digital broadcasting, communication arts, management and business and able to work in the field of digital media communications and communication in the society.
- Have the skill to analyze situations by appropriately applying their knowledge, reasoning, and judgment when they encounter situations in different social contexts, and cultures.
- Have a good personality with good social manners and able to appropriately work with people at all levels.



COURSES

A. General Education Courses — **30 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (Only non-Thai students)	3

Social Science Courses — **6 Credits**

CA 4010	Law and Ethical Concerns for Communication	3
GE 2202	Ethics	3

Humanities Courses — **6 Credits**

GE 1102	Introduction to Philosophy	3
GE 2101	World Civilization	3

Science and Mathematics Courses — **3 Credits**

BG 1301	Fundamentals of Statistics	3

B. Specialized Courses — **99 Credits**

Core Courses — **36 Credits**

CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising and Branding	3
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
CA 1024	Introduction to Digital Media Communication	3
CA 1025	Computer Graphic Design	3
CA 2003	Presentation Technique	3
CA 2019	Communication Arts Research	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3






Major Required Courses **48 credits**

Digital Media Communication students have to take all the subjects in this group and students must get "C" in order to pass.

DM 2401	Media Context Analysis	3
DM 2402	Narrative	3
DM 2403	Digital Media Production and Management	3
DM 2404	Digital Media Design	3
DM 3401	Cinematography	3
DM 3402	Editing Concept	3
DM 3403	UI and UX Design	3
DM 3404	Digital Motion Graphic	3
DM 3405	Website and Application Design	3
DM 3406	Sound Design for Digital Media Communication	3
DM 3400	Internship	3 (200 hrs)
DM 4401	Digital Media Communication Workshop I	6
DM 4402	Digital Media Communication Workshop II	6
DM 4403	Seminar in Digital Media Communication	3

Major Elective Courses **15 credits**

Digital Media Communication students have to take all the subjects in this group and students must get "C" in order to pass.

Plan A: Major Concentration Courses

Students can choose one of two concentrations in the following.

- Concentration 1: "Motion Picture"
- Concentration 2: "Interactive Media"

Or

Plan B: Major Elective Courses

Plan A Major Concentration Courses

Digital Media Communication students pursuing PLAN A must select a concentration in the major area below. Then, students must study three mandatory courses in the selected concentration and select two major elective courses from public relations to fulfill 15 credits.

Concentration 1: "Motion Picture"

DM 3421	Screenwriting	3
DM 3422	Directing	3
DM 3425	Lighting	3
	Digital Media Communication Major Elective Course	
	Digital Media Communication Major Elective Course	

Concentration 2: "Interactive Media"

DM 3421	Screenwriting	3
DM 3424	Digital Content Creation	3
DM 3426	Innovation and Digital Technology	3
	Digital Media Communication Major Elective Course	
	Digital Media Communication Major Elective Course	

PLAN B Major Elective Courses

Digital Media Communication students pursuing PLAN B must select any Digital Media Communication major elective courses with any major required courses or major elective courses from Advertising, Public Relations and Live Event Creation and Management as major elective courses upon completion of the prerequisites (if any) to fulfill 15 credits.

DM 3421	Screenwriting	3
DM 3422	Directing	3
DM 3423	Documentary	3
DM 3424	Digital Content Creation	3
DM 3425	Lighting	3
DM 3426	Innovation and Digital Technology	3
DM 4421	Advanced Photography and Digital Imaging	3
DM 4422	Advanced Directing	3
DM 4423	Advanced UI and UX Design	3
DM 4424	Selected Topic in Digital Media Communication	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE1405	Thai Language and Culture (for non-Thai students)	3
	Total	**18**

Second Semester

BG 1002	English II	3
CA 1025	Computer Graphic Design	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
MGT 1101	Introduction to Business	3
GE 1102	Introduction to Philosophy	3
	Total	**18**

SECOND YEAR
First Semester

BG 2000	English III	3
BG 1301	Fundamentals of Statistics	3
MKT 2280	Principles of Marketing	3
CA 2003	Presentation Technique	3
GE 2101	World Civilization	3
GE 2202	Ethics	3
	Total	**18**

Second Semester

BG 2001	English IV	3
MGT 2900	Principles of Management	3
DM 2401	Media Context Analysis	3
DM 2402	Narrative	3
DM 2403	Digital Media Production and Management	3
DM 2404	Digital Media Design	3
	Total	**18**

THIRD YEAR
First Semester

CA 2019	Communication Arts Research	3
DM 3401	Cinematography	3
DM 3402	Editing Concept	3
DM 3403	UI and UX Design	3
	Major Elective	3
	Free Elective	3
	Total	**18**

Second Semester

DM 3404	Digital Motion Graphic	3
DM 3405	Website and Application Design	3
DM 3406	Sound Design for Digital Media Communication	3
	Major Elective	3
	Major Elective	3
	Total	**15**

Summer Session

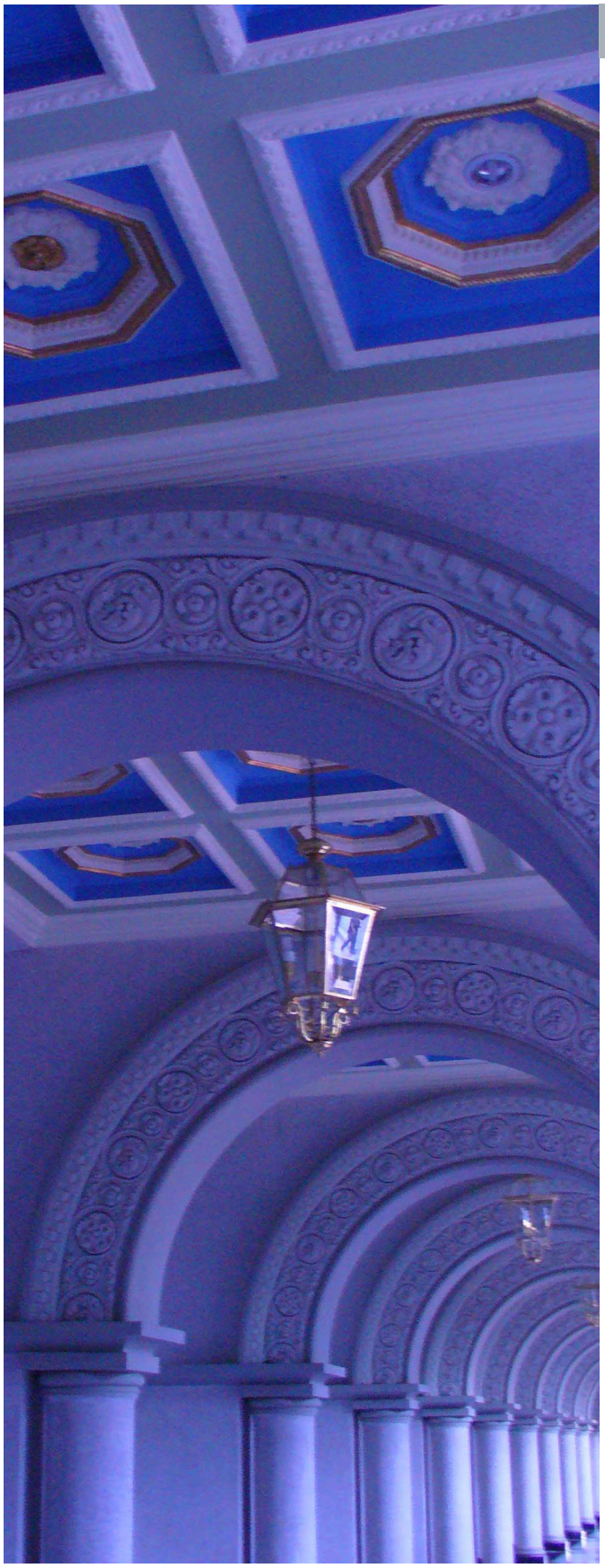
DM 3400	Internship	3 (200 hrs)
	Total	**3**

FOURTH YEAR
First Semester

CA 4010	Law and Ethical Concerns for Communication	3
DM 4401	Digital Media Communication Workshop I	6
	Major Elective	3
	Free Elective	3
	Total	**15**

Second Semester

DM 4402	Digital Media Communication Workshop II	6
DM 4403	Seminar in Digital Media Communication	3
	Major Elective	3
	Free Elective	3
	Total	**15**



DEPARTMENT OF LIVE EVENT CREATION AND MANAGEMENT

DEGREE CONFERRED
Bachelor of Communication Arts (Live Event Creation and Management)
B.Com.Arts (Live Event Creation and Management)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Communication Arts in Live Event Creation and Management upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline.
- Have met the minimum English proficiency requirement specified in one of the following criteria.

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have morals, ethics, public consciousness, and social responsibility in accordance with professional code of ethics.
- Know and understand the principles and practices in organizing including creating and designing a live event both behind the scene and on stage.
- Logically and systematically apply performance principles and practices when organizing and managing a live event.
- Effectively and efficiently use a performance, an event as a communication tool.
- Able to work with others harmoniously and responsibly.
- Able to use information and communication technology in creating a live event.
- Able to use English in communicating verbal cues and communicating to a diverse audience.

COURSES

A. General Education Courses — **30 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3

Social Science Courses — **6 Credits**

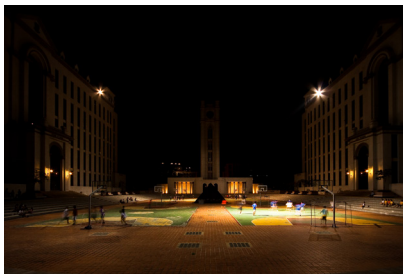
CA 4010	Law and Ethical Concerns for Communication	3
GE 2202	Ethics	3

Humanities Courses — **6 Credits**

GE 1102	Introduction to Philosophy	3
GE 2101	World Civilization	3

Science and Mathematics Courses — **3 Credits**

BG 1301	Fundamentals of Statistics	3





B. Specialized Courses **102 Credits**

Core Courses **36 Credits**

CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising and Branding	3
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
CA 1024	Introduction to Digital Media Communication	3
CA 1025	Computer Graphic Design	3
CA 2003	Presentation Technique	3
CA 2019	Communication Arts Research	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **45 credits**

LV 2101	Script Analysis and Creation for Live Events	3
LV 2102	Design for Live Event Creation and Management	3
LV 2103	Acting for Live Events	3
LV 2104	Art and Literature Appreciation	3
LV 3101	Sound Creation and Production for Live Events	3
LV 3102	Art Direction for Live Events	3
LV 3103	Show Directing	3
LV 3104	Marketing Communication for Live Events	3
LV 3105	Stage Management for Live Events	3
LV3110	Live Event Creation and Management Internship	3
LV 4101	Live Event Creation and Management Workshop I	3
LV 4102	Live Event Creation and Management workshop II	6
LV 4103	Research Methodology for Live Events	3
LV 4104	Project Management for Live Events	3

Major Elective Courses **15 credits**

Students can choose courses to fulfill 15 credits from the following courses and/or choose minor courses of other departments.

LV 3201	Creative Writing and Script Adaptation for Live Events	3
LV 3202	Costume and Make up	3
LV 3203	Advanced Acting for Live Events	3
LV 3204	Personality Development	3
LV 3205	Lighting and Media Design for Live Events	3
LV 3206	Property and Scene Design	3
LV 4201	Art and Culture in 21st Century	3
LV 4202	Cultural Events and Festival Management	3
LV 4203	Promotion and Strategy for Live Events	3
LV 4204	Selected Topic in Live Event Creation and Management	3
LV 4205	Approaches and Concept of Criticism in Live Events	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits (two courses) from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
MGT 1101	Introduction to Business	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
	Total	**18**

Second Semester

BG 1002	English II	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
GE 1102	Introduction to Philosophy	3
GE 1403	Communication in Thai	3
MGT 2900	Principles of Management	3
	Total	**18**

SECOND YEAR
First Semester

BG 2000	English III	3
CA 2003	Presentation Technique	3
MKT 2280	Principles of Marketing	3
CA 1025	Computer Graphic Design	3
BG 1301	Fundamentals of Statistics	3
GE 2101	World Civilization	3
	Total	**18**

Second Semester

BG 2001	English IV	3
LV 2101	Script Analysis and Creation for Live Events	3
LV 2104	Art and Literature Appreciation	3
CA 2019	Communication Arts Research	3
LV 2103	Acting for Live event	3
LV 2102	Design for Live Event Creation and Management	3
	Total	**18**

THIRD YEAR
First Semester

LV 3104	Marketing Communication for Live Events	3
LV 3102	Art Direction for Live Events	3
LV 3105	Stage Management for Live Events	3
LV 3101	Sound Creation and Production for Live Events	3
	Major Elective	3
	Major Elective	3
	Total	**18**

Second Semester

LV 4103	Research methodology for Live Events	3
LV 3103	Show Directing	3
CA 4010	Law and Ethical Concern for Communication	3
	Major Elective	3
	Major Elective	3
	Total	**15**

FOURTH YEAR
First Semester

LV 3110	Live Event Creation and Management Internship	3
LV 4104	Project Management for Live Events	3
LV4101	Live Event Creation and Management workshop I	3
	Major Elective	3
	Major Elective	3
	Total	**15**

Second Semester

LV 4102	Live Event Creation and Management workshop II	6
	Major Elective	3
	Free Elective	3
	Total	**12**



DEPARTMENT OF PUBLIC RELATIONS

DEGREE CONFERRED
Bachelor of Communication Arts (Public Relations)
B.Com. Arts (Public Relations)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Communication Arts in Public Relations upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained accumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Are obligated to meet the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have morals, ethics, public consciousness, and social responsibility in accordance with professional code of ethics.
- Have well-grounded academic knowledge, skills, and practical experiences in the field of public relations, communication arts, management and business and able to work in the field of public relations and communication in the society.
- Have the skill to analyze situations by appropriately applying their knowledge, reasoning, and judgment when they encounter situations in different social contexts, and cultures.
- Have a good personality with good social manners and able to appropriately work with people at all levels.
- Able to continuously develop themselves academically and professionally.
- Have knowledge and ability to use basic mathematics to interpret data and analyze information for planning, management, and development.
- Make efficient use of information technology and foreign languages, especially English and able to communicate cross-culturally.
- Have creativity and communication skills for presentation.

COURSES

A. General Education Courses		**30 Credits**
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
Social Science Courses		**6 Credits**
CA 4010	Law and Ethical Concerns for Communication	3
GE 2202	Ethics	3
Humanities Courses		**6 Credits**
GE 1102	Introduction to Philosophy	3
GE 2101	World Civilization	3
Science and Mathematics Courses		**3 Credits**
BG 1301	Fundamentals of Statistics	3





B. Specialized Courses **96 Credits**

Core Courses **36 Credits**

CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising	3
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
CA 1024	Introduction to Digital Media Communication	3
CA 1025	Computer Graphic Design	3
CA 2003	Presentation Technique	3
CA 2019	Communication Arts Research	3
MGT 1101	Introduction to Business	3
MGT 2900	Principles of Management	3
MKT 2280	Principles of Marketing	3

Major Required Courses **45 credits**

PR 2201	Marketing Public Relations	3
PR 2202	Strategic Public Relations Campaign Planning and Evaluation	3
PR 2203	Persuasive Communication	3
PR 3214	Organization Communication	3
PR 3215	Writing for Public Relations in English	3
PR 3231	Content Strategy	3
PR 3230	Digital Public Relations	3
PR 4201	Corporate Communication and Stakeholder Relations	3
PR 4221	Public Relations for Issue and Crisis Management	3
PR 4227	Public Relations Senior Project for Marketing Communication	6
PR 4228	Public Relations Senior Project for Social Campaign	6
PR 4209	Seminar in Public Relations	3
PR 4213	Public Relations Internship	3 (200 Hours)

Major Elective Courses **15 credits**

Students can choose one of the two plans in the following.

Plan A: Major Concentration Courses

Students can choose one of two concentrations in the following.

- Concentration 1: "Relationship Management"
- Concentration 2: "Public Relations Campaign Execution"

Or

Plan B: Major Elective Courses

Plan A Major Concentration Courses

Public Relations students pursuing PLAN A must select a concentration in the major area below. Then, students must study three mandatory courses in the selected concentration and select two major elective courses from public relations to fulfill 15 credits.

Concentration 1: "Relationship Management"

PR 3227	Media Relations and Planning	3
PR 4219	Community Relations	3
PR 4233	Investor Relations	3
	Public Relations Major Elective Course	
	Public Relations Major Elective Course	

Concentration 2: "Public Relations Campaign Execution"

PR 3218	Special Events Management for Public Relations	3
PR 4232	Fundamental Design for Public Relations	3
PR 4234	Traditional Media Production for Public Relations	3
	Public Relations Major Elective Course	
	Public Relations Major Elective Course	



PLAN B Major Elective Courses

Public Relations students pursuing PLAN B must select any public relations major elective courses with any major required courses or major elective courses from Advertising, Digital Media Communication and Live Event Creation and Management as major elective courses upon completion of the prerequisites (if any) to fulfill 15 credits.

PR 3216	Writing for Public Relations in Thai	3
PR 3224	Applied Research for Public Relations	3
PR 3225	Personality Development and Personal Branding	3
PR 3228	Intercultural Communication	3
PR 4226	Selected Topics in Public Relations	3
PR 4229	Public Speaking	3
PR 4230	Interactive Media for Public Relations	3
PR 4231	Sponsorship Management for Public Relations	3
PR 4235	Current Trends and Digital Literacy	3
PR 4236	Computer Graphic for Public Relations	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
CA 1001	Introduction to Communication	3
CA 1002	Introduction to Photography and Cinematography	3
CA 1021	Introduction to Advertising and Branding	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai students)	3
	Total	**18**

Second Semester

BG 1002	English II	3
CA 1021	Introduction to Advertising	3
or		
CA 1022	Introduction to Public Relations	3
CA 1023	Introduction to Live Event Creation and Management	3
or		
CA 1024	Introduction Digital Media Communication	3
CA 1025	Computer Graphic Design	3
MGT 1101	Introduction to Business	3
GE 2101	World Civilization	3
	Total	**18**

SECOND YEAR
First Semester

BG 2000	English III	3
CA 2003	Presentation Technique	3
MKT 2280	Principles of Marketing	3
BG 1301	Fundamentals of Statistics	3
GE 1102	Introduction to Philosophy	3
GE 2202	Ethics	3
	Total	**18**

Second Semester

BG 2001	English IV	3
MGT 2900	Principles of Management	3
CA 2019	Communication Arts Research	3
PR 2201	Marketing Public Relations	3
PR 2202	Strategic Public Relations Campaign Planning and Evaluation	3
PR 2203	Persuasive Communication	3
	Total	**18**

THIRD YEAR
First Semester

PR 3214	Organization Communication	3
PR 3215	Writing for Public Relations in English	3
PR 3230	Digital Public Relations	3
	Major Elective	3
	Major Elective	3
	Total	**15**

Second Semester

PR 3231	Content Strategy	3
PR 4201	Corporate Communication and Stakeholder Relations	3
PR 4221	Public Relations for Issue and Crisis Management	3
	Major Elective Course	3
	Major Elective Course	3
	Total	**15**

Summer Semester

PR 4213	Public Relations Internship	3 (200 Hours)
	Total	**3 (200 Hours)**

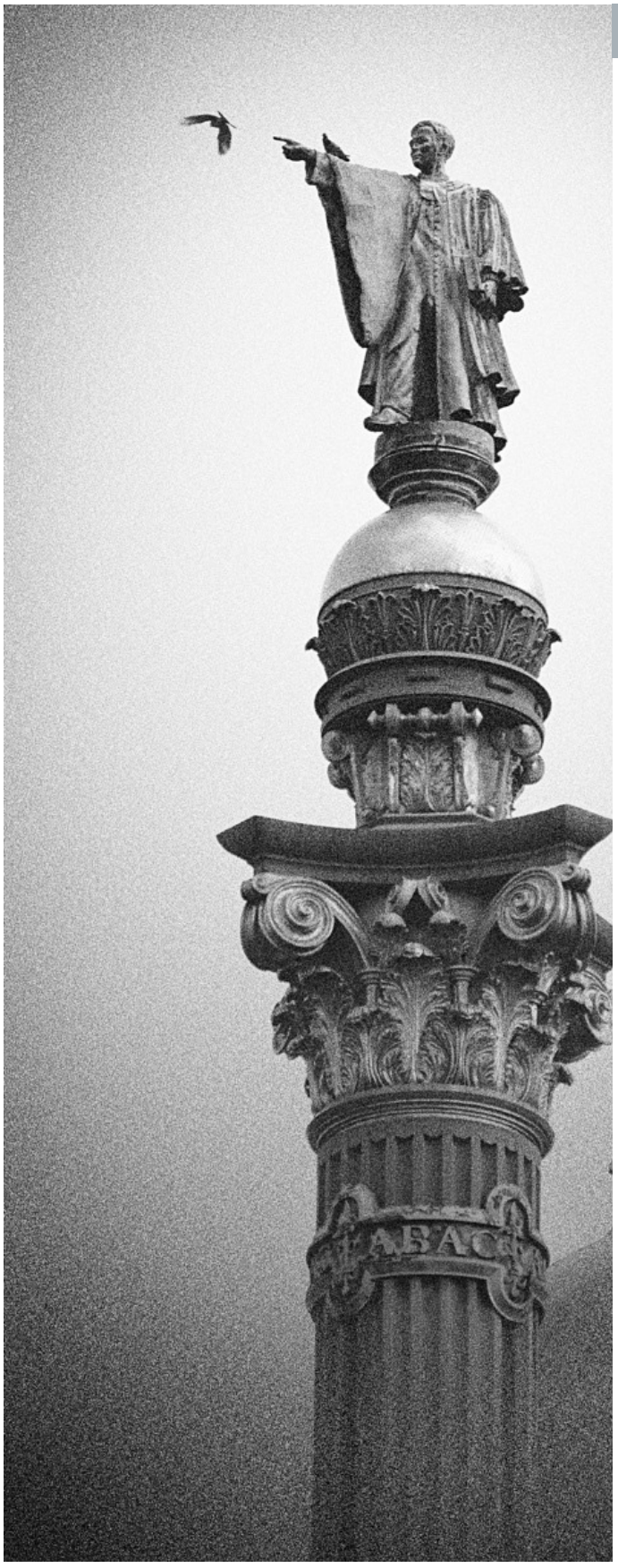
FOURTH YEAR
First Semester

CA 4010	Law and Ethical Concerns for Communication	3
PR 4227	Public Relations Senior Project for Marketing Communication	6
	Major Elective Course	3
	Free Elective Course	3
	Total	**15**

Second Semester

PR 4228	Public Relations Senior Project for Social Campaign	6
PR 4209	Seminar in Public Relations	3
	Free Elective Course	3
	Total	**12**


CATHEDRAL OF LEARNING



DEPARTMENT OF COMPUTER GENERATED IMAGERY

DEGREE CONFERRED
Bachelor of Fine and Applied Arts
(Computer Generated Imagery)
B.F.A. (Computer Generated Imagery)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Fine and Applied Arts in Computer Generated Imagery upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum.
- Have obtained a cumulative grade point average of at least 2.00.
- Have participated in 16 sessions of the Professional Ethics Seminar.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follow:

- Exercise professional ethics and recognize the impact of creative works on the society.
- Capable of applying theoretical knowledge and technical skills in computer generated imagery to profession.
- Capable of using skills in critical, logical and analytical thinking to solve problems in their profession and life.
- Able to work with others in their field.
- Capable of using information technology in the practice of their profession.
- Capable of using communication skills in Thai and English on conveying message visualizing ideas and presenting professional works.






COURSES

A. General Education Courses — 31 Credits

Language Courses — 12 Credits

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3

Social Science Courses — 7 Credits

GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — 9 Credits

ART 3022	Thai Inspiration	3
GE 2101	World Civilization	3
MGT 2404	Managerial Psychology	3

Science and Mathematics Courses — 3 Credits

MA 1200	Mathematics for Business	3

B. Specialized Courses — 97 Credits

Core Courses — 33 Credits

ART 0011	Intensive Drawing	Non-credit
ART 1001	Drawing	3
ART 1002	2 Dimensional Foundation	3
ART 1003	Color Theory	3
ART 1005	Painting	3
ART 1007	Figure Drawing	3
ART 1208	Computer Graphics Foundation	3
ART 2009	History of Art	3
ART 2021	Digital Type and Typography	3
ART 2311	Photography	3
ART 4019	Aesthetics	3
MKT 2280	Principles of Marketing	3

Major Required Courses — 49 credits

CGI 3025	CGI Internship	1 (120 hours)
CGI 1201	Computer Graphics Design Studio I	3
CGI 2235	Introduction to Motion Picture	3
CGI 2203	Computer Graphics Design Studio II	3
CGI 2204	Introduction to 3D Modeling	3
CGI 2205	Motion Graphics Design	3
CGI 2236	Introduction to Sound Design	3
CGI 2207	Animation Concept and Storytelling	3
CGI 2208	Computer Graphics Design Studio III	3
CGI 3210	Computer Graphics Design Studio IV	3
CGI 3211	Cinematic Lighting and Rendering	3
CGI 3212	Computer Graphics Design Studio V	3
CGI 3213	Digital Image for Digital Production	3
CGI 4223	Art Thesis I	3
CGI 4224	Computer Graphics Design Portfolio	3
CGI 4225	Art Thesis II	6

Major Elective Courses — 15 credits

Choose one group of elective courses

Animation

CGI 3209	3D Animation	3
CGI 3214	Movement Analysis and Integration	3
CGI 3227	Lip Sync and Facial Expressions for Animation	3
CGI 3228	Introduction to Rigging	3
CGI 4229	Advanced 3D Character Animation	3

Visual Effects

CGI 3230	Cinematography for Visual Effects	3
CGI 3231	Digital Material for Texturing	3
CGI 3220	Digital Compositing	3
CGI 3236	Visual Effects	3
CGI 4232	Matte Painting for Visual Effects	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

CGI 3233	Advanced 3D Modeling and 3D Visualization	3
CGI 3234	Character Design	3

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
ART 1001	Drawing	3
ART 1002	Dimensional Foundation	3
ART 1003	Color Theory	3
ART 2311	Photography	3
GE 1204	Physical Education	1
BG 1001	English I	3
MGT 1101	Introduction to Business	3
	Total	**19**

Second Semester

ART 1005	Painting	3
ART 1208	Computer Graphics Foundation	3
BG 1002	English II	3
MA 1200	Mathematics for Business	3
CGI 1201	Computer Graphics Design Studio I	3
CGI 2235	Introduction to Motion Picture	3
	Total	**18**

SECOND YEAR

First Semester

ART 1007	Figure Drawing	3
ART 2009	History of Art	3
ART 2021	Digital Type and Typography	3
CGI 2236	Introduction to Sound Design	3
BG 2000	English III	3
CGI 2203	Computer Graphics Design Studio II	3
MKT 2280	Principles of Marketing	3
	Total	**21**

Second Semester

CGI 2204	Introduction to 3D Modeling	3
CGI 3213	Digital Image for Digital Production	3
CGI 2207	Animation Concept and Storytelling	3
CGI 2208	Computer Graphics Design Studio III	3
GE 2101	World Civilization	3
BG 2001	English IV	3
	Total	**18**

THIRD YEAR

First Semester

ART 3022	Thai Inspirations	3
CGI 2205	Motion Graphics Design	3
CGI 3210	Computer Graphics Design Studio IV	3
	Major Elective Courses : Animation	
CGI 3209	3D Animation	3
CGI 3228	Introduction to Rigging	3
	Major Elective Courses Course : Visual Effects	
CGI 3226	Digital Material for Texturing	3
CGI 3230	Cinematography for Visual Effects	3
	Total	**15**

Second Semester

CGI 3211	Cinematic Lighting and Rendering	3
CGI 3212	Computer Graphics Design Studio V	3
MGT 2404	Managerial Psychology	3
	Major Elective Courses : Animation	
CGI 3227	Lip Sync and Facial Expressions for Animation	3
CGI 3214	Movement Analysis and Integration	3
	Major Elective Courses Course : Visual Effects	
CGI 3220	Digital Compositing	3
CGI 3236	Visual Effects	3
	Total	**15**

Summer Session

CGI 3025	CGI Internship	1 (120 hours)
	Total	**1 (120 hours)**

FOURTH YEAR

First Semester

ART 4019	Aesthetics	3
GE 2202	Ethics	3
CGI 4223	Art Thesis I	3
	Free Elective Course	3
	Major Elective Courses : Animation	
CGI 4229	Advanced 3D Character Animation	3
	Major Elective Courses Course : Visual Effects	
CGI 4232	Matte Painting for Visual Effects	3
	Total	**15**

Second Semester

CGI 4224	Computer Graphics Design Portfolio	3
CGI 4225	Art Thesis II	6
	Free Elective Course	3
	Total	**12**



DEPARTMENT OF VISUAL COMMUNICATION DESIGN

DEGREE CONFERRED
Bachelor of Fine and Applied Arts
(Visual Communication Design)
B.F.A. (Visual Communication Design)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Fine and Applied Arts in Visual Communication Design upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained accumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Are obligated to meet the minimum English proficiency requirement specified in one of the following criteria:

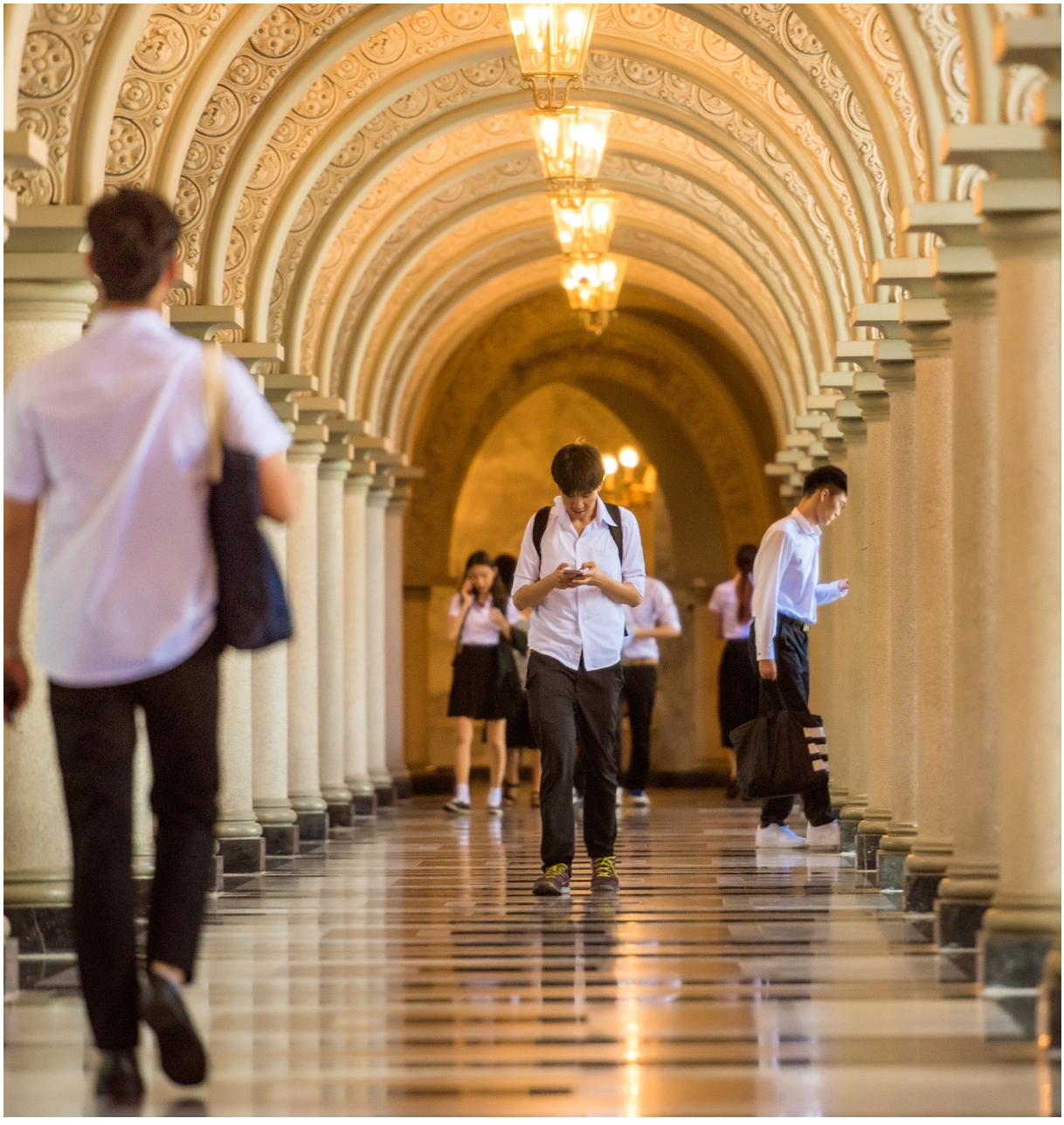
Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

We are committed to provide the local and global community with visual communication designers who are aware of their role in society. An individual must carry out design conforming to business convention, realizing the sustainable approaches and uplifting social and cultural practice as well as personal visual exploration.



COURSES

A. General Education Courses		34 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**7 Credits**
GE 1204	Physical Education	1
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**12 Credits**
ART 3014	Thai Art	3
GE 2101	World Civilization	3
ART 1507	History of Western Art I	3
ART 2513	History of Western Art II	3
Science and Mathematics Courses		**3 Credits**
MA 1200	Mathematics for Business	3






B. Specialized Courses **93 Credits**

Core Courses		**39 Credits**
ART 0011	Intensive Drawing	Non-credit
ART 1002	2 Dimensional Foundation	3
ART 1003	Color Theory	3
ART 1006	3 Dimensional Foundation	3
ART 1608	Computer Graphic	3
ART 1604	Visual Art Media I	3
ART 1605	Visual Art Media II	3
ART 2010	Typography	3
ART 2112	Illustration	3
MKT 2280	Principles of Marketing	3
ART 2311	Photography	3
ART 2615	Visualization	3
ART 3016	History of Modern Design	3
ART 4019	Aesthetics	3

Major Required Courses		**45 credits**
ART 1709	Digital Production	3
VIS 2104	Advance Typography	3
ART 3117	Internship	3 (160 hours)
ART 3718	Folk Art in South East Asia	3
ART 3720	Time Base Media	3
ART 3721	Interactive Media	3
VIS 1701	Visual Literacy	3
VIS 2702	Composition	3
VIS 2703	Mark & Symbol	3
VIS 2705	Visual Marketing & Design	3
VIS 3706	Information Graphic Design	3
VIS 4115	Design Management	3
VIS 4116	Art Thesis I	3
VIS 4122	Art Thesis II	6

Major Elective Courses		**9 credits**
VIS 3111	Package Design	3
VIS 3112	Typeface Design	3
VIS 3807	Text in Space	3
VIS 3808	Image Manipulation	3
VIS 3809	Graphic Design System	3
VIS 3810	Art Direction	3
VIS 3813	Visual Merchandising Design	3
VIS 4117	Signage System and Wayfinding Design	3
VIS 4814	Exhibition Design	3
VIS 4818	Campaign Design	3
VIS 4819	Experimental Design	3

Students must take major elective courses of at least 9 credits from the list.

C. Free Elective Course **6 Credits**

ART 3922	Basic Drawing	3
ART 3923	Thai Painting	3
ART 3924	Print Making	3
ART 3925	Creative Photography	3
ART 4926	History of Asian Art	3
VIS 4124	Book Binding	3
VIS 4920	Art Exposure	3
VIS 4921	Sustainable Graphic Design	3
VIS 4923	Design Discourse	3

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).



STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
ART 1002	2 Dimensional Foundation	3
ART 1003	Color Theory	3
ART 1608	Computer Graphic	3
ART 1604	Visual Art Media I	3
BG 1001	English I	3
GE 2101	World Civilization	3
	Total	**18**

Second Semester

ART 1605	Visual Art Media II	3
ART 1507	History of Western Art I	3
ART 1709	Digital Production	3
ART 2010	Typography	3
BG 1002	English II	3
VIS 1701	Visual Literacy	3
	Total	**18**

SECOND YEAR
First Semester

ART 1006	3 Dimensional Foundation	3
ART 2112	Illustration	3
ART 2513	History of Western Art II	3
BG 2000	English III	3
MGT 1101	Introduction to Business	3
VIS 2702	Composition	3
	Total	**18**

Second Semester

ART 2311	Photography	3
ART 2615	Visualization	3
ART 3016	History of Modern Design	3
BG 2001	English IV	3
VIS 2703	Mark & Symbol	3
VIS 2705	Visual Marketing & Design	3
	Total	**18**

THIRD YEAR
First Semester

ART 3014	Thai Art	3
ART 3720	Time Base Media	3
MKT 2280	Principles of Marketing	3
VIS 2104	Advance Typography	3
VIS 3706	Information Graphic Design	3
	Major Elective Course	3
	Total	**18**

Second Semester

ART 3718	Folk Art in South East Asia	3
ART 3721	Interactive Media	3
MA 1200	Mathematics for Business	3
VIS 4115	Design Management	3
	Major Elective Course	3
	Free Elective Course	3
	Total	**18**

Summer Session

ART 3117	Internship	3 (160 hrs)
	Total	**3 (160 hrs)**

FOURTH YEAR
First Semester

ART 4019	Aesthetics	3
VIS 4116	Art Thesis I	3
	Major Elective Course	3
	Free Elective Course	3
	Total	**12**

Second Semester

GE 2202	Ethics	3
GE 1204	Physical Education	1
VIS 4122	Art Thesis II	6
	Total	**10**

MONTFORT DEL ROSARIO SCHOOL OF **ARCHITECTURE AND DESIGN**





MONTFORT DEL ROSARIO SCHOOL OF ARCHITECTURE AND DESIGN

CURRICULUM STRUCTURE

COURSES	ARCHITECTURE	INTERIOR ARCHITECTURE	INTERIOR DESIGN	PRODUCT DESIGN
A. General Education Courses	30	30	30	30
Language Courses	15	15	15	15
Social Science Courses	3	3	3	3
Humanities Courses	6	6	6	6
Science and Mathematics Courses	6	6	6	6
B. Specialized Courses	135	129	103	105
Core Courses	30	36	24	18
Major Required Courses	57	57	42	81
Technology and Support Courses	-	-	34	-
Major Elective Courses	12	6	3	6
Minor Required Courses	36	30	-	-
C. Free Elective Courses	6	6	6	6
Total	**171**	**165**	**139**	**141**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Architecture / Bachelor of Fine and Applied Arts upon students who meet all the requirements as follows:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the university
- Have demonstrated good behavior and discipline

OBJECTIVES

To produce graduates who:

- Possess architectural knowledge and skills sufficient to assume architectural leadership position in developing the society and the country, with professional responsibility.
- Are able to take their leading roles in rendering architectural services and development with science and technology knowledge as well as culture and arts conservation.
- Posses Professional ethics that will lead to architectural enhancement and approval of the society.



DEPARTMENT OF ARCHITECTURE

DEGREE CONFERRED
Bachelor of Architecture (Architecture)
B.Arch. (Architecture)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Architecture in Architecture upon students who meet all of the following requirements:

- Have completed of the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment or	70%*
TOEFL (iBT) or	90
TOEFL (P) or	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Possess professional ethics that will lead to architectural enhancement and approval of the society.
- Possess architectural knowledge and skills sufficient to assume architectural leadership position in developing the society and the country, with professional responsibility.
- Initiate research, analyze and critically evaluate solutions to formulate conclusions relating to architectural design.
- To nurture a spirit of innovation and entrepreneurship in design-related field.
- Able to take their leading roles in rendering architectural services and work constructively and productively within an interdisciplinary environment.
- Effectively communicate by using a variety of oral, written and IT skills.
- Equip with broader knowledge of built environment.

COURSES

A. General Education Courses		30 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai Students)	3
Social Science Courses		**3 Credits**
MGT 1101	Introduction to Business	3
Humanities Courses		**6 Credits**
GS 1004	Art of Delineation	3
GS 1005	Graphic Presentation	3
Science and Mathematics Courses		**6 Credits**
GS 1008	Applied Mathematics	3
GE 1301	Environmental Science	3





B. Specialized Courses **135 Credits**

Core Courses **30 Credits**

AR 1102	Visual Studies and Communication	3
AR 1104	Fundamental of Architectural Design	3
AR 1106	Architectural Drawing	3
AR 1108	History of Art and Architecture	3
AR 2109	Building Technology and Construction I	3
AR 2110	Building Technology and Construction II	3
AR 2111	Introduction to Computer – Aided Design	3
AR 3108	Building Equipment and Systems	3
AR 3109	History of Thai Architecture	3
AR 4106	Methods of Research and Data Processing	3

Major Required Courses **57 credits**

AR 2202	Architectural Design I	6
AR 2204	Architectural Design II	6
AR 3200	Theory and Concept in Architecture	3
AR 3203	Architectural Design III	6
AR 3207	Architectural Design IV	6
AR 4207	Integrated Architectural Design I	6
AR 4208	Integrated Architectural Design II	6
AR 5206	Integrated Architectural Design III	6
AR 5200	Pre-Thesis in Architecture	3
AR 5205	Thesis in Architecture	9

Major Elective Courses **12 credits**

Select courses according to concentration

A.) Concentration in Architectural Design

AR 5402	Fundamentals of Architecture and Urban Conservation	3
AR 5403	Advanced Computer - Aided Design	3
AR 5405	Individual Study in Architecture	3
AR 5409	Architectural Psychology	3
AR 5410	Thai Architecture	3
AR 5414	Energy Saving	3
AR 5415	Interactive Features Design	3
AR 5416	Façade Design in Architecture	3
AR 5417	Interior Design by Architects	3
AR 5418	Introduction to Exhibition Design	3
AR 5419	Special Topics in History, Theory and Technology in Architecture	3
AR 5420	Lighting, Perception and Culture	3
AR 5421	Landscape Architectural Design	3
AR 5422	Contemporary Theory and Concept in Architecture	3
AR 5423	Sustainable Building Design	3
AR 5424	Introduction to Design-Build	3

B.) Concentration in Design Business

AR 5401	Building Cost Estimation and Control	3
AR 5404	Construction Management	3
AR 5405	Individual Study in Architecture	3
AR 5407	Real Estate Development	3
AR 5413	Project Management	3
AR 5425	Project Feasibility Study	3

Minor Required Courses **36 Credits**

AR 1300	Preparation for Architectural and Design Studies	Non-Credit
AR 2307	Structural Design Principle	3
AR 2308	History of Modern Architecture and Later	3
AR 2309	Architectural Design Methods	3
AR 3307	Building Technology and Construction III	3
AR 3308	Building Technology and Construction IV	3
AR 3310	Fundamentals of Site and Landscape Planning	3
AR 3311	Fundamental of Building Information Modeling Management	3
AR 3312	Architectural Programming	3
AR 4301	Fundamentals of Urban and Regional Planning	3
AR 4302	Seminar in Architecture	3
AR 4303	Practicum in Architecture	Non-Credit
AR 4304	Building Technology and Construction V	3
AR 5300	Professional Ethics and Practices	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
AR 1102	Visual Studies and Communication	3
AR 1106	Architectural Drawing	3
BG 1001	English I	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai Students)	3
GS 1004	Arts of Delineation	3
GS 1008	Applied Mathematics	3
AR 1300	Preparation for Architectural and Design Studies	Non-Credit
	Total	**18**

Second Semester

AR 1104	Fundamental of Architectural Design	3
AR 1108	History of Art and Architecture	3
BG 1002	English II	3
GE 1301	Environmental Science	3
GS 1005	Graphic Presentation	3
MGT 1101	Introduction to Business	3
	Total	**18**

SECOND YEAR
First Semester

AR 2109	Building Technology and Construction I	3
AR 2202	Architectural Design I	6
AR 2307	Structural Design Principle	3
AR 2308	History of Modern Architecture and Later	3
BG 2000	English III	3
	Total	**18**

Second Semester

AR 2110	Building Technology and Construction II	3
AR 2111	Introduction to Computer – Aided Design	3
AR 2204	Architectural Design II	6
AR 2309	Architectural Design Methods	3
BG 2001	English IV	3
	Total	**18**

THIRD YEAR
First Semester

AR 3108	Building Equipment and Systems	3
AR 3203	Architectural Design III	6
AR 3307	Building Technology and Construction III	3
AR 3310	Fundamentals of Site and Landscape Planning	3
AR 3311	Fundamental of Building Information Modeling Management	3
	Total	**18**

Second Semester

AR 3109	History of Thai Architecture	3
AR 3200	Theory and Concept in Architecture	3
AR 3207	Architectural Design IV	6
AR 3308	Building Technology and Construction IV	3
AR 3312	Architectural Programming	3
	Total	**18**

FOURTH YEAR
First Semester

AR 4207	Integrated Architectural Design I	6
AR 4301	Fundamentals of Urban and Regional Planning	3
AR 4302	Seminar in Architecture	3
AR 4304	Building Technology and Construction V	3
	Major Elective I	3
	Total	**18**

Second Semester

AR 4106	Methods of Research and Data Processing	3
AR 4208	Integrated Architectural Design II	6
AR 4303	Practicum in Architecture	Non-Credit
	Major Elective II	3
	Major Elective III	3
	Free Elective	3
	Total	**18**

FIFTH YEAR
First Semester

AR 5200	Pre-Thesis in Architecture	3
AR 5206	Integrated Architectural Design III	6
	Major Elective IV	3
	Free Elective	3
	Total	**15**

Second Semester

AR 5205	Thesis in Architecture	9
AR 5300	Professional Ethics and Practices	3
	Total	**12**



DEPARTMENT OF INTERIOR ARCHITECTURE

DEGREE CONFERRED
Bachelor of Architecture (Interior Architecture)
B.Arch. (Interior Architecture)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Architecture in Interior Architecture upon students who meet all of the following requirements:

- Have completed of the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have to meet the minimum English Proficiency requirement specified in one of the following criteria

Test Instruments	Required Passing Score
AU English Proficiency Assessment or	70%*
TOEFL (iBT) or	90
TOEFL (P) or	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Develop moral character and possess professional ethics accepted and approved by the society.
- Understand interior architecture theories and possess techniques developed through the systematic and efficient creative thinking process as well as professional responsibility sufficient to assume the role of interior architects in the development of industry, society and the country.
- Able to innovate and transform creative concepts through systematic analysis and considerations of related theories to the spatial visualization.
- Able to render interior architecture services in the milieu of science and technology while adhering to preservation of arts and culture.
- Able to contribute to a team work among designers and others with the same level of competency and aspiration in order to function creatively while maintaining a healthy competitive environment.
- Have creativity and presentation skills via computer applications and logical schema.
- Have dexterity in freehand drawing, interior architecture drafting, delineation and three dimensional model making.

COURSES

A. General Education Courses		30 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai Students)	3
Social Science Courses		**3 Credits**
MGT 1101	Introduction to Business	3
Humanities Courses		**6 Credits**
GS 1004	Art of Delineation	3
GS 1005	Graphic Presentation	3
Science and Mathematics Courses		**6 Credits**
GE 1301	Environmental Science	3
GS 1008	Applied Mathematics	3



B. Specialized Courses — 129 Credits

Core Courses — 36 Credits

AR 1102	Visual Studies and Communication	3
AR 1104	Fundamental of Architectural Design	3
AR 1106	Architectural Drawing	3
AR 1108	History of Art and Architecture	3
AR 2109	Building Technology and Construction I	3
AR 2110	Building Technology and Construction II	3
AR 2111	Introduction to Computer – Aided Design	3
AR 3108	Building Equipment and Systems	3
AR 4101	History of Thai Architecture	3
IN 3102	Advanced Computer – Aided Design	3
IN 2106	Contemporary Issues in Design	3
IN 4102	Methods of Research and Data Processing	3

Major Required Courses — 57 credits

IN 2202	Interior Architectural Design I	6
IN 2204	Interior Architectural Design II	6
IN 3200	Theory and Concept in Interior Architecture	3
IN 3203	Interior Architectural Design III	6
IN 3207	Interior Architectural Design IV	6
IN 4203	Interior Architectural Design V	6
IN 4205	Interior Architectural Design VI	6
IN 5200	Pre-Thesis in Interior Architecture	3
IN 5203	Interior Architectural Design VII	6
IN 5205	Thesis in Interior Architecture	9

Major Elective Courses — 6 credits

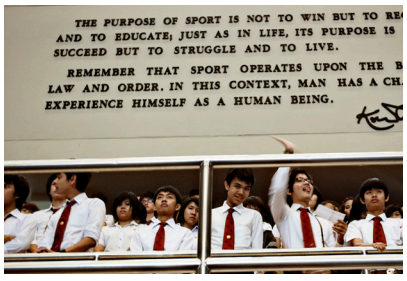
IN 5400	Elements of Thai Architecture	3
IN 5401	Interior Architecture Cost Estimation and Control	3
IN 5404	Individual Study in Interior Architecture	3
IN 5411	Advanced Lighting	3
IN 5416	Introduction to Exhibition Design	3
IN 5417	Arts Appreciation	3
IN 5418	Advance Visualization Technique	3
IN 5419	Advance Construction Document for Interior Architecture	3

Minor Required Courses — 30 Credits

AR 1300	Preparation for Architectural and Design	Non-credits
IN 2305	Interior Architectural Design Methods	3
IN 2306	History of Interior Architecture	3
IN 3301	Interior Construction Technology I	3
IN 3303	Interior Construction Technology II	3
IN 3304	Lighting Design	3
IN 3305	Furniture Design	3
IN 3306	Interior Material Application	3
IN 4304	Practicum in Interior Architecture (240 Hours)	Non-credit
IN 4305	Seminar in Interior Architecture	3
IN 4306	Furniture Production Method	3
IN 5300	Professional Ethics and Practices	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits which are offered by their faculty or by different faculties upon completion of the prerequisites.







STUDY PLAN

FIRST YEAR
First Semester

Code	Subjects	Credits
AR 1102	Visual Studies and Communication	3
AR 1106	Architectural Drawing	3
BG 1001	English I	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai Students)	3
GS 1004	Arts of Delineation	3
GS 1008	Applied Mathematics	3
	Total	**18**

Second Semester

AR 1104	Fundamental of Architectural Design	3
AR 1108	History of Art and Architecture	3
BG 1002	English II	3
GE 1301	Environmental Science	3
MGT 1101	Introduction to Business	3
GS 1005	Graphic Presentation	3
	Total	**18**

SECOND YEAR
First Semester

AR 2109	Building Technology and Construction I	3
BG 2000	English III	3
IN 2106	Contemporary Issues in Design	3
IN 2202	Interior Architectural Design I	6
IN 2305	Interior Architectural Design Method	3
	Total	**18**

Second Semester

AR 2110	Building Technology and Construction II	3
AR 2111	Introduction to Computer – Aided Design I	3
BG 2001	English IV	3
IN 2204	Interior Architectural Design II	6
IN 2306	History of Interior Architecture	3
	Total	**18**

THIRD YEAR
First Semester

AR 3108	Building Equipment and System	3
IN 3200	Theory and Concept in Interior Architecture	3
IN 3203	Interior Architectural Design III	6
IN 3301	Interior Construction Technology I	3
IN 3306	Interior Material Application	3
	Total	**18**

Second Semester

IN 3102	Advanced Computer – Aided Design	3
IN 3207	Interior Architectural Design IV	6
IN 3303	Interior Construction Technology II	3
IN 3304	Lighting Design	3
IN 3305	Furniture Design	3
	Total	**18**

FOURTH YEAR
First Semester

AR 4101	History of Thai Architecture	3
IN 4203	Interior Architectural Design V	6
IN 4305	Seminar in Interior Architecture	3
IN 4306	Furniture Production Methods	3
	Total	**15**

Second Semester

IN 4102	Methods of Research and Data Processing	3
IN 4205	Interior Architectural Design VI	6
IN 4304	Practicum in Interior Architecture (240 Hours)	Non-Credit
	One Free Elective Course	3
	One Major Elective Course	3
	Total	**15**

FIFTH YEAR
First Semester

IN 5200	Pre-Thesis in Interior Architecture	3
IN 5203	Interior Architectural Design VII	6
	One Free Elective Course	3
	One Major Elective Course	3
	Total	**15**

Second Semester

AR 5205	Thesis in Interior Architecture	9
AR 5300	Professional Ethics and Practices	3
	Total	**12**



DEPARTMENT OF INTERIOR DESIGN

DEGREE CONFERRED
Bachelor of Fine and Applied Arts (Interior Design)
B.F.A. (Interior Design)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Fine and Arts in Interior Design upon students who meet all of the following requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Have completed of the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance with the University
- Have demonstrated good behavior and discipline



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Develop moral character and possess professional ethics accepted and approved by the society.
- Possess interior design theoretical knowledge, technical skills, entrepreneurial drive with business skill, and professional responsibility sufficient to assume leadership positions in the industry, society and the country.
- Have to the milieu of science and technology related to interior design services while adhering to preservation of arts and culture.
- Able to contribute to a team working among designers and others with the same level of competency and aspiration in order to function creatively while maintaining a healthy competitive environment.
- Have creativity and presentation skills via computer applications and logical schema.
- Have dexterity in freehand drawing, interior design drafting, delineation and 3 dimensional model making.

COURSES

A. General Education Courses		30 Credits
Language Courses		**15 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai Students)	3
Social Science Courses		**3 Credits**
MGT 1101	Introduction to Business	3
Humanities Courses		**6 Credits**
GS 1004	Art of Delineation	3
GS 1005	Graphic Presentation	3
Science and Mathematics Courses		**6 Credits**
MA 1200	Mathematics for Business	3
GE 1301	Environmental Science	3



B. Specialized Courses — 103 Credits

Core Courses — 24 Credits

IND 1101	Visual Design	3
IND 1102	Introduction to Design Culture and Trend	3
IND 1301	Basic Drawing	3
IND 1302	Design Fundamentals	3
IND 2101	Design Methods	3
IND 2102	Human Factors	3
IND 2301	History of Interior Design	3
IND 3101	Theory and Concept in Design	3

Major Required Courses — 42 credits

IND 2201	Interior Design I	6
IND 2202	Interior Design II	6
IND 3201	Interior Design III	6
IND 3202	Interior Design IV	6
IND 4201	Interior Design V	6
IND 4202	Senior Project	6
IND 4304	Pre-Senior Project	6

Technology and Support Courses — 34 credits

IND 1303	Computer Applications for Interior Design	3
IND 2302	Building Construction	3
IND 2303	Furniture Production and Fabrication Technology	3
IND 3102	Design Research and Development	3
IND 3301	Interior Construction	3
IND 3302	Interior Material and Technology	3
IND 3303	Building System Study	3
IND 3306	Lighting Design	3
IND 3307	Practicum in Interior Design	1
IND 3308	Brand and Marketing in Interior Design	3
IND 4301	Design Management	3
IND 4303	Professional Ethics and Practice	3

Major Elective Courses — 3 credits

IND 4401	Seminar in Interior Design	3
IND 4402	Advanced Computer-Aided Design	3
IND 4403	Model Making and 3D Exploration	3
IND 4404	Home Textiles and Soft Furnishing	3
IND 4405	Thai Architecture Study	3
IND 4406	Advanced Lighting	3
IND 4407	Decorative Art	3
IND 4408	Individual Study in Design	3
IND 4409	Branding Experience in Art and Design	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA1200	Mathematics for Business	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai Students)	3
GS 1004	Art of Delineation	3
IND 1101	Visual Design	3
IND 1301	Basic Drawing	3
	Total	**18**

Second Semester

BG 1002	English II	3
GE 1301	Environmental Science	3
GS 1005	Graphic Presentation	3
IND 1102	Introduction to Design Culture and Trend	3
IND 1302	Design Fundamentals	3
IND 1303	Computer Application for Interior Design	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
MGT 1101	Introduction to Business	3
IND 2101	Design Methods	3
IND 2201	Interior Design I	6
IND 2301	History of Interior Design	3
	Total	**18**

Second Semester

BG 2001	English IV	3
IND 2102	Human Factors	3
IND 2202	Interior Design II	6
IND 2302	Building Construction	3
IND 2303	Furniture Production and Fabrication Technology	3
	Total	**18**

THIRD YEAR

First Semester

IND 3101	Theory and Concept in Design	3
IND 3201	Interior Design III	6
IND 3301	Interior Construction	3
IND 3302	Interior Material and Technology	3
IND 3303	Building System Study	3
	Total	**18**

Second Semester

IND 3102	Design Research and Development	3
IND 3202	Interior Design IV	6
IND 3306	Lighting Design	3
IND 3307	Practicum in Interior Design	1
IND 3308	Brand and Marketing in Interior Design	3
	Free Elective Course	3
	Total	**19**

FOURTH YEAR

First Semester

IND 4201	Interior Design V	6
IND 4301	Design Management	3
IND 4304	Pre-Senior Project	6
	Major Elective Course	3
	Total	**18**

Second Semester

IND 4202	Senior Project	6
IND 4303	Professional Ethics and Practice	3
	One Free Elective Course	3
	Total	**12**





DEPARTMENT OF PRODUCT DESIGN

DEGREE CONFERRED
Bachelor of Fine and Applied Arts (Product Design)
B.F.A. (Product Design)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Fine and Arts in Product Design upon students who meet all of the following requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Have completed the total number of credits of the curriculum.
- Have obtained a cumulative grade point average of at least 2.00.
- Have participated in 16 sessions of the Professional Ethics Seminar.
- Have obtained library and financial clearance with the University.
- Have demonstrated good behavior and discipline.

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Possess personal, professional, and environmental ethics accepted and approved by the society.
- Possess product design knowledge, technical skills, entrepreneurial and enterprising skills, and professional responsibility sufficient to assume leadership positions in the industry, society and the country.
- Confident in rendering product design services achieved through design thinking, problem solving, numerical analysis, and appropriate psychomotor skills in the milieu of science and technology while adhering to preservation of arts and culture.
- Possess the 21st century skills, which includes social skills, communication skills, and digital literacy skills within collaborative environments



COURSES

A. General Education Courses — **30 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (for non-Thai Students)	3

Social Science Courses — **3 Credits**

MGT 1101	Introduction to Business	3

Humanities Courses — **6 Credits**

GS 1004	Art of Delineation	3
GS 1005	Graphic Presentation	3

Science and Mathematics Courses — **6 Credits**

MA1200	Mathematics for Business	3
GE 1301	Environmental Science	3



B. Specialized Courses **105 Credits**

Core Courses **18 Credits**

PD 1101	Visual Design	3
PD 1102	Introduction to Design Culture and Trend	3
PD 2101	Design Thinking	3
PD 2102	User Experience Design	3
PD 3101	Theory and Concept in Design	3
PD 3102	Design Research and Development	3

Major Required Courses **81 credits**

PD 1301	Technical Drawing	3
PD 1302	Design Principles	3
PD 1304	Digital Design and Fabrication	3
PD 2201	Product Design I	6
PD 2202	Product Design II	6
PD 2303	History of Product Design	3
PD 2304	Art and Design Appreciation	3
PD 2305	Model Making and Digital Fabrication	3
PD 3201	Product Design III	6
PD 3202	Product Design IV	6
PD 3301	Material and Manufacturing Processes I	3
PD 3302	Material and Manufacturing Processes II	3
PD 3306	Marketing for Product Design	3
PD 3307	Social Engagement and Product Design	3
PD 3308	Practicum in Product Design	Non-credit (240 hrs)
PD 4201	Product Design V	6
PD 4203	Thesis in Product Design	9
PD 4303	Professional Ethics	3
PD 4304	Special Problem in Product Design	6
PD 4305	Seminar in Design Enterprising	3

Major Elective Courses **6 credits**

PD 3401	User Interface Design	3
PD 3402	Graphic and Packaging Design	3
PD 3403	Experience Design for Exhibitions	3
PD 3404	Fashion and Textile Design	3
PD 3405	Jewelry Design	3
PD 3406	Toy and Play Design	3
PD 3407	Furniture Design	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
MA 1200	Mathematics for Business	3
GE 1403	Communication in Thai (for Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai Students)	3
GS 1004	Art of Delineation	3
PD 1101	Visual Design	3
PD 1301	Technical Drawing	3
	Total	**18**

Second Semester

BG 1002	English II	3
GE 1301	Environmental Science	3
GS 1005	Graphic Presentation	3
IND 1102	Introduction to Design Culture and Trend	3
PD 1302	Design Principles	3
PD 1304	Digital Design and Fabrication	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
PD 2101	Design Thinking	3
PD 2201	Product Design I	6
PD 2305	Model Making and Digital Fabrication	3
PD 2304	Art and Design Appreciation	3
	Total	**18**

Second Semester

BG 2001	English IV	3
PD 2102	User Experience Design	3
PD 2202	Product Design II	6
PD 2303	History of Product Design	3
MGT 1101	Introduction to Business	3
	Total	**18**

THIRD YEAR

First Semester

PD 3101	Theory and Concept in Design	3
PD 3201	Product Design III	6
PD 3301	Material and Manufacturing Processes I	3
PD 3306	Marketing for Product Design	3
	Major Elective Course	3
	Total	**18**

Second Semester

PD 3102	Design Research and Development	3
PD 3202	Product Design IV	6
PD 3302	Material and Manufacturing Processes II	3
PD 3307	Social Engagement and Product Design	3
	Major Elective Course	3
	Total	**18**

FOURTH YEAR

First Semester

PD 4201	Product Design V	6
PD 4304	Special Problem in Product Design	6
PD 4305	Seminar in Design Enterprising	3
PD 3308	Practicum in Product Design	Non-credit (240 hrs)
	Free Elective Course	3
	Total	**18**

Second Semester

PD 4203	Thesis in Product Design	9
PD 4303	Professional Ethics	3
	Free Elective Course	3
	Total	**15**

VINCENT MARY SCHOOL OF **ENGINEERING**





VINCENT MARY SCHOOL OF ENGINEERING

CURRICULUM STRUCTURE

COURSES	ELECTRICAL ENGINEERING	COMPUTER ENGINEERING	MECHATRONICS ENGINEERING	AERONAUTIC ENGINEERING
A. General Education Courses	31	30	31	34
Language Courses	12	12	12	12
Social Science Courses	6	6	6	9
Humanities Courses	3	3	3	3
Science and Mathematics Courses	10	9	10	10
B. Specialized Courses	104	104	109	104
Basic Engineering Courses	20	32	20	40
Core Courses	17	-	21	-
Major Required Courses	61	51	62	61
Major Elective Courses	6	21	6	3
C. Free Elective Courses	6	6	6	6
Total	**141**	**140**	**146**	**144**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Engineering upon students who meet all the requirements as follows:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the university
- Have demonstrated good behavior and discipline



DEPARTMENT OF ELECTRICAL ENGINEERING

DEGREE CONFERRED
Bachelor of Engineering (Electrical Engineering)
B.Eng. (Electrical Engineering)

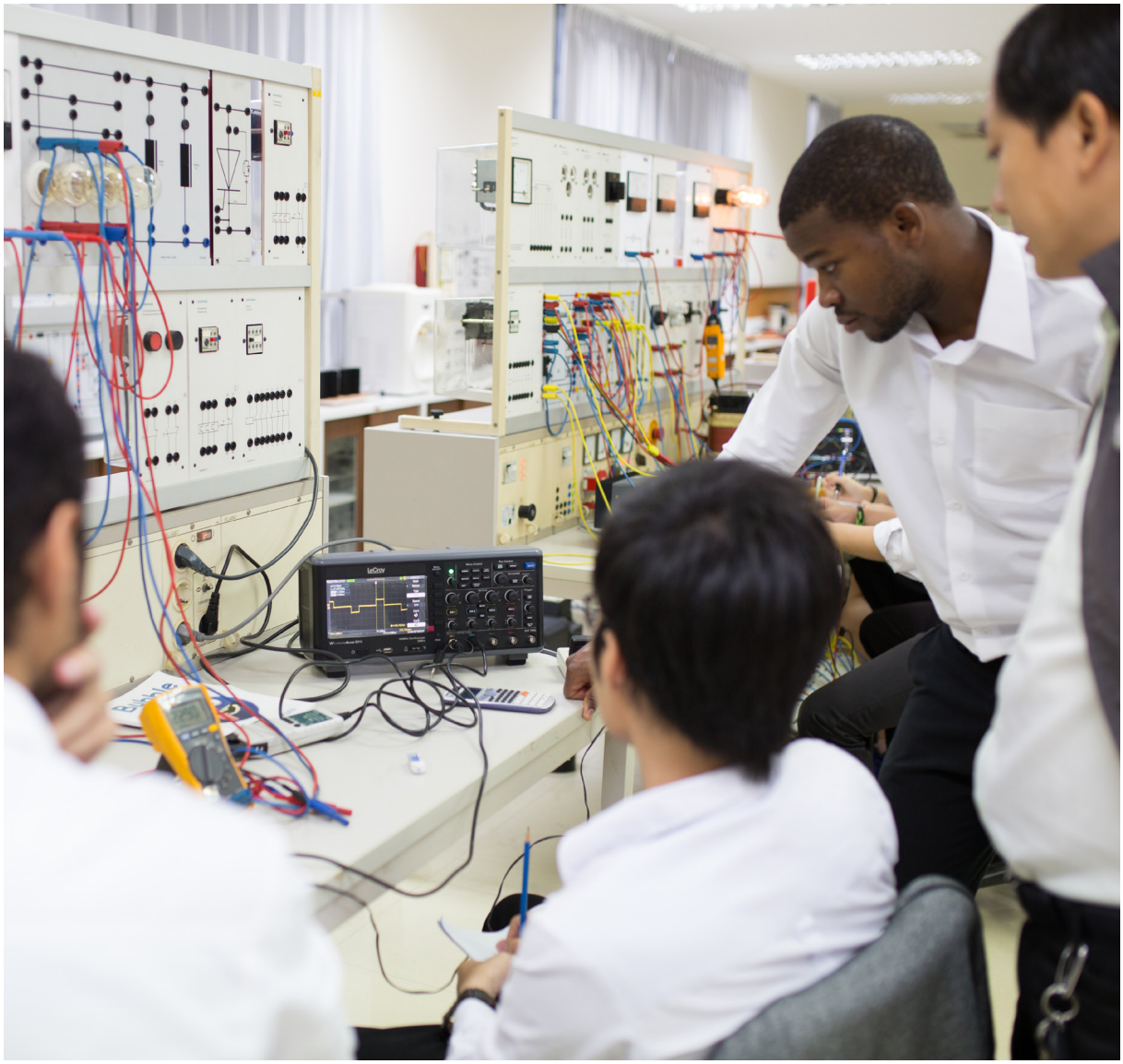
GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Engineering in Electrical Engineering upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have moral and professional ethics.
- Have knowledge in electrical engineering and able to apply knowledge in the administration of building electrical systems, high-voltage systems, illumination systems, industrial electrical systems, and safety in electrical systems.
- Capable of conducting research in both theoretical and practical aspects.
- Have good personality, good social manners and able to appropriately work with people of all levels.
- Have strong mathematical and computational skills

COURSES

A. General Education Courses		31 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**6 Credits**
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**3 Credits**
GE 2101	World Civilization	3



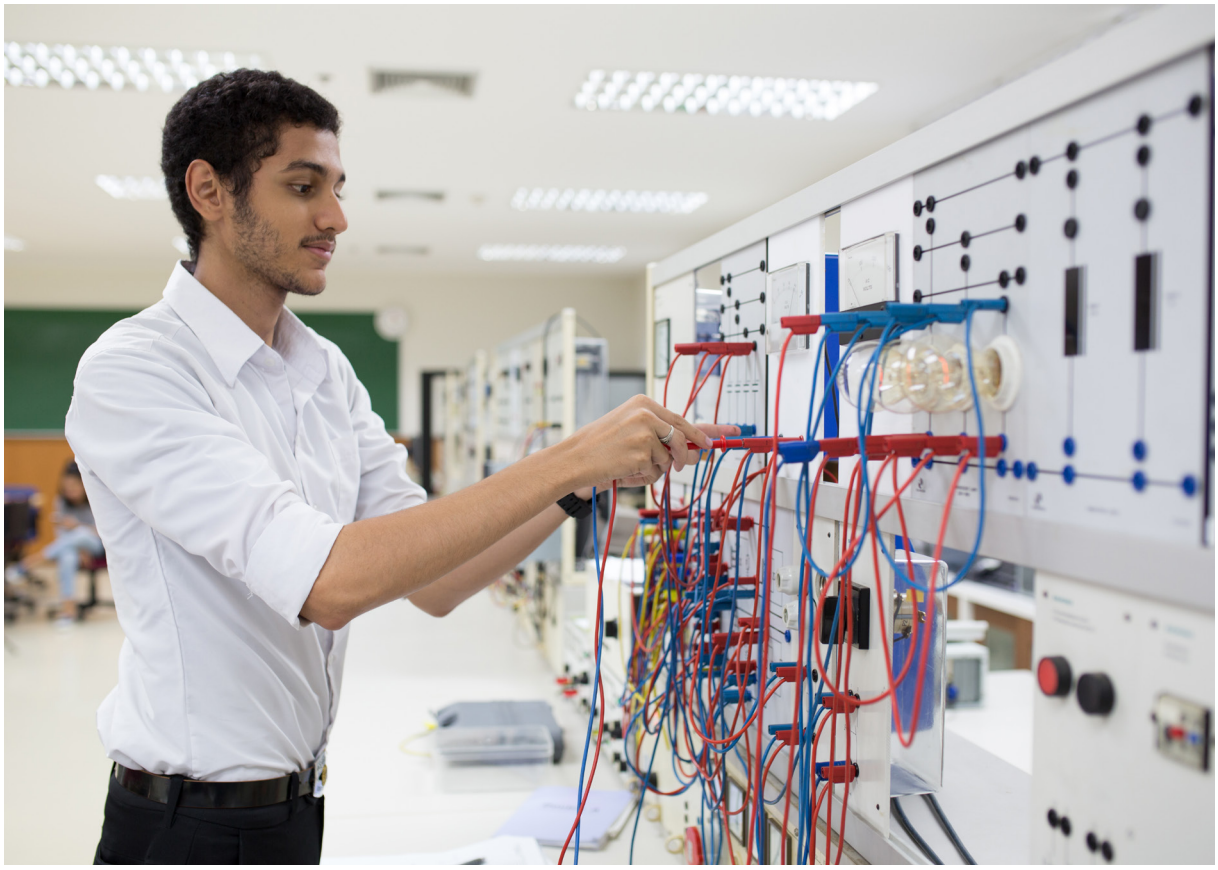
Science and Mathematics Courses		**10 Credits**
BG 0008	General Chemistry Laboratory	1
BG 1108	General Chemistry	3
BG 2208	Discrete Mathematics	3
BG 2212	Applied Statistics	3

B. Specialized Courses **104 Credits**

Basic Engineering Courses		**20 Credits**
BG 1204	Calculus I	3
BG 1205	Calculus II	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 1221	Computer Programming	3
BG 2207	Engineering Mathematics	3

Core Courses		**17 credits**
Common Core Courses		**11 credits**
IE 1110	Engineering Materials	3
ME 1113	Engineering Drawing	3
ME 1114	Engineering workshop	2
ME 2211	Engineering Mechanics I	3
Core Courses for Electrical and Electronics		**6 credits**
EE 3301	Electromagnetic Fields	3
MCE 4102	Introduction to Industrial Automation	3
Core Courses for Telecommunication and Electronics		**6 credits**
EE 3406	Control Systems	3
EE 4305	Digital Signal Processing	3

Major Required Courses		**61 credits**
Common Major Required Courses		**28 credits**
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2203	Signals and systems	3
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
EE 3601	Electronic Circuit Design	3
EE 3602	Electronic Circuit Design Laboratory	1
EE 3606	Electrical Instruments and Measurements	3
EE 3705	Microprocessors and Microcontrollers	3
TE 3000	Principles of Communications	3
Major Courses for Electrical and Electronics		**33 credits**
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
EE 3402	Electrical Machines	3
EE 3403	Electrical Machines Laboratory	1
EE 3406	Control Systems	3
EE 4501	Power System Analysis	3
EE 4503	Electrical Systems Design	3
EE 4505	Power System Protection	3
EE 4506	High Voltage Engineering	3
EE 4518	Electrical Power Generation, Transmission and Distribution	3
EE 4705	Power Electronics	3
EE 4706	Power Electronics Laboratory	1
EE 4901	Electrical and Electronics Engineering Project I	1
EE 4902	Electrical and Electronics Engineering Project II	2



Major Courses for Telecommunication and Electronics **33 credits**

CE 4207	System and Network Programming	3
CE 4224	Telecommunication Networks Laboratory	1
CE 4228	Data Communication and Networking	3
EE 3301	Electromagnetic Fields	3
TE 3002	Communications Laboratory	1
TE 3102	Communication Networks and Transmission Lines	3
TE 3301	Radio Wave Propagation	3
TE 4108	Digital Communication	3
TE 4111	Antenna Engineering	3
TE 4112	Optical Communications	3
TE 4201	Communication Electronics	3
TE 4202	Communication Electronics Laboratory	1
TE 4901	Telecommunication and Electronics Engineering Project I	1
TE 4902	Telecommunication and Electronics Engineering Project II	2

Major Elective Courses **6 credits**

Students can take major elective courses of 6 credits from the following courses.

CE 2102	Data Structures and Algorithms	3
CE 2103	Object-Oriented Programming	3
CE 4227	Mobile and Wireless Networks	3
CE 4229	Introduction to Cloud Computing	3
EE 3704	Embedded Systems	3
EE 4201	Network Theory	3
EE 4301	Introduction to Electromagnetic Compatibility	3
EE 4305	Digital Signal Processing (Only for major Electrical and Electronics)	3
EE 4401	Electric Drive	3
EE 4403	Basic Mechatronics	3
EE 4504	Illumination Engineering	3
EE 4600	IC Technology	3
EE 4601	Industrial Electronics	3
EE 4602	Industrial Instrumentation and Control	3
EE 4903	Advanced Topics in Electrical and/or Electronic Engineering	3
EE 4904	Special Problems in Electrical and/or Electronic Engineering	3
EE 4907	Electrical Engineering Industrial Training	3
IE 4201	Engineering Management	3
MCE 4801	Instrument for Aviation	6
ME 3310	Thermofluids	3
TE 4105	Microwave Engineering	3
TE 4204	Optoelectronics	3
TE 4301	Principle of Telecommunications Policies	3
TE 4903	Advanced Topics in Telecommunication and/or Electronic Engineering	3
TE 4904	Special Problems in Telecommunication and/or Electronic Engineering	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

MAJOR : ELECTRICAL AND ELECTRONICS ENGINEERING

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 0008	General Chemistry Laboratory	1
BG 1001	English I	3
BG 1108	General Chemistry	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
IE 1110	Engineering Materials	3
	Total	**17**

Second Semester

BG 1002	English II	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 1221	Computer Programming	3
ME 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
BG 2207	Engineering Mathematics	3
BG 2208	Discrete Mathematics	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2211	Engineering Mechanics I	3
	Total	**20**

Second Semester

BG 2001	English IV	3
BG 2212	Applied Statistics	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2203	Signals and systems	3
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
GE 2101	World Civilization	3
	Total	**20**

THIRD YEAR

First Semester

EE 3301	Electromagnetic Fields	3
EE 3402	Electrical Machines	3
EE 3403	Electrical Machines Laboratory	1
EE 3601	Electronic Circuit Design	3
EE 3602	Electronic Circuit Design Laboratory	1
EE 3606	Electrical Instruments and Measurements	3
MGT 1101	Introduction to Business	3
	Total	**17**

Second Semester

EE 3406	Control Systems	3
EE 3705	Microprocessors & Microcontrollers	3
GE 2202	Ethics	3
TE 3000	Principles of Communications	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**18**

FOURTH YEAR

First Semester

EE 4501	Power System Analysis	3
EE 4503	Electrical Systems Design	3
EE 4506	High Voltage Engineering	3
EE 4901	Electrical and Electronic Engineering Project I	1
MCE 4102	Introduction to Industrial Automation	3
	One Major Elective Course	3
	Total	**16**

Second Semester

EE 4505	Power System Protection	3
EE 4518	Electrical Power Generation, Transmission and Distribution	3
EE 4705	Power Electronics	3
EE 4706	Power Electronics Laboratory	1
EE 4902	Electrical and Electronic Engineering Project II	2
	One Free Elective Course	3
	Total	**15**

STUDY PLAN

MAJOR : TELECOMMUNICATION AND ELECTRONICS ENGINEERING

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 0008	General Chemistry Laboratory	1
BG 1001	English I	3
BG 1108	General Chemistry	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
IE 1110	Engineering Materials	3
	Total	**17**

Second Semester

BG 1002	English II	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 1221	Computer Programming	3
ME 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
BG 2207	Engineering Mathematics	3
BG 2208	Discrete Mathematics	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2211	Engineering Mechanics I	3
	Total	**20**

Second Semester

BG 2001	English IV	3
BG 2212	Applied Statistics	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2203	Signals and systems	3
GE 2101	World Civilization	3
	Total	**16**

THIRD YEAR

First Semester

EE 3301	Electromagnetic Fields	3
EE 3601	Electronic Circuit Design	3
EE 3602	Electronic Circuit Design Laboratory	1
EE 3606	Electrical Instruments and Measurements	3
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
	One Free Elective Course	3
	Total	**19**

Second Semester

EE 3406	Control Systems	3
EE 3705	Microprocessors and Microcontrollers	3
TE 3000	Principles of Communications	3
TE 3002	Communications Laboratory	1
TE 3102	Communication Networks and Transmission Lines	3
TE 3301	Radio Wave Propagation	3
	One Free Elective Course	3
	Total	**19**

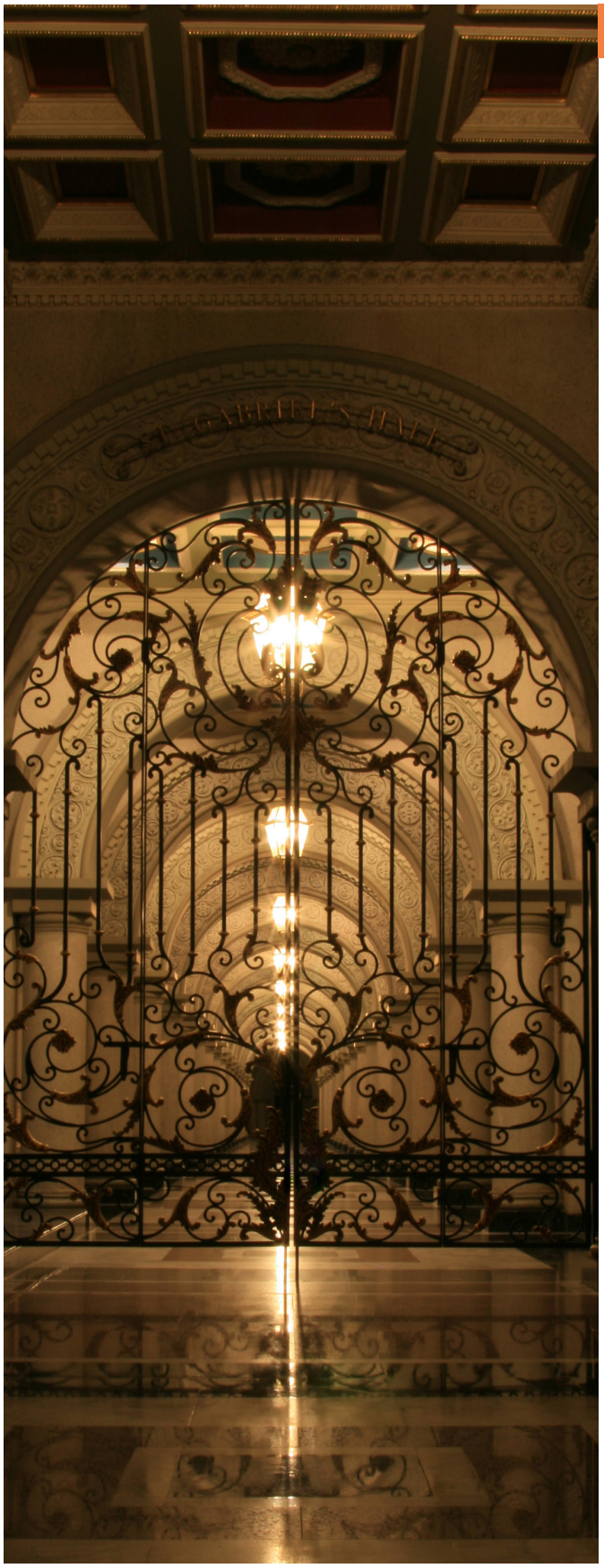
FOURTH YEAR

First Semester

CE 4207	System and Network Programming	3
CE 4224	Telecommunication Networks Laboratory	1
CE 4228	Data Communication and Networking	3
EE 4305	Digital Signal Processing	3
TE 4108	Digital Communication	3
TE 4901	Telecommunication and Electronic Engineering Project I	1
	One Major Elective Course	3
	Total	**17**

Second Semester

TE 4111	Antenna Engineering	3
TE 4112	Optical Communication	3
TE 4201	Communication Electronics	3
TE 4202	Communication Electronics Laboratory	1
TE 4902	Telecommunication and Electronic Engineering Project II	2
	One Major Elective Course	3
	Total	**15**



DEPARTMENT OF COMPUTER ENGINEERING

DEGREE CONFERRED
Bachelor of Engineering (Computer Engineering)
B.Eng. (Computer Engineering)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Engineering in Computer Engineering upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have moral and professional ethics.
- Have knowledge in Computer Engineering and able to apply knowledge.
- Capable of conducting research in both theoretical and practical aspects.
- Have good personality, good social manners and able to appropriately work with people at all levels.
- Have strong mathematical, computational and information technology skills.

COURSES

A. General Education Courses		30 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**6 Credits**
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**3 Credits**
GE 2101	World Civilization	3





Science and Mathematics Courses		**9 Credits**
BG 1221	Computer Programming	3
BG 2208	Discrete Mathematics	3
BG 2212	Applied Statistics	3

B. Specialized Courses — 104 Credits

Basic Engineering Courses		**32 Credits**
BG 1204	Calculus I	3
BG 1205	Calculus II	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2207	Engineering Mathematics	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2203	Signals and Systems	3
ME 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
TE 3000	Principles of Communications	3

Major Required Courses		**51 credits**
Applications		
CE 3109	Database Management Systems	3
CE 4221	Network Applications and Technology	3
CE 4901	Computer Engineering Project I	1
CE 4902	Computer Engineering Project II	2
Software Technology		
CE 2103	Object-Oriented Programming	3
CE 2104	Software Design and Development	3
CE 3104	Software Engineering	3
System Fundamentals		
CE 2102	Data Structures and Algorithms	3
CE 3103	Computer Operating Systems	3
CE 4224	Telecommunication Networks Laboratory	1
CE 4225	Computer and Network Security	3
CE 4228	Data Communication and Networking	3
CE 4715	Artificial Intelligence	3
Computer Architectures and Hardware		
CE 2703	Introduction to Computer Systems	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
CE 2709	Computer Architecture	3
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
EE 3705	Microprocessors and Microcontrollers	3

Major Elective Courses		**21 credits**
Track1: Computer Systems		
CE 3003	Mobile Application Development	3
CE 3105	Microprocessor Programming Using Assembly & C	3
CE 3106	Programming Languages	3
CE 3111	Design and Analysis of Algorithms	3
CE 3707	Microprocessor Systems Design	3
CE 4110	Compilers	3
CE 4201	Image Processing and Computer Vision	3
CE 4713	Advanced Computer Architecture	3
CE 4714	Fault-Tolerant Computer	3
CE 4903	Advanced Topics in Computer Engineering	3
CE 4904	Special Problems in Computer Engineering	3
EE 4305	Digital Signal Processing	3
Track2: Network Technology		
CE 3901	Digital Audio/Video Coding Technique	3
CE 4002	Introduction to Broadcasting Technology	3
CE 4207	System and Network Programming	3
CE 4223	Advanced Computer Networks	3
CE 4226	Network Systems Analysis and Design	3
CE 4227	Mobile and Wireless Networks	3
TE 4112	Optical Communications	3
TE 4204	Optoelectronics	3
TE 4301	Principle of Telecommunications Policies	3
Track3: Internet of Things and Cloud Computing		
CE 4114	Data Mining	3
CE 4229	Introduction to Cloud Computing	3
CE 4301	Fundamental of Internet of Things	3
CE 4302	Introduction to Big-Data	3
EE 3704	Embedded Systems	3
EE 4403	Basic Mechatronics	3
EE 4602	Industrial Instrumentation and Control	3
MCE 4102	Introduction to Industrial Automation	3
Track4: Engineering Management and Entrepreneurship		
CE 4108	Operations Research	3
CE 4109	Information Systems Analysis and Design	3
CE 4907	Computer Engineering Industrial Training	3
IE 4201	Engineering Management	3
IE 4203	Engineering Economics	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1221	Computer Programming	3
BG 2208	Discrete Mathematics	3
ME 1114	Engineering Workshop	2
	Total	**18**

Second Semester

BG 1002	English II	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
CE 2102	Data Structures and Algorithms	3
CE 2703	Introduction to Computer Systems	3
ME 1113	Engineering Drawing	3
	Total	**19**

SECOND YEAR

First Semester

BG 2000	English III	3
BG 2207	Engineering Mathematics	3
CE 2103	Object-Oriented Programming	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
	Total	**17**

Second Semester

BG 2001	English IV	3
BG 2212	Applied Statistics	3
CE 2104	Software Design and Development	3
EE 2203	Signals and systems	3
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
	Total	**16**

THIRD YEAR

First Semester

CE 2709	Computer Architecture	3
CE 3103	Computer Operating Systems	3
CE 3109	Database Management Systems	3
CE 4221	Network Applications and Technology	3
EE 3705	Microprocessors and Microcontrollers	3
TE 3000	Principles of Communications	3
	Total	**18**

Second Semester

CE 3104	Software Engineering	3
CE 4224 1	Telecommunication Networks Laboratory	
CE 4228	Data Communication and Networking	3
GE 2101	World Civilization	3
MGT 1101	Introduction to Business	3
	One Major Elective Course	3
	One Major Elective Course	3
	Total	**19**

FOURTH YEAR

First Semester

CE 4225	Computer and Network Security	3
CE 4715	Artificial Intelligence	3
CE 4901	Computer Engineering Project I	1
	One Major Elective Course	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**16**

Second Semester

CE 4902	Computer Engineering Project II	2
GE 2202	Ethics	3
	One Major Elective Course	3
	One Major Elective Course	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**17**



DEPARTMENT OF MECHATRONICS ENGINEERING

DEGREE CONFERRED
Bachelor of Engineering (Mechatronics Engineering)
B.Eng. (Mechatronics Engineering)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Engineering in Mechatronics Engineering upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have met the minimum English proficiency requirement specified in one of the following criteria:

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



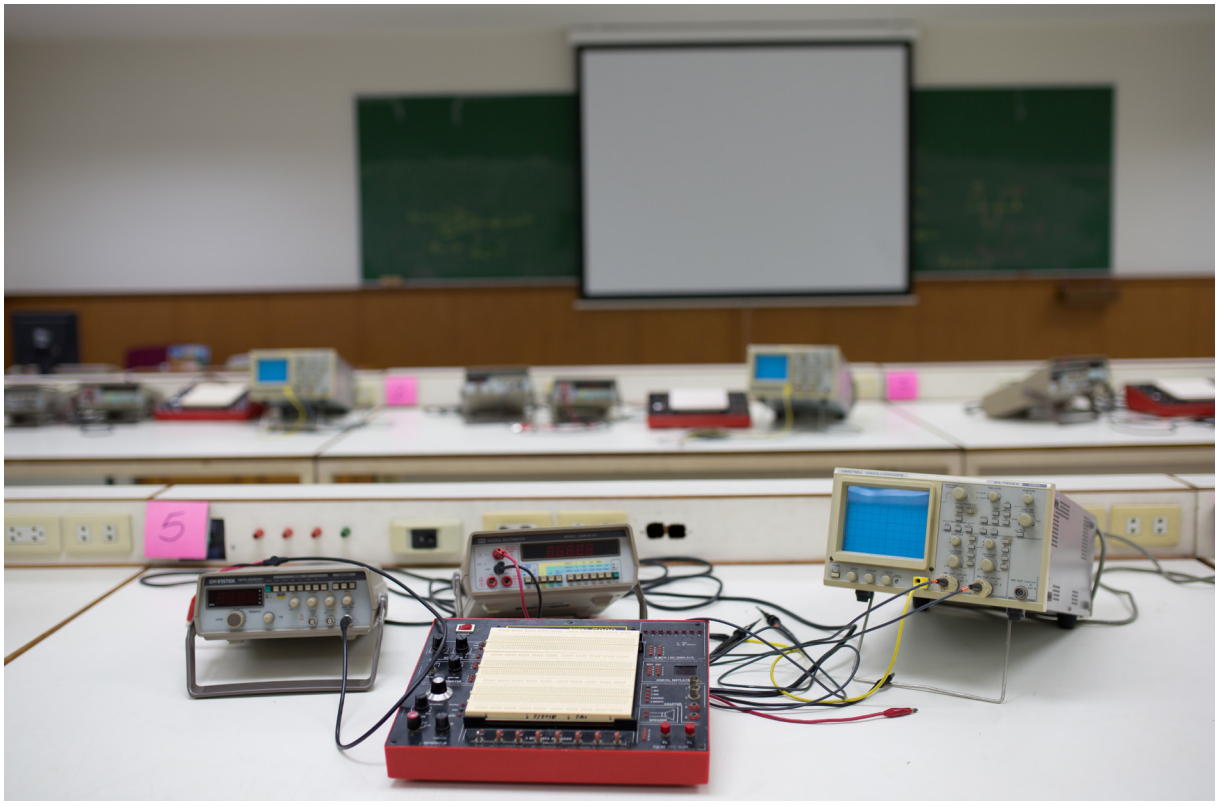
OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have moral and professional ethics.
- Have knowledge in Mechatronics Engineering and able to apply knowledge.
- Capable of conducting research in both theoretical and practical aspects.
- Have good personality, good social manners and able to appropriately work with people of all levels.
- Have strong mathematical, computational and information technology skills

COURSES

A. General Education Courses		31 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**6 Credits**
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**3 Credits**
GE 2101	World Civilization	3



Science and Mathematics Courses **10 Credits**

BG 0008	General Chemistry Laboratory	1
BG 1108	General Chemistry	3
BG 1221	Computer Programming	3
BG 2208	Discrete Mathematics	3

B. Specialized Courses **109 Credits**

Basic Engineering Courses **20 Credits**

BG 1204	Calculus I	3
BG 1205	Calculus II	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2207	Engineering Mathematics	3
BG 2212	Applied Statistics	3

Core Courses **21 credits**

Core Courses for All Concentrations **17 credits**

EE 2203	Signals and Systems	3
IE 1110	Engineering Materials	3
ME 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
ME 2211	Engineering Mechanics I	3
ME 2220	Engineering Mechanics II	3

Core Courses for Concentration in Automation Engineering **4 credits**

EE 3402	Electrical Machines	3
EE 3403	Electrical Machines Laboratory	1

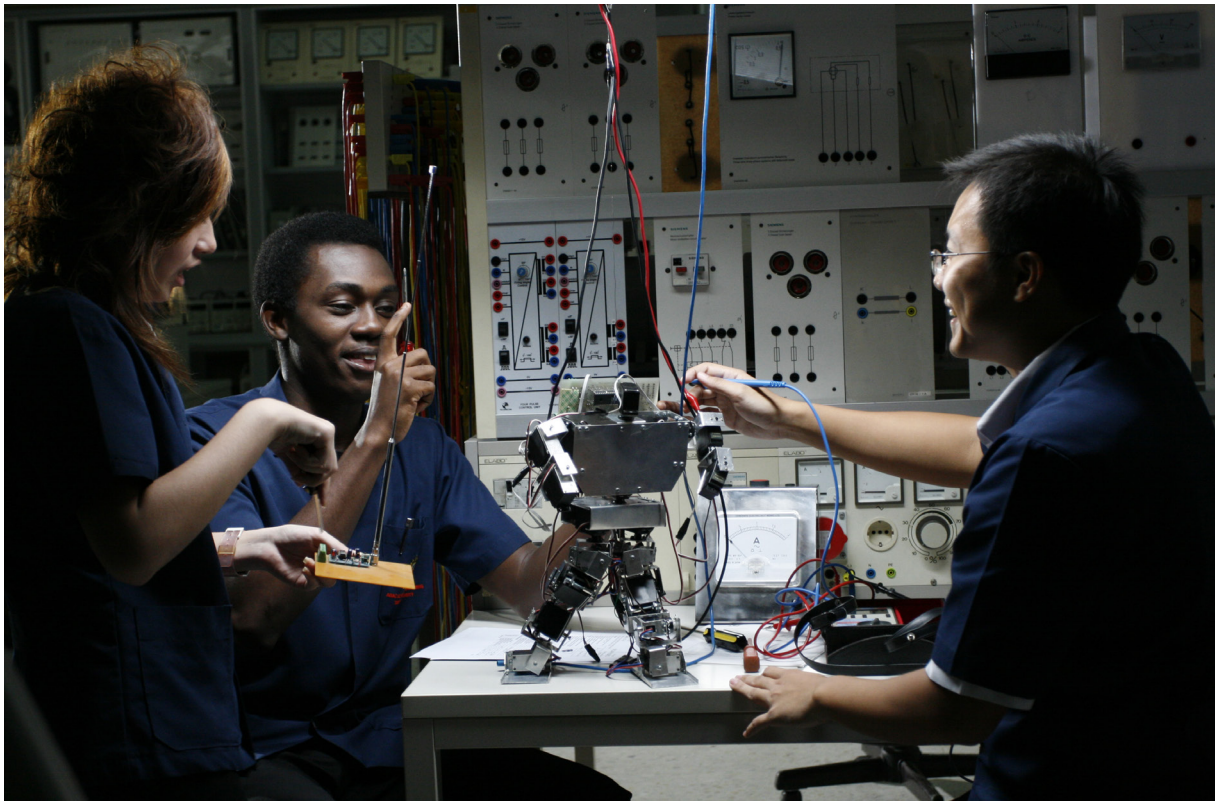
Core Courses for Concentration in Marine Engineering **4 credits**

ME 3501	Naval Architecture and Ship Construction	4

Major Required Courses **62 credits**

Major Required Courses for All Concentrations **41 credits**

CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
EE 3406	Control Systems	3
EE 4705	Power Electronics	3
EE 4706	Power Electronics Laboratory	1
IE 3100	Manufacturing Processes	3
MCE 2101	Fundamentals of Mechatronics Engineering	3
MCE 2102	Mechatronics Engineering Laboratory I	1
MCE 4103	Mechatronics Engineering Laboratory II	1
MCE 4901	Mechatronics Engineering Project I	1
MCE 4902	Mechatronics Engineering Project II	2
ME 3110	Mechanics of Materials	3
ME 3311	Pneumatic and Hydraulic Systems	3
ME 3312	Pneumatic and Hydraulic Systems Laboratory	1



Major Required Courses for Concentration in Automation Engineering **21 credits**

CE 4201	Image Processing and Computer Vision	3
EE 3405	Digital Control Systems	3
EE 3606	Electrical Instruments and Measurements	3
EE 3705	Microprocessors and Microcontrollers	3
MCE 4101	Introduction to Robotics	3
MCE 4102	Introduction to Industrial Automation	3
ME 3120	Mechanics of Machinery	3

Major Required Courses for Concentration in Marine Engineering **21 credits**

ME 3204	Marine Electrical Powering and Systems	3
ME 3410	Thermodynamics	3
ME 3414	Fluid Mechanics	3
ME 3418	Heat Transfer	3
ME 4502	Marine Propulsion and Machinery Systems	3
ME 4506	Ship Dynamics	3
ME 4512	Ship Operation and Maintenance	3

Major Elective Courses **6 credits**

Students can take major elective courses of 6 credits from the following courses.

CE 3001	Commercial Application Programming	3
CE 3003	Mobile Applications Development	3
CE 4221	Network Applications and Technology	3
CE 4224	Telecommunication Network Laboratory	1
CE 4225	Computer and Network security	3
CE 4301	Fundamental of Internet of Things	3
EE 3301	Electromagnetic Fields	3
EE 3704	Embedded Systems	3
EE 4305	Digital Signal Processing	3
EE 4501	Power System Analysis	3
EE 4503	Electrical System Design	3
EE 4506	High Voltage Engineering	3
EE 4602	Industrial Instrumentation and Control	3
EE 4601	Industrial Electronics	3
EE 4701	Microprocessor Interface Techniques	3
IE 2110	Introduction to Manufacturing with Plastics	3
IE 4101	Manufacturing and Information Technology	3
IE 4201	Engineering Management	3
IE 4203	Engineering Economics	3
MCE 4801	Instrument for Aviation	6
MCE 4903	Advanced Topics in Mechatronics Engineering	3
MCE 4904	Special Problems in Mechatronics Engineering	3
MCE 4907	Engineering Internship	3
ME 4010	Machine Design	3
ME 4310	Mechanical Vibration	3
ME 4412	Internal Combustion Engines	3
ME 4414	Air Conditioning	3
ME 4505	Ship Design	3
ME 4602	Maritime Robotics	3
TE 3000	Principles of Communications	3

Students can also select major required courses of other majors as their major elective courses.

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN
MAJOR : AUTOMATION ENGINEERING

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1221	Computer Programming	3
BG 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
	Total	**18**

Second Semester

BG 0008	General Chemistry Laboratory	1
BG 1002	English II	3
BG 1108	General Chemistry	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2208	Discrete Mathematics	3
IE 1110	Engineering Materials	3
	Total	**20**

SECOND YEAR
First Semester

BG 2000	English III	3
BG 2207	Engineering Mathematics	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
MCE 2101	Fundamental of Mechatronics Engineering	3
MCE 2102	Mechatronics Engineering Laboratory I	1
ME 2211	Engineering Mechanics I	3
	Total	**21**

Second Semester

BG 2001	English IV	3
BG 2212	Applied Statistics	3
EE 2203	Signals and Systems	3
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2220	Engineering Mechanics II	3
	Total	**20**

THIRD YEAR
First Semester

EE 3402	Electrical Machines	3
EE 3403	Electrical Machines Laboratory	1
EE 3406	Control Systems	3
EE 3606	Electrical Instruments and Measurements	3
EE 3705	Microprocessors and Microcontrollers	3
ME 3120	Mechanics of Machinery	3
ME 3311	Pneumatic and Hydraulic Systems	3
ME 3312	Pneumatic and Hydraulic Systems Laboratory	1
	Total	**20**

Second Semester

GE 2101	World Civilization	3
CE 4201	Image Processing and Computer Vision	3
EE 3405	Digital Control Systems	3
IE 3100	Manufacturing Processes	3
ME 3110	Mechanics of Materials	3
	Total	**15**

FOURTH YEAR
First Semester

GE 2202	Ethics	3
MCE 4101	Introduction to Robotics	3
MCE 4103	Mechatronics Engineering Laboratory II	1
MCE 4901	Mechatronics Engineering Project I	1
MGT 1101	Introduction to Business	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**17**

Second Semester

EE 4705	Power Electronics	3
EE 4706	Power Electronics Laboratory	1
MCE 4102	Introduction to Industrial Automation	3
MCE 4902	Mechatronics Engineering Project II	2
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**15**

STUDY PLAN
MAJOR : MARINE ENGINEERING

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1221	Computer Programming	3
BG 1113	Engineering Drawing	3
ME 1114	Engineering Workshop	2
	Total	**18**

Second Semester

BG 0008	General Chemistry Laboratory	1
BG 1002	English II	3
BG 1108	General Chemistry	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2208	Discrete Mathematics	3
IE 1110	Engineering Materials	3
	Total	**20**

SECOND YEAR
First Semester

BG 2000	English III	3
BG 2207	Engineering Mathematics	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
MCE 2101	Fundamental of Mechatronics Engineering	3
MCE 2102	Mechatronics Engineering Laboratory I	1
ME 2211	Engineering Mechanics I	3
	Total	**21**

Second Semester

BG 2001	English IV	3
BG 2212	Applied Statistics	3
EE 2203	Signals and Systems	3
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2220	Engineering Mechanics II	3
	Total	**20**

THIRD YEAR
First Semester

EE 3406	Control Systems	3
ME 3204	Marine Electrical Powering and Systems	3
ME 3311	Pneumatic and Hydraulic Systems	3
ME 3312	Pneumatic and Hydraulic Systems Laboratory	1
ME 3410	Thermodynamics	3
ME 3414	Fluid Mechanics	3
	Total	**16**

Second Semester

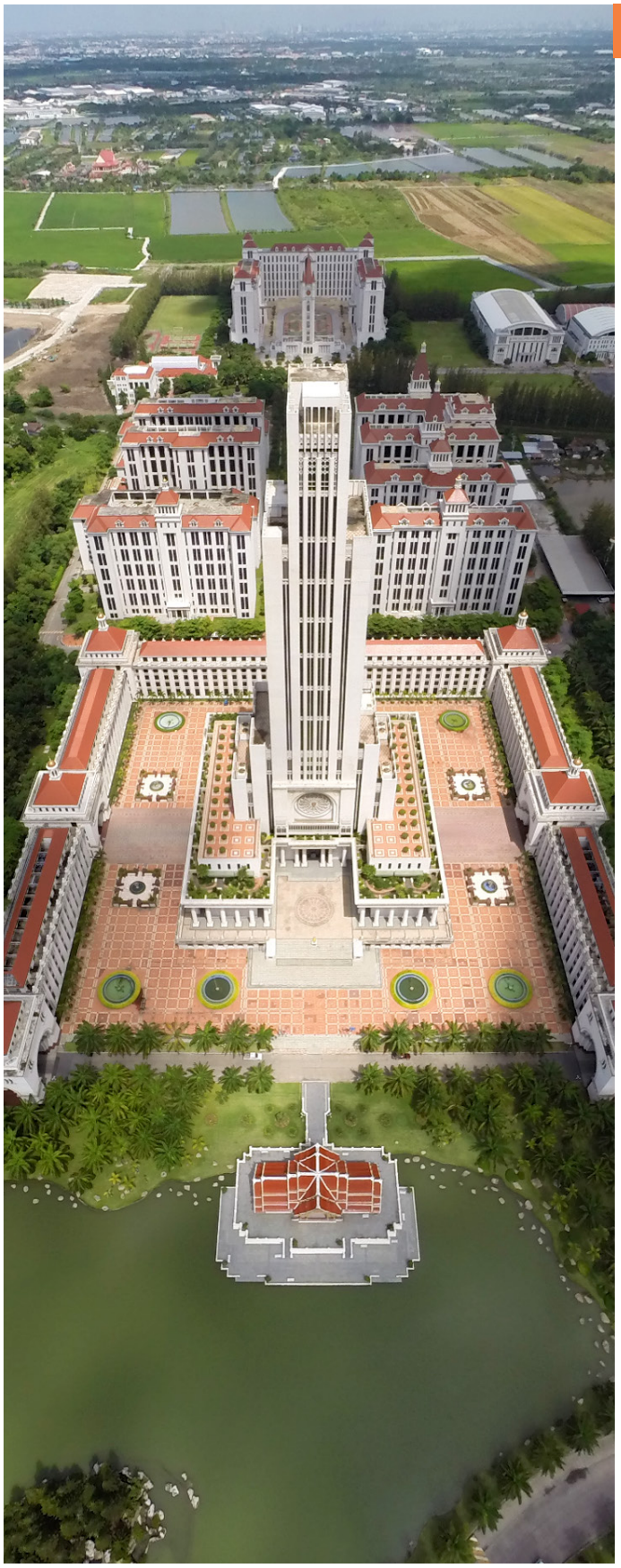
GE 2101	World Civilization	3
IE 3100	Manufacturing Processes	3
ME 3110	Mechanics of Materials	3
ME 3418	Heat Transfer	3
ME 3501	Naval Architecture and Ship Construction	4
	One Free Elective Course	3
	Total	**19**

FOURTH YEAR
First Semester

GE 2202	Ethics	3
MCE 4103	Mechatronics Engineering Laboratory II	1
MCE 4901	Mechatronics Engineering Project I	1
ME 4502	Marine Propulsion and Machinery Systems	3
MGT 1101	Introduction to Business	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**17**

Second Semester

EE 4705	Power Electronics	3
EE 4706	Power Electronics Laboratory	1
MCE 4902	Mechatronics Engineering Project II	2
ME 4506	Ship Dynamics	3
ME 4512	Ship Operation and Maintenance	3
	One Major Elective Course	3
	Total	**15**



DEPARTMENT OF AERONAUTIC ENGINEERING

DEGREE CONFERRED
Bachelor of Engineering (Aeronautic Engineering)
B.Eng. (Aeronautic Engineering)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Engineering in Aeronautic Engineering upon students who meet all of the following requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Have completed of the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance with the University
- Have demonstrated good behavior and discipline

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have moral sound, committed to acting justly and open to further growth.
- Have aeronautic knowledge both engineering and non-engineering.
- Have aircraft maneuver skills.
- Be open-minded with strong logical thinking problem-solving.
- Have communication skills.



COURSES

A. General Education Courses		34 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**9 Credits**
GE 1301	Environmental Science	3
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**3 Credits**
GE 2101	World Civilization	3
Science and Mathematics Courses		**10 Credits**
BG 0008	General Chemistry Laboratory	1
BG 1108	General Chemistry	3
BG 1221	Computer Programming	3
BG 2208	Discrete Mathematics	3





B. Specialized Courses **104 Credits**

Basic Engineering Courses **40 Credits**

BG 1204	Calculus I	3
BG 1205	Calculus II	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2209	Statistics for Engineers	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
IE 1110	Engineering Materials	3
MCE 2101	Fundamentals of Mechatronics Engineering	3
MCE 2102	Fundamentals of Mechatronics Engineering Laboratory I	1
ME 1112	Engineering Laboratory	2
ME 1113	Engineering Drawing	3
ME 2211	Engineering Mechanics I	3

Major Required Courses **61 credits**

Students can select Commercial Pilot or Aircraft Maintenance Engineer as their major.

Commercial Pilot **61 credits**

AE 1100	Core Flying: Single-Engine Flight - Ground	3
AE 1101	Theory of Single-Engine Flight	3
AE 1200	Core Flying: Single-Engine Flight - Flight	2
AE 2100	Basic Flying: Single/Multi-Engine - Ground	3
AE 2200	Basic Flying: Single/Multi-Engine - Flight I	1
AE 2201	Basic Flying: Single/Multi-Engine - Flight II	1
AE 2202	Basic Flying: Multi-Engine Operations	2
AE 2203	Basic Flying: Operational Procedures	1
AE 2300	Basic Flying: Flight Communications	1
AE 2401	Basic Flying: Air Law	3
AE 3300	Intermediate Flying: Route Manual and Pilot Applications	3
AE 3301	Intermediate Flying: General Navigation	3
AE 3302	Intermediate Flying: Flight Performance and Planning I	3
AE 3303	Intermediate Flying: Flight Performance and Planning II	3
AE 3304	Intermediate Flying: Meteorology	3
AE 3400	Intermediate Flying: Advanced Aerodynamics	3
AE 3500	Intermediate Flying: Airframes and Aircraft Systems	3
AE 3501	Intermediate Flying: Power Plants and Instrumentations	3
AE 3502	Intermediate Flying: Radio Navigation	3
AE 3700	Commercial Flight I	1
AE 3701	Commercial Flight II	1
AE 3702	Commercial Flight III	1
AE 3703	Commercial Flight IV	1
AE 3705	Commercial Flight – Ground	3
AE 3900	Seminar in International and Domestic Navigation	3
AE 4300	Intermediate Flying: Crew Resources Management and Flight Safety	1
AE 4301	Intermediate Flying: Human Performance and Limitations	3

Aircraft Maintenance Engineer **61 credits**

AE 1910	Problem-based Training in Aircraft Maintenance I	1
AE 1911	Problem-based Training in Aircraft Maintenance II	1
AE 1920	Problem-based Training in Aircraft Maintenance III	1
AE 2700	Fundamental Aircraft: Propulsion Theory	2
AE 2701	Fundamental Aircraft: Aircraft Engine	3
AE 2702	Fundamental Aircraft: Aerodynamics	2
AE 2703	Fundamental Aircraft: Aircraft Structure	3
AE 2704	Fundamental Aircraft: Aircraft Material	3
AE 2705	Fundamental Aircraft: Aircraft Performance	3
AE 2901	Fundamental Aircraft: Practical Verification	1
AE 3310	Aircraft Maintenance: Maintenance Human Factor	1
AE 3311	Aircraft System: Technical Document System	3
AE 3312	Aircraft System: Logistics	2
AE 3411	Aircraft System: Aviation Acts and Airworthiness Regulations	3
AE 3511	Aircraft System: Aircraft Communications	1
AE 3512	Aircraft System: Ground Support Equipment	2
AE 3513	Aircraft System: Non-Destructive Inspection	3
AE 3710	Aircraft Maintenance: Aircraft Maintenance I	3
AE 3711	Aircraft Maintenance: Aircraft Maintenance II	3
AE 3712	Aircraft System: Hydraulic and Pneumatic System	3
AE 3713	Aircraft System: Landing Gear and Brake System	3
AE 3714	Aircraft System: Fuel System	3
AE 3715	Aircraft System: Powerplant	3
AE 3716	Aircraft System: Stability and Weight & Balance System	3



AE 3800	Aircraft System: Aircraft Electrical System	3
AE 3901	Aircraft Maintenance: Practical Verification	1
AE 4901	Aircraft System: Practical Verification	1

Major Elective Courses **3 credits**

1. Students of all majors can select the following courses as major elective courses according to the number of required credits.

AE 2402	English for Aviation	3
AE 2501	Maintenance English I	1
AE 2502	Maintenance English II	1
AE 3401	Avionics	3
AE 4700	Commercial Pilot License Instructor	3
AE 4701	Commercial Pilot License Instructor: Fight I	2
AE 4702	Commercial Pilot License Instructor: Flight II	2
AE 4904	Special Problems in Aeronautic Engineering I	3
AE 4905	Special Problems in Aeronautic ngineering II	2
AE 4906	Special Problems in Aeronautic Engineering III	1
AE 4930	Advanced Topics in Aeronautic Engineering I	3
AE 4931	Advanced Topics in Aeronautic Engineering II	2
AE 4932	Advanced Topics in Aeronautic Engineering III	1
CE 2703	Introduction to Computer Systems	3
CE 2704	Digital Logic Design	3
CE 2705	Digital Logic Design Laboratory	1
CE 4227	Mobile and Wireless Networks	3
EE 2401	Electromechanical Energy Conversion	3
EE 2402	Electromechanical Energy Conversion Laboratory	1
EE 3301	Electromagnetic Fields	3
EE 3404	Feedback Control Systems	3
EE 3601	Electronic Circuit Design	3
EE 3602	Electronic Circuit Design Laboratory	1
EE 4305	Digital Signal Processing	3
EE 4403	Basic Mechatronics	3
EE 4503	Electrical Systems Design	3
EE 4602	Industrial Instrumentation and Control	3
TE 4201	Communication Electronics	3
TE 4202	Communication Electronics Laboratory	1

2. Students can also select major required courses of other majors as their major elective courses.

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

AERONAUTIC ENGINEERING CURRICULUM'S GUIDELINES

1). Freshmen and Sophomore students will take engineering courses.
2). Second year first semester students are required to take an examination to qualify for Private Pilot License (PPL) at the Department of Civil Aviation, Thailand.
3). The School will send the list of students for medical examinations at either the institute of Aviation Medicine, Bhumibol Adulyadej Hospital or Bangkok Hospital, Thailand.
4). Third year second semester students may start taking basic pilot subjects.
5). Students who obtain Private Pilot Licenses (PPL) are deemed to have the added potential of flying through the Instrument Rating (IR) and the Department of Civil Aviation Verification.
6). Test Multi Engine Rating (MR) after class hours: Training for Multi Engine Operations at the airport by the Civil Aviation Department. Students must hold Private Pilot Licenses (PPL) prior to passing this examination.
7). When a student graduates he/she must have completed Commercial Pilot License (CPL). In the CPL cases of students who did not hold License PPL, they will need to ensure that they passed (IR), (ME), (CPL) simultaneously.

STUDY PLAN
COMMERCIAL PILOT

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1221	Computer Programming	3
ME 1112	Engineering Laboratory	2
ME 1113	Engineering Drawing	3
	Total	**18**

Second Semester

BG 0008	General Chemistry Laboratory	1
BG 1108	General Chemistry	3
BG 1002	English II	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2208	Discrete Mathematics	3
IE 1110	Engineering Materials	3
	Total	**20**

SECOND YEAR
First Semester

BG 2000	English III	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
MCE 2101	Fundamentals of Mechatronics Engineering	3
MCE 2102	Fundamentals of Mechatronics Engineering	1
MGT 1101	Introduction to Business	3
	Free Elective	3
	Total	**17**

Second Semester

BG 2001	English IV	3
BG 2209	Statistics for Engineers	3
GE 2101	World Civilization	3
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2211	Engineering Mechanics I	3
	Free Elective	3
	Total	**19**

Summer Session

GE 1301	Environmental Science	3
	Total	**3**

THIRD YEAR
First Semester

AE 3302	Intermediate Flying: Flight Performance and Planning I	3
AE 3304	Intermediate Flying: Meteorology	3
AE 3400	Intermediate Flying: Advanced Aerodynamics	3
AE 3501	Intermediate Flying: Power Plants and Instrumentations	3
AE 4300	Intermediate Flying: Crew Resources Management and Flight Safety	1
AE 4301	Intermediate Flying: Human Performance and Limitations	3
	Total	**16**

Second Semester

AE 1100	Core Flying: Single-Engine Flight – Ground	3
AE 1101	Theory of Single-Engine Flight	3
AE 1200	Core Flying: Single-Engine Flight – Flight	2
AE 2100	Basic Flying: Single/Multi-Engine – Ground	3
AE 2200	Basic Flying: Single/Multi-Engine - Flight I	1
AE 2201	Basic Flying: Single/Multi-Engine - Flight II	1
AE 2202	Basic Flying: Multi-Engine Operations	2
	Total	**15**

Summer Session

AE 3700	Commercial Flight I	1
AE 3705	Commercial Flight - Ground	3
	Total	**4**

FOURTH YEAR
First Semester

AE 2203	Basic Flying: Operational Procedures	1
AE 2300	Basic Flying: Flight Communications	1
AE 2401	Basic Flying: Air Law	3
AE 3701	Commercial Flight II	1
AE 3702	Commercial Flight III	1
AE 3703	Commercial Flight IV	1
	Major Elective	3
	Total	**11**

Second Semester

GE 2202	Ethics	3
AE 3300	Intermediate Flying: Route Manual and Pilot Applications	3
AE 3301	Intermediate Flying: General Navigation	3
AE 3303	Intermediate Flying: Flight Performance and Planning II	3
AE 3500	Intermediate Flying: Airframes and Aircraft Systems	3
AE 3502	Intermediate Flying: Radio Navigation	3
AE 3900	Seminar in International and Domestic Navigation	3
	Total	**21**

STUDY PLAN
AIRCRAFT MAINTENANCE ENGINEERING

FIRST YEAR
First Semester

Code	Subjects	Credits
BG 1001	English I	3
BG 1204	Calculus I	3
BG 1211	Physics I	3
BG 1212	Physics Laboratory I	1
BG 1221	Computer Programming	3
ME 1112	Engineering Laboratory	2
ME 1113	Engineering Drawing	3
	Total	**18**

Second Semester

BG 0008	General Chemistry Laboratory	1
BG 1108	General Chemistry	3
BG 1002	English II	3
BG 1205	Calculus II	3
BG 1213	Physics II	3
BG 1214	Physics Laboratory II	1
BG 2208	Discrete Mathematics	3
IE 1110	Engineering Materials	3
	Total	**20**

SECOND YEAR
First Semester

BG 2000	English III	3
EE 2201	Electric Circuits	3
EE 2202	Electric Circuits Laboratory	1
MCE 2101	Fundamentals of Mechatronics Engineering	3
MCE 2102	Fundamentals of Mechatronics Engineering	1
MGT 1101	Introduction to Business	3
AE 1910	Problem-based Training in Aircraft Maintenance I	1
AE 2700	Fundamental Aircraft: Propulsion Theory	2
	Total	**17**

Second Semester

BG 2001	English IV	3
BG 2209	Statistics for Engineers	3
GE 2101	World Civilization	3
EE 2605	Engineering Electronics	3
EE 2606	Engineering Electronics Laboratory	1
ME 2211	Engineering Mechanics I	3
AE 1911	Problem-based Training in Aircraft Maintenance II	1
AE 2701	Fundamental Aircraft: Aircraft Engine	3
	Total	**20**

Summer Session

GE 1301	Environmental Science	3
	Total	**3**

THIRD YEAR
First Semester

AE 1920	Problem-based Training in Aircraft Maintenance III	1
AE 2702	Fundamental Aircraft: Aerodynamics	2
AE 2703	Fundamental Aircraft: Aircraft Structure	3
AE 2704	Fundamental Aircraft: Aircraft Material	3
AE 2705	Fundamental Aircraft: Aircraft Performance	3
AE 3310	Aircraft Maintenance: Maintenance Human Factor	1
AE 3710	Aircraft Maintenance: Aircraft Maintenance I	3
	Total	**16**

Second Semester

AE 2901	Fundamental Aircraft: Practical Verification	1
AE 3311	Aircraft System: Technical Document System	3
AE 3312	Aircraft System: Logistics	2
AE 3411	Aircraft System: Aviation Acts and Airworthiness Regulations	3
AE 3511	Aircraft System: Aircraft Communications	1
AE 3711	Aircraft Maintenance: Aircraft Maintenance II	3
AE 3712	Aircraft System: Hydraulic and Pneumatic System	3
AE 3713	Aircraft System: Landing Gear and Brake System	3
	Total	**19**

FOURTH YEAR
First Semester

AE 3714	Aircraft System: Fuel System	3
AE 3715	Aircraft System: Powerplant	3
AE 3800	Aircraft System: Aircraft Electrical System	3
AE 3901	Aircraft Maintenance: Practical Verification	1
	Major Elective	3
	Free Elective	3
	Total	**16**

Second Semester

GE 2202	Ethics	3
AE 3512	Aircraft System: Ground Support Equipment	2
AE 3513	Aircraft System: Non-Destructive Inspection	3
AE 3716	Aircraft System: Stability and Weight & Balance System	3
AE 4901	Aircraft System: Practical Verification	1
	Free Elective	3
	Total	**15**

VINCENT MARY SCHOOL OF **SCIENCE AND TECHNOLOGY**





VINCENT MARY SCHOOL OF SCIENCE AND TECHNOLOGY

CURRICULUM STRUCTURE

COURSES	CS	IT
A. General Education Courses	**30**	**30**
Language Courses	12	12
Social Science Courses	6	6
Humanities Courses	3	3
Science and Mathematics Courses	9	9
B. Specialized Courses	**90**	**90**
Basic Courses	15	30
Major Required Courses	36	30
Major Elective Courses	39	30
C. Free Elective Courses	**6**	**6**
Total	**126**	**126**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science upon students who meet all the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



DEPARTMENT OF COMPUTER SCIENCE

DEGREE CONFERRED
Bachelor of Science (Computer Science)
B.S. (Computer Science)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science in Computer Science upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows :

- Have morals and ethics.
- Socially responsible and understand well the impacts and consequences of technology towards society and the environment.
- Have the knowledge and understanding of the major principles and theories of computer science.
- Capable of developing the fundamentals of computer programs and with the expertise to analyze, operate and manage computer systems.
- Able to understand the organization and operation of the computer hardware.
- Able to help in the promotion and collaboration of transfer technology which is undergoing rapid development.
- Capable of meeting the nation's present and future needs for computer science experts in the application and development for computer planning.
- Possess systematical, logical and critical thinking skills.
- Able to work with a team and be a leader or a follower.
- Have responsibility in the assigned tasks and continuously have self-development in the field of computer science.
- Able to communicate effectively.



COURSES

A. General Education Courses		30 Credits
Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**6 Credits**
GE 2202	Ethics	3
MGT 1101	Introduction to Business	3
Humanities Courses		**3 Credits**
GE 2101	World Civilization	3
Science and Mathematics Courses		**9 Credits**
DA 1121	Basic Mathematics and Statistics	3
MT 1602	Fundamentals of Financial Accounting	3
MT 4201	Social Interests, Government Policies and Technology	3





B. Specialized Courses **90 Credits**

Basic Courses **15 Credits**

CS 2101	Mathematics Foundation for Computer Science	3
DA 2101	Calculus I	3
DA 2103	Principles of Statistics	3
LA 4606	Intellectual Property Law	3
MT 4323	Entrepreneurship in Technology Business	3

Major Required Courses **36 credits**

CS 1201	Computer Programming I	3
CS 1202	Computer Programming II	3
CS 2201	Data Structures and Algorithms	3
CS 2202	Computer Architecture	3
CS 2203	Programming Languages	3
CS 2204	Database Systems	3
CS 2205	Operating Systems	3
CS 2206	Computer Networks	3
CS 3200	Senior Project I	3
CS 3201	Algorithms Design	3
CS 4200	Senior Project II	3
IT 2231	Introduction to Information Technology	3

Major Required Courses **39 credits**

Major elective courses are divided into two groups. Students need to study major elective courses according to the following conditions.

Group 1: Students are required to select at least 8 courses (24 credits).

CS 3441	Biometrics	3
CS 3442	Computer Graphics	3
CS 3443	Computer Network Security	3
CS 3444	Image Processing	3
CS 3445	Enterprise Database System	3
CS 3446	Fundamentals of Cloud Computing	3
CS 3447	Information Retrieval & Search Engines	3
CS 3448	Recommender Systems	3
CS 3449	Machine Learning	3
CS 3450	Systems Analysis and Design	3
CS 3452	Theory of Computation	3
CS 3453	Web Application Development	3
CS 4400	Seminar in Computer Science	3
CS 4401-99	Selected Topics	3

Group 2: Students are required to choose one concentration and study 5 courses (15 credits) from the chosen concentration.

Group 2 (A) Software Engineering

CS 3411	Human Computer Interaction	3
CS 3412	ICT Project Management	3
CS 3413	Software Architecture and Design	3
CS 3414	Software Engineering	3
CS 3415	Software Engineering Workshop	3
CS 3416	Software Quality Assurance	3
CS 3417	Software Verification and Validation	3

Group 2 (B) Informatics

CS 3421	Artificial Intelligence Concepts	3
CS 3422	Introduction to Big Data Analytics	3
CS 3423	Data Mining	3
CS 3424	Data Warehousing and Business Intelligence	3
CS 3425	Intelligent System Development	3
CS 3426	Multiprocessor Programming	3
CS 3427	Numerical Analysis	3

Group 2 (C) Software Design and Development

CS 3414	Software Engineering	3
CS 3431	Android Application Development	3
CS 3432	iOS Application Development	3
CS 3433	Enterprise Application Development	3
CS 3434	Introduction to Game Development	3
CS 3435	Game Design and Development Workshop	3
CS 3436	UI/UX Design and Prototyping	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites.

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
CS 1201	Computer Programming I	3
DA 1121	Basic Mathematics and Statistics	3
IT 2231	Introduction to Information Technology	3
MGT 1101	Introduction to Business	3
	Total	**15**

Second Semester

BG 1002	English II	3
CS 1202	Computer Programming II	3
DA 2101	Calculus I	3
DA 2103	Principles of Statistics	3
GE 2101	World Civilization	3
MT 1602	Fundamentals ofFinancial Accounting	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
CS 2201	Data Structures and Algorithms	3
CS 2202	Computer Architecture	3
CS 2203	Programming Languages	3
CS 2101	Mathematics Foundationfor Computer Science	3
	One Major Elective Course	3
	Total	**18**

Second Semester

BG 2001	English IV	3
CS 2204	Database Systems	3
CS 2205	Operating Systems	3
CS 2206	Computer Networks	3
	Two Major Elective Courses	6
	Total	**18**

THIRD YEAR

First Semester

CS 3201	Algorithms Design	3
GE 2202	Ethics	3
LA 4606	Intellectual Property Law	3
	Three Major Elective Courses	9
	Total	**18**

Second Semester

CS 3200	Senior Project I	3
MT 4201	Social Interests, Government Policies, and Technology	3
	Two Major Elective Courses	6
	One Free Elective Course	3
	Total	**15**

FOURTH YEAR

First Semester

	Five Major Elective Courses	15
	One Free Elective Course	3
	Total	**18**

Second Semester

CS 4200	Senior Project II	3
MT 4323	Entrepreneurship in Technology Business	3
	Total	**6**



DEPARTMENT OF INFORMATION TECHNOLOGY

DEGREE CONFERRED
Bachelor of Science (Information Technology)
B.S. (Information Technology)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science in Information Technology upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline

OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Have morals and ethics.
- Understand and are responsible for the impacts and consequences of technology towards society and the environment.
- Have the knowledge and understanding of the major principles and theories of information technology.
- Able to manage and develop information systems and communication network.
- Capable of applying new technology in the design, operation, linkage, control and management of information systems.
- Possess systematic, logical and critical thinking skills.
- Able to provide advice and coordinate the services needed by executives in both internal and external units of organizations.
- Able to provide solutions related to information systems in the dynamic environment.
- Able to work with a team and be a leader or a follower
- Have responsibility in the assigned tasks and continuously have self-development in the field of information technology.
- Able to communicate effectively.



COURSES

A. General Education Courses — **30 Credits**

Language Courses — **12 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3

Social Science Courses — **6 Credits**

GE 2202	Ethics	3
MGT 1101	Introduction to Business	3

Humanities Courses — **3 Credits**

GE 2101	World Civilization	3

Science and Mathematics Courses — **9 Credits**

DA 1121	Basic Mathematics and Statistics	3
DA 2103	Principles of Statistics	3
MT 4201	Social Interests, Government Policies and Technology	3





B. Specialized Courses — 90 Credits

Basic Courses — 30 Credits

DA 2101	Calculus I	3
DA 2203	Probability and Statistical Methods	3
IT 2151	Business Systems	3
IT 2130	Systems Science	3
IT 2157	Human Computer Interaction	3
IT 2220	Computer System Concepts	3
IT 2231	Introduction to Information Technology	3
IT 3111	User Interface Design	3
LA 4606	Intellectual Property Law	3
CS 1201	Computer Programming I	3

Major Required Courses — 30 credits

IT 2211	Requirement Engineering	3
IT 2230	Information Structures	3
IT 3210	Database Management Systems	3
IT 3231	Information Systems Analysis	3
IT 3232	Information Systems Design	3
IT 3253	Data Communication and Networking	3
IT 4291	Senior Project I	3
IT 4292	Senior Project II	3
IT 4314	Software Engineering Concepts	3
IT 4315	Object Oriented Concept in Analysis and Design	3

Major Elective Courses — 30 credits

Major Elective courses are divided into two Groups. Students need to study major elective courses from each group according to the following conditions.

Group 1: Students must select at least 3 courses (9 credits).

IT 2371	Object Oriented Programming I	3
IT 3351	Web Design and Development I	3
IT 3355	Mobile Applications Development	3
IT 3371	Object Oriented Programming II	3
IT 3372	Visual Programming	3
IT 4367	Web Design and Development II	3

Group 2: Students must select at least 7 courses (21 credits).

IT 3211	Information Storage and Retrieval	3
IT 3230	Management Information Systems	3
IT 3331	Organizational Behavior and Development	3
IT 4141	Public Relations	3
IT 4311	Introduction to Computer Graphics	3
IT 4316	Image Processing	3
IT 4331	Software Testing	3
IT 4340	Introduction to Information Resource Management	3
IT 4358	Expert Systems	3
IT 4359	E-Commerce	3
IT 4360	Multimedia Applications	3
IT 4363	Information System Security and Auditing	3
IT 4366	Advanced Data Management Systems	3
IT 4400-99	Selected Topic	3

C. Free Elective Course — 6 Credits

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites.





STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
DA 1121	Basic Mathematics and Statistics	3
IT 2130	Systems Science	3
IT 2231	Introduction to Information Technology	3
MGT 1101	Introduction to Business	3
CS 1201	Computer Programming I	3
	Total	**18**

Second Semester

BG 1002	English II	3
DA 2103	Principles of Statistics	3
GE 2101	World Civilization	3
IT 1251	Business Systems	3
IT 2220	Computer Systems Concepts	3
IT 2230	Information Structures	3
	Total	**18**

SECOND YEAR

First Semester

BG 2000	English III	3
DA 2101	Calculus I	3
IT 2157	Human Computer Interaction	3
IT 2211	Requirement Engineering	3
IT 3210	Database Management Systems	3
IT 3253	Data Communication and Networking	3
	Total	**18**

Second Semester

BG 2001	English IV	3
DA 2203	Probability and Statistical Methods	3
GE 2202	Ethics	3
IT 3231	Information Systems Analysis	3
	One Major Elective Course from Group I	3
	One Major Elective Course from Group II	3
	Total	**18**

THIRD YEAR

First Semester

IT 3111	User Interface Design	3
IT 3232	Information Systems Design	3
LA 4606	Intellectual Property Law	3
	One Major Elective Course from Group I	3
	One Major Elective Course from Group II	3
	One Free Elective Course	3
	Total	**18**

Second Semester

IT 4314	Software Engineering Concepts	3
IT 4315	Objects Oriented Concept in Analysis and Design	3
	One Major Elective Course from Group I	3
	One Major Elective Course from Group II	3
	One Free Elective Course	3
	Total	**15**

FOURTH YEAR

First Semester

IT 4291	Senior Project I	3
MT 4201	Social Interests, Government Policies and Technology	3
	Three Major Elective Course from Group II	9
	Total	**15**

Second Semester

IT 4292	Senior Project II	3
	One Major Elective Course from Group II	3
	Total	**6**

FACULTY OF BIOTECHNOLOGY





FACULTY OF BIOTECHNOLOGY

CURRICULUM STRUCTURE

COURSES	FOOD TECHNOLOGY	AGRO-INDUSTRY	AGRO-INDUSTRY (DOUBLE DEGREE)
A. General Education Courses	**30**	**30**	**30**
Language Courses	12	12	12
Social Science Courses	9	6	6
Humanities Courses	3	6	6
Science and Mathematics Courses	6	6	6
B. Specialized Courses	**102**	**103**	**118**
Core Courses	49	49	49
Major Required Courses	44	45	48
Major Elective Courses	9	9	21
C. Free Elective Courses	**6**	**6**	**6**
Total	**138**	**139**	**154**

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science upon students who meet all the requirements as follows:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the university
- Have demonstrated good behavior and discipline



DEPARTMENT OF FOOD TECHNOLOGY

DEGREE CONFERRED
Bachelor of Science (Food Technology)
B.Sc. (Food Technology)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science in Food Technology upon students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline
- Have met the minimum English proficiency requirement

Test Instruments	Required Passing Score
AU English Proficiency Assessment OR	70%*
TOEFL (iBT) OR	90
TOEFL (P) OR	575
IELTS	6.5

**70% = Level B2 of Common European Framework of Reference for Language (CEFR)*



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Possess good moral and ethics, socially and professionally.
- Aware of laws, standards and regulations concerning foods and agricultural products.
- Understand food components, their characteristics and properties, the changes of food components during processing and storage, and selection of suitable analyzing method to determine those food components.
- Understand the principles underlying food safety and food microbiology, development of quality assurance plan for safety food production and food plant sanitation.
- Understand the principles used in preservation, engineering, processing and packaging of the foods and the application of the knowledge in order to develop suitable food production process.
- Understand product development procedure as a systematic and controllable process as well as principle of food marketing
- Understand how the food business works as well as entrepreneurship
- Possess analysis skills in food chemistry, food safety and food plant sanitation as well as food processing to control and assure of the quality food.
- Experiment and analyze the problems related to assessment of physical and sensory qualities of the foods.
- Able to work with different groups of people in the food industries and related fields.
- Able to use information technology in searching for information, communication, and presentation of ideas effectively.





COURSES

A. General Education Courses — 30 Credits

Language Courses — 12 Credits

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3

Social Science Courses — 9 Credits

GE 1207	Fundamental Psychology	3
GE 2202	Ethics	3
ECO 2200	Introduction to Economics	3

Humanities Courses — 3 Credits

GE 2101	World Civilization	3

Science and Mathematics Courses — 6 Credits

SA 1201	Statistics I	3
SC 2151	Introduction to Microcomputer Application	3

B. Specialized Courses — 102 Credits

Core Courses — 49 Credits

BS 1001	General Chemistry	3
BS 1002	General Chemistry Laboratory	1
BS 1005	Principles of Biology	3
BS 1006	Biology Laboratory	1
BS 1007	Organic Chemistry	3
BS 1008	Organic Chemistry Laboratory	1
BS 1101	Calculus I for Bioscience	3
BS 1201	Physics for Bioscience	3
BS 1202	Physics Laboratory for Bioscience	1
BS 2004	Analytical Chemistry	3
BS 2005	Analytical Chemistry Laboratory	1
BS 2006	Basic Biochemistry	3
BS 2007	Basic Biochemistry Laboratory	1
BS 2008	Physical Chemistry	3
BS 2011	Introduction to Microbiology	3
BS 2013	Engineering Drawing for Bioscience	1
BS 2019	Genetics and Its Food Application	3
BT 2011	Introduction to Biotechnology	3
BT 3015	Industrial Fermentation	3
BT 3016	Enzyme Technology	3
BT 3017	Principles of Research	3





Major Required Courses **44 credits**

FT 3100	Introduction to Food Technology	2
FT 3103	Food Microbiology	3
FT 3105	Human Nutrition	3
FT 3106	Industrial Food Processing I	3
FT 3108	Food Chemistry I	3
FT 3109	Food Chemistry II	3
FT 3110	Food Law and Regulation	1
FT 3111	Food Engineering I	3
FT 3112	Food Engineering II	3
FT 4108	Industrial Food Processing II	3
FT 4110	Food Marketing and Management	3
FT 4112	Food Quality Control	3
FT 4113	Food Product Development	3
FT 4128	Food Safety and Sanitation	3
FT 4190	Special Project	3
FT 4191	Field Trip	1
FT 4192	Seminar	1
FT 4194	Internship	Non-credit (300 Hours)

Major Elective Courses **9 credits**

BS 4001	Ecology, Conservation and Environmentalism	3
BT 3018	Genetic Engineering	3
FT 4114	Bakery Technology	3
FT 4115	Fruit and Vegetable Technology	3
FT 4116	Food Toxicology	3
FT 4117	Dairy Technology	3
FT 4120	Food Additive	3
FT 4121	Meat Poultry and Fishery Technology	3
FT 4122	Confectionery Technology	3
FT 4124	Lipid Technology	3
FT 4125	Beverage Technology	3
FT 4126	Food Packaging	3
FT 4127	Cereal Technology	3
FT 4131	Selected Topic	3
FT 4132	Color and Flavor Technology	3
FT 4135	Sensory Analysis	3
FT 4136	Advance Product Development	3
FT 4137	Technology of Confectionery and Thai Sweet	3
FT 4138	Phytochemicals and Functional Foods	3
AI 3201	Biological Material and Biodegradation	3
AI 3209	Microbial Physiology	3
AI 4219	Sugar Technology	3
AI 4220	Post Harvest Technology	3
AI 4221	Alcoholic Beverage Technology	3
AI 4222	Water and Waste Management	3
AI 4223	Waste and By-product Utilization	3

C. Free Elective Course **6 Credits**

FT 4133	Introduction to Wine Appreciation	3
FT 4134	Food Health and Beauty	3

Students can take free elective courses of 6 credits from any faculty in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
BS 1001	General Chemistry	3
BS 1002	General Chemistry Laboratory	1
BS 1005	Principles of Biology	3
BS 1006	Biology Laboratory	1
BS 1101	Calculus I for Bioscience	3
BS 1201	Physics for Bioscience	3
BS 1202	Physics Laboratory for Bioscience	1
	One Free Elective Course	3
	Total	**21**

Second Semester

BG 1002	English II	3
SA 1201	Statistics I	3
BS 1007	Organic Chemistry	3
BS 1008	Organic Chemistry Laboratory	1
BS 2004	Analytical Chemistry	3
BS 2005	Analytical Chemistry Laboratory	1
GE 1207	Fundamental Psychology	3
SC 2151	Introduction to Microcomputer Application	3
	Total	**20**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2200	Introduction to Economics	3
BS 2006	Basic Biochemistry	3
BS 2007	Basic Biochemistry Laboratory	1
BS 2013	Engineering Drawing for Bioscience	1
FT 3100	Introduction to Food Technology	2
FT 3105	Human Nutrition	3
FT 3110	Food Law and Regulation	1
	Total	**17**

Second Semester

BG 2001	English IV	3
BS 2008	Physical Chemistry	3
BS 2011	Introduction to Microbiology	3
BS 2019	Genetics and Its Food Application	3
BT 2011	Introduction to Biotechnology	3
FT 3108	Food Chemistry I	3
	Total	**18**

THIRD YEAR

First Semester

BT 3015	Industrial Fermentation	3
FT 3103	Food Microbiology	3
FT 3106	Industrial Food Processing I	3
FT 3109	Food Chemistry II	3
FT 3111	Food Engineering I	3
	Total	**15**

Second Semester

BT 3016	Enzyme Technology	3
FT 3112	Food Engineering II	3
FT 4108	Industrial Food Processing II	3
FT 4128	Food Safety and Sanitation	3
FT 4110	Food Marketing and Management	3
GE 2101	World Civilization	3
	Total	**18**

Summer Session

FT 4194	Internship	Non-credit

FOURTH YEAR

First Semester

BT 3017	Principles of Research	3
FT 4112	Food Quality Control	3
FT 4113	Food Product Development	3
	One Major Elective Course	3
	One Free Elective Course	3
	Total	**15**

Second Semester

GE 2202	Ethics	3
FT 4190	Special Project	3
FT 4191	Field Trip	1
FT 4192	Seminar	1
	Two Major Elective Courses	6
	Total	**14**





DEPARTMENT OF AGRO-INDUSTRY

DEGREE CONFERRED
Bachelor of Science (Agro-Industry)
B.Sc. (Agro-Industry)

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Science in Agro-Industry upon students who meet all of the following requirements specified in the Graduate Program Standard Criteria B.E. 2548 and Assumption University Bylaw B.E. 2548 as follows:

- Have completed the total number of credits (139 credits) of the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline

Assumption University confers the degree of Bachelor of Science Program in Agro- Industry and King Mongkut's Institute of Technology Ladkrabang confers the degree of Bachelor of Science Program in Industrial Microbiology upon students who meet all of the following requirements:

- Have completed the total number of credits (154 credits) specified in the curriculum
- Have obtained a cumulative Grade Point Average of at least 2.00
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have obtained library and financial clearance from the University
- Have demonstrated good behavior and discipline



OBJECTIVES

To produce graduates who have the characteristics, knowledge and skills as follows:

- Demonstrate moral responsibility to the society, the environment and their profession.
- Understand the principles of basic science and how they are applied to the improvement of productivity and competitiveness of agro-products.
- Understand the diversity of agro-commodity and the value chain of important commodities.
- Understand the basic knowledge and procedure to create product innovation and design new process to improve safety and quality of agro products.
- Able to apply their knowledge in the practice of their profession.
- Able to work with people in the specialized field and other fields.
- Able to communicate effectively in spoken and written forms.
- Able to make appropriate use of technology in the practice of their profession.
- Able to use information technology in searching for information, communication, and presentation of ideas effectively.





COURSES

Option 1:
Bachelor of Science Program in Agro-Industry

Total number of credits	**139 Credits**
A. General Education Courses	**30 Credits**
Language Courses	12 Credits
Social Science Courses	6 Credits
Humanities Courses	6 Credits
Science and Mathematics Courses	6 Credits
B. Specialized Courses	**103 Credits**
Core Courses	49 Credits
Major Required Courses	45 Credits
Major Elective Courses	9 Credits
C. Free Elective Courses	**6 Credits**

Option 2:
Bachelor of Science Program in Agro-Industry and Bachelor of Science Program in Industrial Microbiology

Total number of credits	**154 Credits**
A. General Education Courses	**30 Credits**
Language Courses	12 Credits
Social Science Courses	6 Credits
Humanities Courses	6 Credits
Science and Mathematics Courses	6 Credits
B. Specialized Courses	**118 Credits**
Core Courses	49 Credits
Major Required Courses	48 Credits
Major Elective Courses	21 Credits
C. Free Elective Courses	**6 Credits**

A. General Education Courses

Language Courses		**12 Credits**
BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
Social Science Courses		**6 Credits**
ECO 2200	Introduction to Economics	3
GE 2202	Ethics	3
Humanities Courses		**6 Credits**
GE 1207	Fundamental Psychology	3
GE 2101	World Civilization	3
Science and Mathematics Courses		**6 Credits**
BG 1201	Statistics I	3
SC 2151	Introduction to Microcomputer Application	3

B. Specialized Courses

Core Courses		**49 Credits**
BS 1001	General Chemistry	3
BS 1002	General Chemistry Laboratory	1
BS 1005	Principles of Biology	3
BS 1006	Biology Laboratory	1
BS 1009	Organic Chemistry	3
BS 1010	Organic Chemistry Laboratory	1
BS 1103	Calculus for Bioscience	3
BS 1201	Physics for Bioscience	3
BS 1202	Physics Laboratory for Bioscience	1
BS 2006	Basic Biochemistry	3
BS 2008	Physical Chemistry	3
BS 2011	Introduction to Microbiology	3
BS 2014	Analytical Chemistry	3
BS 2015	Analytical Chemistry Laboratory	1
BS 2016	Basic Biochemistry Laboratory	1
BS 2017	Genetics	3
BS 2018	Engineering Drawing for Bioscience	1
BT 2011	Introduction to Biotechnology	3
BT 3015	Industrial Fermentation	3
BT 3016	Enzyme Technology	3
BT 3019	Principles of Research	3
Major Required Courses		**45/48 credits**
AI 3201	Biological Material and Biodegradation	3
AI 3202	Introduction to Agro-Industry	2
AI 3203	Instrumentation and Control in Agro-Industrial Process	3
AI 3204	Processing of Agricultural Products I	3



AI 3205	Biochemical Engineering	3
AI 3206	Agro-Industry Management and Marketing	3
AI 3207	Unit Operation of Agro-Industry I	3
AI 3208	Standards and Regulations of Agricultural products	2
AI 3209	Microbial Physiology	3
AI 4208	Processing of Agricultural Products II	3
AI 4209	Unit Operation for Agro-Industry II	3
AI 4211	Fermentation Process	3
AI 4213	Agro-Industrial Quality Control	3
AI 4218	Agro-Industrial Product Development	3
AI 4290	Special Project	3
AI 4291	Field Trip	1
AI 4292	Seminar	1
AI 4294	Internship (300 Hours)	Non-credit
*AI 4295	*Special Project*	6

**Remark: Students in Option 2 has to enroll AI 4295 Special Project (6 credits) instead of AI 4290 Special Project (3 credits)*

Major Elective Courses **9/21 credits**

AI 4212	Tissue Culture Techniques and Application	3
AI 4215	Agro-Industry Preservation and Packaging	3
AI 4216	Fiber Technology	3
AI 4217	Essential Oil Technology	3
AI 4219	Sugar Technology	3
AI 4220	Post Harvest Technology	3
AI 4221	Alcoholic Beverage Technology	3
AI 4222	Water and Waste Management	3
AI 4223	Waste and By-product Utilization	3
AI 4226	Plant Breeding Technology	3
AI 4232	Secondary Metabolites of Plant Cells	3
AI 4233	Pulp and Paper Technology	3
AI 4234	Wood Technology	3
AI 4235	Rubber Technology	3
AI 4236	Feed Manufacturing Technology	3
AI 4237	Leather Product Technology	3
AI 4238	Mushroom Cultivation Technology	3
AI 4239	Selected Topic	3
AI 4240	Bioinformatics	3
AI 4241	Bacteriology	3
AI 4242	Mycology	3
AI 4243	Algology	3
BS 4001	Ecology, Conservation and Environmentalism	3
BT 3018	Genetic Engineering	3
FT 3103	Food Microbiology	3
FT 3108	Food Chemistry I	3
FT 3109	Food Chemistry II	3
FT 4115	Fruit and Vegetable Technology	3
FT 4117	Dairy Technology	3
FT 4121	Meat Poultry and Fishery Technology	3
FT 4123	Food Sanitation	3
FT 4124	Lipid Technology	3
FT 4126	Food Packaging	3
FT 4127	Cereal Technology	3
FT 4132	Color and Flavor Technology	3

C. Free Elective Course **6 Credits**

Students can take free elective courses of 6 credits from any course offered in Assumption University upon completion of the prerequisites (if any).

STUDY PLAN

ONE DEGREE PROGRAM in AGRO-INDUSTRY

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
BS 1001	General Chemistry	3
BS 1002	General Chemistry Laboratory	1
BS 1005	Principles of Biology	3
BS 1006	Biology Laboratory	1
BS 1103	Calculus for Bioscience	3
BS 1201	Physics for Bioscience	3
BS 1202	Physics Laboratory for Bioscience	1
GE 2101	World Civilization	3
	Total	**21**

Second Semester

BG 1002	English II	3
SA 1201	Statistics I	3
BS 1009	Organic Chemistry	3
BS 1010	Organic Chemistry Laboratory	1
GE 1207	Fundamental Psychology	3
SC 2151	Introduction to Microcomputer Application	3
	One Free Elective Course	3
	Total	**19**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2200	Introduction to Economics	3
BS 2014	Analytical Chemistry	3
BS 2015	Analytical Chemistry Laboratory	1
BS 2006	Basic Biochemistry	3
BS 2016	Basic Biochemistry Laboratory	1
BS 2018	Engineering Drawing for Bioscience	1
	One Free Elective Course	3
	Total	**18**

Second Semester

AI 3202	Introduction to Agro-Industry	2
BG 2001	English IV	3
BS 2011	Introduction to Microbiology	3
BS 2017	Genetics	3
BT 2011	Introduction to Biotechnology	3
BS 2008	Physical Chemistry	3
GE 2202	Ethics	3
	Total	**20**

THIRD YEAR

First Semester

AI 3201	Biological Material and Biodegradation	3
AI 3204	Processing of Agricultural Product I	3
AI 3209	Microbial Physiology	3
BT 3015	Industrial Fermentation	3
	One Major Elective Course	3
	One Major Elective Course	3
	Total	**18**

Second Semester

AI 3203	Instrumentation and Control in Agro-Industrial Process	3
AI 3205	Biochemical Engineering	3
AI 3207	Unit Operation of Agro-Industry I	3
AI 3208	Standards and Regulations of Agricultural Products	2
AI 4208	Processing of Agricultural Product II	3
BT 3016	Enzyme Technology	3
	Total	**17**

FOURTH YEAR

First Semester

AI 3206	Agro-Industry Management and Marketing	3
AI 4209	Unit Operation for Agro-Industry II	3
AI 4211	Fermentation Process	3
AI 4213	Agro-Industrial Quality Control	3
AI 4294	Internship	Non-credit (300 Hours)
BT 3019	Principles of Research	3
	Total	**15**

Second Semester

AI 4218	Agro-Industrial Product Development	3
AI 4290	Special Project	3
AI 4291	Field Trip	1
AI 4292	Seminar	1
	One Major Elective Course	3
	Total	**11**

STUDY PLAN

DOUBLE DEGREE PROGRAM in AGRO-INDUSTRY & INDUSTRIAL MICROBIOLOGY

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
ECO 2200	Introduction to Economics	3
BS 1001	General Chemistry	3
BS 1002	General Chemistry Laboratory	1
BS 1005	Principles of Biology	3
BS 1006	Biology Laboratory	1
BS 1103	Calculus for Bioscience	3
GE 1207	Fundamental Psycholog	3
	Total	**20**

Second Semester

BG 1002	English II	3
SA 1201	Statistics I	3
BS 1009	Organic Chemistry	3
BS 1010	Organic Chemistry Laboratory	1
BS 1201	Physics for Bioscience	3
BS 1202	Physics Laboratory for Bioscience	1
BS 2011	Introduction to Microbiology	3
BS 2017	Genetics	3
	Total	**20**

Summer Session

AI 3202	Introduction to Agro-Industry	2
SC 2151	Introduction to Microcomputer Application	3
	Total	**5**

SECOND YEAR

First Semester

AI 3203	Instrumentation and Control in Agro-Industrial Process	3
AI 4243	Algology	3
BG 2000	English III	3
BS 2014	Analytical Chemistry	3
BS 2015	Analytical Chemistry Laboratory	1
BS 2006	Basic Biochemistry	3
BS 2016	Basic Biochemistry Laboratory	1
GE 2101	World Civilization	3
	Total	**20**

Second Semester

AI 3204	Processing of Agricultural Product I	3
AI 3205	Biochemical Engineering	3
AI 3209	Microbial Physiology	3
BG 2001	English IV	3
BT 2011	Introduction to Biotechnology	3
BS 2008	Physical Chemistry	3
GE 2202	Ethics	3
	Total	**21**

Summer Session

BS 2018	Engineering Drawing for Bioscience	1
BS 4001	Ecology, Conservation and Environmentalism	3
	Total	**4**

THIRD YEAR

First Semester

AI 3201	Biological Material and Biodegradation	3
AI 3206	Agro-Industry Management and Marketing	3
AI 3207	Unit Operation of Agro- Industry I	3
AI 3208	Standards and Regulations of Agricultural Products	2
AI 4208	Processing of Agricultural Product II	3
BT 3015	Industrial Fermentation	3
BT 3018	Genetic Engineering	3
	Total	**20**

Second Semester

AI 4213	Agro-Industrial Quality Control	3
AI 4222	Water and Waste Management	3
AI 4240	Bioinformatics	3
AI 4241	Bacteriology	3
AI 4242	Mycology	3
BT 3019	Principles of Research	3
	Total	**18**

Summer Session

AI 4294	Internship	Non- credit (300 hours)

FOURTH YEAR

First Semester

AI 4209	Unit Operation for Agro- Industry II	3
AI 4211	Fermentation Process	3
AI 4218	Agro-Industrial Product Development	3
AI 4292	Seminar	1
BT 3016	Enzyme Technology	3
	Two Free Elective Courses	6
	Total	**19**

Second Semester

AI 4295	Special Project	6
AI 4291	Field Trip	1
	Total	**7**

FACULTY OF **LAW**





FACULTY OF LAW

DEGREE CONFERRED
Bachelor of Laws
LL.B.

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Laws upon students who meet all of the following requirements:

- Complete all required courses and accumulate the total number of credits specified in the curriculum
- Attain a cumulative grade point average (GPA) of 2.00 or better
- Participate in 16 sessions of the Professional Ethics Seminar
- Settle all accounts with the University Financial Office and the Library
- Demonstrate a good behavior and self-discipline
- Pass the English Proficiency test required by the University

OBJECTIVES

- To produce law graduates who demonstrate professional ethics, are of good moral character, have high integrity, uphold justice, and are socially responsible.
- The graduates will acquire fundamental legal knowledge and an understanding of commercial law that will enable them to apply the laws appropriately.
- The graduates will attain a high level of English proficiency.
- The graduates will be able to apply their legal knowledge to analyze and solve work-related problems appropriately and responsibly.
- The graduates will be able to work with others, adapt to different work environments and socialize appropriately. They will demonstrate leadership and accountability. They will be capable of planning an ongoing process of learning and self-improvement.
- The graduates will be able to use communications technology effectively.



CURRICULUM STRUCTURE

COURSES	CREDITS
A. General Education Courses	**30**
- Language Courses	15
- Social Science Courses	9
- Humanities Courses	3
- Science and Mathematics Courses	3
B. Specialized Courses	**108**
- Core Courses	89
- Major Required Courses	13
- Major Elective Courses	6
- Skill Enhancement Courses	-
C. Free Elective Courses	**6**
Total	**144**

COURSES

A. General Education Courses — **30 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (For Thai students)	3

Social Science Courses — **9 Credits**

ECO 2200	Introduction to Economics	3
MGT 1101	Introduction to Business	3
GE 2202	Ethics	3

Humanities Courses — **3 Credits**

Choose 1 of the following subjects

GE 2103	Arts of Reasoning	3
GE 2106	Logical Thinking and Application	3
MGT 2404	Managerial Psychology	3





Science and Mathematics Courses **3 Credits**

Choose 1 of the following subjects

GE 1301	Environmental Science	3
GE 2301	Lifestyles in Dynamic World	3
GE 2303	Building Brilliant Brain	3
SA1201	Statistics I	3

B. Specialized Courses **108 Credits**

Core Courses **89 Credits**

(1) General Principles of Laws

LL 1101	Theories and Principles of Private Law	3
LL 1102	Legal History	2
LL 1103	Application, Interpretation of Laws and Legal Reasoning	2
LL 2104	Legal Profession Ethics	2
LL 4105	Philosophy of Law	2

(2) Civil and Commercial Laws

LL 1201	Juristic Acts and Contracts Law	3
LL 1202	Property and Land Law	3
LL 2203	Law on Consequences and Extinction of Obligations	3
LL 2204	Law of Delict, Management of Affairs without Mandate, Undue Enrichment	3
LL 2205	Specific Contracts I	3
LL 2206	Insurance Law	2
LL 2207	Specific Contracts II	3
LL 2208	Negotiable Instruments and Current Accounts Law	2
LL 3209	Secured Transactions Law	2
LL 3210	Law on Business Organizations	3
LL 3211	Family Law	3
LL 3212	Succession Law	3

(3) Criminal Laws

LL 1301	Criminal Law I	3
LL 2302	Criminal Law II	2
LL 2303	Criminal Law III	3

(4) Public Laws

LL 1401	Theories and Principles of Public Law	2
LL 1402	Constitutional Law and Political Institutions	3
LL 3403	Administrative Law and Procedures	3

(5) Business Laws and International Business Laws

LL 3501	Public Finance Law and Tax Law	3
LL 4502	Labor and Social Security Law	3

(6) Procedural Laws and the Role of Legal Profession in the Judicial Process

LL 3601	Civil Procedure Law I	3
LL 3602	Criminal Procedure Law	4
LL 3603	Court system and Constitution of Courts of Justice	2
LL 3604	Civil Procedure Law II	3
LL 3605	Evidence Law	3

(7) International Laws

LL 3701	Public International Law	3
LL 3702	Private International Law	3

(8) Laws Related to Changes in Society

LL 4801	Legal Research and Legal Research Methodology	2

Major Required Courses **13 Credits**

(5) Business Laws and International Business Laws

LL 3503	Bankruptcy Law and Rehabilitation	2
LL 4504	Law on Taxation in International Trade and Invesment	2
LL 4505	Intellectual Property Law	3
LL 4506	International Business Transactions Law	2

(6) Procedural Laws and the Role of Legal Profession in the Judicial Process

LL 4606	Principles of Contract Drafting	2
LL 4607	Counselling and Advocacy	2

Major Elective Courses **6 Credits**

Choose 3 subjects from the following list

(1) General Principles of Laws

LL 4106	Introduction to Common Law System	2

(2) Civil and Commercial Laws

LL 4213	Seminar in Civil and Commercial Law	2

(3) Criminal Laws

LL 4304	Seminar in Criminal Law	2

(4) Public Laws

LL 4404	Law Drafting and Legislative Process	2
LL 4405	Human Rights Law	2
LL 4406	Environmental Law	2
LL 4407	Natural Resources Law	2
LL 4408	Consumer Protection Law	2
LL 4409	Broadcasting and Telecommunication Laws	2
LL 4410	Energy and Petroleum Law	2
LL 4411	Medical and Public Health Laws	2
LL 4412	Laws on Food and Drug	2



(5) Business Laws and International Business Laws

LL 4507	Principles of Economics for Lawyers	2
LL 4508	Principles of Accounting and Financial Reports for Lawyers	2
LL 4509	Securities and Securities Exchange Law	2
LL 4510	Banking and Financial Institutions Law	2
LL 4511	Investment Law	2
LL 4512	International Economic Law	2
LL 4513	Arbitration Law	2
LL 4514	Carriage of Goods by Sea Law	2
LL 4515	Customs Law	2
LL 4516	Industrial Law	2
LL 4517	Law on Real Estate Business	2
LL 4518	Competition Law	2
LL 4519	Seminar in Tax Law	2
LL 4520	Seminar in Business Law	2
LL 4521	Law on Merger and Acquisition	2
LL 4522	Law on Sport and Entertainment	2
LL 4523	Seminar in Securities and Securities Exchange Law	2
LL 4524	Seminar in Intellectual Property Law	2
LL 4525	Law on Fashion Business	2
LL 4526	International Financial Law	2

(6) Procedural Laws and the Role of Legal Professions in the Judicial Process

LL 4608	Seminar in Civil Procedure Law	2
LL 4609	Seminar in Criminal Procedure Law	2
LL 4610	Criminology and Penology	2
LL 4611	Science, Technology and Criminal Investigation	2
LL 4612	Law on Juvenile and Family Court and Procedure	2
LL 4613	Human Rights in Judicial Procedure	2

(7) International Laws

LL 4703	Law of the Sea	2
LL 4704	International Organization Law	2
LL 4705	European Union Law	2
LL 4706	Introduction to Air Law and Space Law	2
LL 4707	ASEAN Law	2
LL 4708	Human Rights in ASEAN	2
LL 4709	Seminar in ASEAN Law	2

(8) Laws Related to Changes in Society

LL 4802	Introduction to Digital Technology Laws	2
LL 4803	Business and Human Rights	2
LL 4804	Business Law and ASEAN	2
LL 4805	Law on Digital Economy and Startup Business	2
LL 4806	Law on Agriculture	2
LL 4807	Introduction for Logistics and Supply Chain	2
LL 4808	Legal Aspects of Transportation and Logistics	2
LL 4809	Business, Corporate Governance and Corporate Social Responsibility	2

Skills Enhancement **No Credits**

LL 2001	Legal English I	-
LL 3002	Legal English II	-

C. Free Elective Course **6 Credits**

Students must take at least 6 credits of Elective subjects offered by the Law School or from subjects offered by any other School of Assumption University, upon completion of the necessary prerequisites (if any). Students are prohibited from taking any law subjects offered by a School other than the School of Law.

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1403	Communication in Thai	3
GE 2202	Ethics	3
LL 1101	Theories and Principles of Private Law	3
LL 1102	Legal History	2
LL 1401	Theories and Principles of Public Law	2
Choose 1 subject from the Humanities Courses		3
	Total	**19**

Second Semester

BG 1002	English II	3
LL 1201	Juristic Acts and Contracts Law	3
LL 1202	Property and Land Law	3
LL 1301	Criminal Law I	3
LL 1402	Constitutional Law and Political Institutions	3
LL 1103	Application, Interpretation of Laws and Legal Reasoning	2
Choose 1 subject from Science and Mathematics Courses		3
	Total	**20**

SECOND YEAR

First Semester

BG 2000	English III	3
ECO 2200	Introduction to Economics	3
MGT 1101	Introduction to Business	3
LL 2203	Law on Consequences and Extinction of Obligations	3
LL 2204	Law of Delict, Management of Affairs without Mandate, Undue Enrichment	3
LL 2205	Specific Contracts I	3
LL 2302	Criminal Law II	2
	Total	**20**

Second Semester

BG 2001	English IV	3
LL 2001	Legal English I	-
LL 2104	Legal Profession Ethics	2
LL 2206	Insurance Law	2
LL 2207	Specific Contracts II	3
LL 2208	Negotiable Instruments and Current Accounts Law	2
LL 2303	Criminal Law III	3
	Total	**15**

THIRD YEAR

First Semester

LL 3002	Legal English II	-
LL 3209	Secured Transactions Law	2
LL 3210	Law on Business Organizations	3
LL 3211	Family Law	3
LL 3501	Public Finance Law and Tax Law	3
LL 3601	Civil Procedure Law I	3
LL 3602	Criminal Procedure Law	4
LL 3603	Court system and Constitution of Courts of Justice	2
	Total	**20**

Second Semester

LL 3212	Succession Law	3
LL 3403	Administrative Law and Procedures	3
LL 3503	Bankruptcy Law and Rehabilitation	2
LL 3604	Civil Procedure Law II	3
LL 3605	Evidence Law	3
LL 3701	Public International Law	3
LL 3702	Private International Law	3
	Total	**20**

FOURTH YEAR

First Semester

LL 4105	Philosophy of Law	2
LL 4502	Labor and Social Security Law	3
LL 4505	Intellectual Property Law	3
LL 4504	Law on Taxation in International Trade and Investment	2
Choose 3 Major Elective subjects		6
	Total	**16**

Second Semester

LL 4506	International Business Transactions Law	2
LL 4606	Principles of Contract Drafting	2
LL 4607	Counselling and Advocacy	2
LL 4801	Legal Research and Legal Research Methodology	2
Choose at least 6 credits of Free Elective Subject		
	Total	**14**

BERNADETTE DE LOURDES SCHOOL OF **NURSING SCIENCE**





BERNADETTE DE LOURDES SCHOOL OF NURSING SCIENCE

DEGREE CONFERRED
Bachelor of Nursing Science
B.N.S.

GRADUATION REQUIREMENTS

Assumption University confers the degree of Bachelor of Nursing Science to students who meet all of the following requirements:

- Have completed the total number of credits of the curriculum
- Have obtained a cumulative grade point average (GPA) of at least 2.00 (from 4.00 system)
- Have obtained GPA not lower than 2.00 out of 4.00 in all professional courses
- Have participated in 16 sessions of the Professional Ethics Seminar
- Have demonstrated good behavior, conduct and obtain disciplinary scores not lower than 70%
- Have obtained library and financial clearance from the University
- Have ability to communicate in English according to the requirement of the University



OBJECTIVES

The BLNS sets up the objectives of the curriculum to produce nursing graduates who have the desirable characteristics as follows:

- Exercise leadership, moral and ethical mind in daily life, and provide nursing care with kindness and professional ethics
- Demonstrate maturity in all aspects, assertiveness and social accountability
- Have knowledge in nursing science and related sciences, and be able to apply them in nursing practice by demonstrating professionalism and good management
- Have ability and skills in nursing informatics, numerical and statistics analyses
- Use critical thinking skills in problem solving and utilize the scientific process in conducting research and innovations
- Be able to establish interpersonal relationships and effectively collaborate among health care team
- Be able to communicate in English with clients and health care team effectively and aware of cultural diversity and sensitivity
- Perform nursing practice with client safety mindset, caring, and compassionate attitude according to the role and scope of the profession, and conform with the professional code of ethics using holistic health services and client-centered approaches
- Demonstrate confidence, faith and good attitude toward nursing profession and perform self development for the professional growth

CURRICULUM STRUCTURE

COURSES	CREDITS
A. General Education Courses	**30**
- Language Courses	15
- Social Science Courses	4
- Humanities Courses	3
- Science and Mathematics Courses	8
B. Specialized Courses	**102**
- Basic Professional Courses and Professional Courses (Theory)	62
- Professional Courses (Practicum)	40
C. Free Elective Courses	**6**
Total	**138**

COURSES

A. General Education Courses — **30 Credits**

Language Courses — **15 Credits**

BG 1001	English I	3
BG 1002	English II	3
BG 2000	English III	3
BG 2001	English IV	3
GE 1403	Communication in Thai (For Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai students)	3





Social Science Courses		**4 Credits**
GE 1204	Physical Education	1
GE 2202	Ethics	3

Humanities Courses		**3 Credits**
GE 2101	World Civilization	3

Science and Mathematics Courses		**8 Credits**
BG 1301	Fundamentals of Statistics	3
GE 1301	Environmental Science	3
BG 2301	Information Technology for Nurses	2

B. Specialized Courses **102 Credits**

Basic Professional Courses		**21 Credits**
NB 1210	Pathophysiology	3
NB 1214	Anatomy and Physiology	5
NB 1215	Biochemistry	2
NB 1216	Microbiology and Parasitology	2
NB 1217	Multiculturalism in Health Care	1
NB 2209	Pharmacology	3
NB 2212	Psychology and Mental Health	2
NB 2214	Diet Therapy	1
NB 2215	Entrepreneurship in Health Care	2

Professional Courses		**81 Credits**
(1) Theory		**41 Credits**
NS 1310	Professional Socialization I	2
NS 1312	Health Promotion throughout Lifespan	2
NS 1314	Scientific Nursing Approach and Holistic Health Assessment	2
NS 2310	Alteration in Adult Health and Nursing I	3
NS 2319	Foundation of Professional Nursing	3
NS 2324	Bio-Behavioral-Psychiatric Nursing	2
NS 2325	Community Focused Nursing I	2
NS 2326	Family-Centered Care for Infant, Child, and Adolescent I	2
NS 3326	Nursing Inquiry I	2
NS 3327	Alteration in Adult Health and Nursing II	3
NS 3328	Family-Centered Care for Infant, Child, and Adolescent II	2
NS 3329	Community Focused Nursing II	2
NS 3330	Gerontology Nursing	1
NS 3331	Holistic Childbearing and Family Nursing I	3
NS 3332	Emergency Nursing	1
NS 4322	Professional Socialization II	2
NS 4323	Therapeutic Health Assessment	2
NS 4326	Holistic Childbearing and Family Nursing II	3
NS 4327	Nursing Leadership and Management	2
(2) Practicum		**40 Credits**
NS 2424	Nursing Experience	2
NS 2425	Clinical Practicum for Professional Nursing Foundation	3
NS 2426	Clinical Practicum in Adult Health Nursing I	3
NS 2427	Mental Health and Psychiatric Nursing Practicum	3
NS 3401	Nursing Inquiry II	1
NS 3426	Clinical Practicum in Adult Health Nursing II	3
NS 3427	Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum I	2
NS 3428	Gerontology Nursing Practicum	2
NS 3429	Community Focused Nursing Practicum	3
NS 3430	Holistic Childbearing and Family Nursing Practicum I	3
NS 3431	Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum II	3
NS 4420	Holistic Childbearing and Family Nursing Practicum II	4
NS 4421	Therapeutic Health Assessment Practicum	2
NS 4422	Nursing Leadership and Management Practicum	3
NS 4423	Comprehensive Nursing Practicum	3

C. Free Elective Course **6 Credits**

Students can take free elective courses at least 6 credits from any course offered by the universities.

The Bernadette de Lourdes School of Nursing Science has also offered the free elective courses as follows:

NE 3501	Spa and Aroma Therapy	3
NE 3506	Health Care for Civil Aviation	3
NE 3507	Herbal Therapy for Self-Care	3
NE 4502	Adolescent Health	3
NE 4503	Comprehensive Nursing for Excellence	3

STUDY PLAN

FIRST YEAR

First Semester

Code	Subjects	Credits
BG 1001	English I	3
GE 1204	Physical Education	1
GE 1403	Communication in Thai (For Thai students)	3
or		
GE 1405	Thai Language and Culture (For non-Thai students)	3
NB 1214	Anatomy and Physiology	5
NB 1215	Biochemistry	2
NB 1216	Microbiology and Parasitology	2
	Total	**16**

Second Semester

BG 1002	English II	3
GE 2202	Ethics	3
BG 2301	Information Technology for Nurses	2
NB 1210	Pathophysiology	3
NS 1310	Professional Socialization I	2
NS 1312	Health Promotion throughout Lifespan	2
NS 1314	Scientific Nursing Approach and Holistic Health Assessment	2
	Total	**17**

Summer Session

GE 1301	Environmental Science	3
NB 1217	Multiculturalism in Health Care	1
	Total	**4**

SECOND YEAR

First Semester

BG 2000	English III	3
NB 2212	Psychology and Mental Health	2
NB 2209	Pharmacology	3
NB 2214	Diet Therapy	1
NS 2310	Alteration in Adult Health and Nursing I	3
NS 2319	Foundation of Professional Nursing	3
NS 2424	Nursing Experience	2
	Total	**17**

Second Semester

BG 2001	English IV	3
NB 2215	Entrepreneurship in Health Care	2
NS 2324	Bio-Behavioral-Psychiatric Nursing	2
NS 2425	Clinical Practicum for Professional Nursing Foundation	3
NS 2426	Clinical Practicum in Adult Health Nursing I	3
NS 2326	Family-Centered Care for Infant, Child, and Adolescent I	2
	Total	**15**

Summer Session

NS 2427	Mental Health and Psychiatric Nursing Practicum	3
NS 2325	Community Focused Nursing I	2
	Total	**5**

THIRD YEAR

First Semester

BG 1301	Fundamentals of Statistics	3
NS 3326	Nursing Inquiry I	2
NS 3327	Alteration in Adult Health and Nursing II	3
NS 3328	Family-Centered Care for Infant, Child, and Adolescent II	2
NS 3329	Community Focused Nursing II	2
NS 3426	Clinical Practicum in Adult Health Nursing II	3
NS 3427	Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum I	2
	Total	**17**

Second Semester

GE 2101	World Civilization	3
NS 3330	Gerontology Nursing	1
NS 3331	Holistic Childbearing and Family Nursing I	3
NS 3332	Emergency Nursing	1
NS 3401	Nursing Inquiry II	1
NS 3431	Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum II	3
NS 3429	Community Focused Nursing Practicum	3
	One Free Elective Course	3
	Total	**18**

Summer Session

NS 3428	Gerontology Nursing Practicum	2
NS 3430	Holistic Childbearing and Family Nursing Practicum I	3
	Total	**5**

FOURTH YEAR

First Semester

NS 4323	Therapeutic Health Assessment	2
NS 4326	Holistic Childbearing and Family Nursing II	3
NS 4327	Nursing Leadership and Management	2
NS 4420	Holistic Childbearing and Family Nursing Practicum II	4
NS 4421	Therapeutic Health Assessment Practicum	2
	Total	**13**

Second Semester

NS 4322	Professional Socialization II	2
NS 4422	Nursing Leadership and Management Practicum	3
NS 4423	Comprehensive Nursing Practicum	3
	One Free Elective Course	3
	Total	**11**



Course Description
Academic Year 2018

ACT 1600 **Fundamental of Financial Accounting** **3 (3-0-6)**
Prerequisite : *For Martin de Tours School of Management and Economics Students*

Basic accounting theory and procedures for service and merchandising firms including analysis of business transactions, basic double-entry system in the recording process: journalizing, posting to the ledgers and preparation of trial balance, adjusting entries, worksheets and closing entries, as well as special journals and preparation of basic financial statements and also including basic accounting theory pertaining to accounting for merchandise inventory, cash, receivable, plant assets, natural resources, intangible assets, investments, liabilities, owner's equity, principle and method of voucher system.

ACT 1601 **Fundamentals of Financial Accounting** **3 (3-0-6)**

Basic accounting theory and procedures for service and merchandising firms by using double-entry system, completing accounting process: journalizing, posting to the ledgers, preparation of trial balance, adjusting entries, worksheet and closing entries, as well as preparation and presentation of basic financial statements.

ACT 2620 **Fundamental of Managerial Accounting** **3 (3-0-6)**
Prerequisite : *ACT 1600 Fundamentals of Financial Accounting*

Role that managerial accounting plays in servicing informational needs of managers in planning, organizing and controlling through study of systematic structuring of business decisions and identifying the information relevant to decision making, profit planning and budgeting, cost-volume-profit analysis, variance analysis, preparation statement of cash flows and segment report.

ACT 3602 **Intermediate Accounting I** **3 (3-0-6)**
Prerequisite : *ACT 1600 Fundamentals of Financial Accounting*

Accounting conceptual framework, accounting principles, practices and problems of accounting for assets: definition, classification, recognition, measurements, valuation, impairment of assets, presentation and disclosure of assets in statement of financial position, accounting for cash, marketable securities, notes receivable, accounts receivable, merchandise inventory, investments, tangible and intangible assets, natural resources, different methods of depreciation, difference between capital and revenue expenditure, and preparation and presentation of financial statements in detail and good format.

ACT 3603 **Intermediate Accounting II** **3 (3-0-6)**
Prerequisite: *ACT 1600 Fundamentals of Financial Accounting*

Accounting principles and practices in accounting for short term liabilities, long term liabilities and owner's equity: definition, classification, recognition, measurements, valuation, presentation and disclosure on financial statements, accounting for partnership: organization, operation, dissolution, liquidation, financial statements preparation and presentation, accounting for corporation: organization, issuance of stock, increase and decrease of capital, additional paid-in capital, earnings per share, retained earnings, appropriated retained earnings, liquidation, and statements of change in shareholders' equity and retained earnings statement preparation and presentation, accounting for employee benefits, and accounting for lease.

ACT 3608 **Financial Report and Financial Statement Analysis** **3 (3-0-6)**
Prerequisites : *ACT 2620 Fundamentals of Managerial Accounting*
FIN 3101 Corporate Finance

Reading and interpreting financial statements, analyzing, criticizing departmental financial matters, stockholders' equity, investment, capital expansion, and division of profit, analysis and interpretation of financial statements, techniques employed in financial statement analysis, presentation of reports to stockholders and interested public, the principles employed in analyzing assets from the viewpoint of investment, profitability and other factors that affect price of securities, forecasting and analysis of security market environment, and critical problem solving.

ACT 3614 **Taxation I** **3 (3-0-6)**
Prerequisite : *BG 1401 Business Law II*

Factors relating to taxes paid by individuals and business enterprises: principles and features of taxation according to Revenue Codes; methods of various tax liability appraisal and collection such as personal income tax, corporate tax, business tax, custom, excise tax, duties and stamps, and other kinds of taxes involved in business.

ACT 3615 **Taxation II** **3 (3-0-6)**
Prerequisites : *ACT 1600 Fundamentals of Financial Accounting*
ACT 3614 Taxation I

Types of business firms that must prepare accounting in compliance with law and regulations of Revenue Codes including the comparative study of preparing accounting based on Generally Accepted Accounting Principles and based on Revenue Codes, principles for determining income tax for both personal and corporate income taxes, withholding tax, value added tax, special business tax, custom, excise tax, duties and stamps, accounting principles for taxable revenue and expense, including valuation of assets and liabilities, and depreciation in calculation of taxable income and practical problems related to tax accounting.

ACT 3616 **Public Sector and Fund Accounting** **3 (3-0-6)**
Prerequisite : *ACT 1600 Fundamentals of Financial Accounting*

System and procedure of governmental and state enterprise accounting, national budget system, government's financial management, national budget, financial funds, governmental and fund accounting systems, controlling function of the National Audit Council and the Comptroller General Department, national financial statements, accounting of municipalities and other government agencies, state enterprise accounting, fund accounting of foundations, and educational institutions.

ACT 3624 **Real Estate Accounting** **3 (3-0-6)**
Prerequisite : *ACT 3632 Cost Accounting*

Accumulation and selection of data; record analysis, and preparation in report format to conform to real estate accounting standard, laws and other pertinent laws of Thailand for investors, investment firms, housing projects, speculators, real estate agencies, condominium cooperatives, real estate developers and financial institution real estate portfolios, various expense allocation systems, analysis of variances against projected expenditures, including use of the case method.

ACT 3625 **Hospital Accounting** **3 (3-0-6)**
Prerequisite : *ACT 3632 Cost Accounting*

Accumulating, recording, interpreting accounting data and preparation of reports on various hospital procedures (including medical service functions and institutions such as polyclinics and nursing homes) both for the public and private sectors of hospitals, and rules and regulations governing the accounting of health services in Thailand.

ACT 3626 **Hotel Accounting** **3 (3-0-6)**
Prerequisite : *ACT 1600 Fundamentals of Financial Accounting*

Accumulation of data and preparation of reports on the performance of various hotel functions: room rentals, food and beverage, including indoor, banquet and outdoor catering, entertainment, laundry and other services, foreign exchange, arcade rental income and other franchise income such as limousine rentals, parking, exhibition stalls, sauna and health clubs, massage parlors, sports centers, control systems, periodical performance appraisals and analysis of variances for corrective action.

ACT 3629 **Profit Planning and Control** **3 (3-0-6)**
Prerequisite : *ACT 2620 Fundamentals of Managerial Accounting*

Process in preparing budgets for managerial planning and control: procedures for various types of budgets such as cash budgeting, capital budgeting, sales budgets, production budgets, interrelationship among budgets, cost-volume-profit analysis and other related topics.

ACT 3632 **Cost Accounting** **3 (3-0-6)**
Prerequisite : *ACT 2620 Fundamentals of Managerial Accounting*

Cost concepts, cost terms, definition, importance and usefulness of cost accounting information for planning and controlling under certain and uncertain circumstances, cost accumulation, techniques in cost analysis, preparing production cost reports, accounting procedures for raw materials, labor and overhead costs as well as various cost accounting approaches: job-order accounting, process costing, joint-product and by-product costs, spoilage, waste, defect, and scrap, cost control by means of standard costs; analysis of variances; cost volume profit relationship; variable costing system; budgeting and planning; pricing and transfer price; and activity base costing.

ACT 3633 **Cost Management** **3 (3-0-6)**
Prerequisite : *ACT 3632 Cost Accounting*

Cost concepts and scope of using cost accounting information for managerial planning and production control, analysis of costs for decision-making, including the use of such information for product pricing, mixed cost, absorption costing, direct costing, variable cost, fixed cost, cost –volume-profit analysis, variance analysis, performance evaluation, transfer pricing, capital expenditure planning, manufacturing expenses control, measurement and control of various work units

ACT 3643 **Auditing** **3 (3-0-6)**
Prerequisite : *ACT 3602 Intermediate Accounting I*
or ACT 3603 Intermediate Accounting II

Auditing conceptual framework, standards, law and professional acts, roles and responsibilities of external auditors, accepting auditing jobs, professional ethics and accountability, audit planning, fraud and errors in auditing process, auditing reports and procedures: assets, liabilities, owners' equity, revenue and expenses, internal control, risk assessments, risk control as well as audit decision making and evidence accumulation, preparation of working paper, auditor's report, and guidelines on auditing by computer.

ACT 3644 **Internal Control and Audit** **3 (3-0-6)**
Prerequisite : *ACT 3602 Intermediate Accounting I*
or ACT 3603 Intermediate Accounting II

Performance of an internal audit in terms of an independent appraisal function which serves to examine and evaluate the adequacy and effectiveness of an organization's system on internal control and its overall quality of performance, furnishing top management with analysis, appraisals, recommendations, counsel, and information concerning the activities audited, internal auditing process, internal auditing skills, management control and Introduction to Management Information Systems, and audit environment.

ACT 4605 **International Accounting** **3 (3-0-6)**
Prerequisite : *ACT 1600 Fundamentals of Financial Accounting*
ACT 2620 Fundamentals of Managerial Accounting

Accumulation and recording of accounting data for business firms with multinational presence, including analysis and reporting of these by function, products, product lines and by country/location for proper presentation of operational results to top management, and update of International Financial Reporting Standard- -IFRS , interpretation of IFRS and accounting applied in Asian countries.

ACT 4607 **Advanced Accounting I** **3 (3-0-6)**
Prerequisites : *ACT 3602 Intermediate Accounting I*
ACT 3603 Intermediate Accounting II

Specific accounting procedures: joint venture, consignment sale, installment sale, real estate, construction contract, funds accounting, not for profits organization, home office and branch accounting for both domestic and foreign countries, accounting procedures regarding currency exchange, accounting policy, change in accounting estimate, correction of errors, and preparation of financial statements from incomplete records.

ACT 4608 **Advanced Accounting II** **3 (3-0-6)**
Prerequisites : *ACT 3602 Intermediate Accounting I*
ACT 3603 Intermediate Accounting II

Accounting principles and methods for business combination, investment in associated and subsidiary companies, preparation of consolidated financial statements, statement of realization and liquidation, accounting for statement of affairs, receiverships, accounting for foreign currency translation, accounting for trouble debt restructuring, preparation statement of change in stockholders' equity, comprehensive income statements, and statement of cash flows for both separated and consolidated statements.

ACT 4609 **Accounting Theory** **3 (3-0-6)**
Prerequisites : *ACT 3602 Intermediate Accounting I*
ACT 3603 Intermediate Accounting II

Evolution, structure, and concept of accounting, emphasis on comprehensive theories with reference to design of holistic accounting systems, definitions and nature of the accounting and accounting theories, theory verification, accounting history, alternative accounting theories and the role of theories in financial accounting and standard setting in assets, liabilities, owner's equity, revenues including information disclosure in financial statements preparation.

ACT 4611 **Seminar in Accounting** **3 (3-0-6)**
Prerequisite : *ACT 4607 Advanced Accounting I*

Discussion and analysis of using accounting conceptual framework and standards as guidelines for practice, contemporary, new, current, interesting accounting issues, updating new accounting standards, rules, regulations related to generally accepted accounting principles in both international and national levels, concepts and principles of code of conduct, code of best practice, and code of accounting professional ethics, practical problems in field of financial accounting, managerial accounting and related field, using case study, academic paper, article, and field research.

ACT 4612 **Independent Study** **3 (3-0-6)**
Prerequisite : *Senior standing (Accounting Major)*

Application of theoretical concepts to the real problems of any organization in a selected industry in Thailand. A specific area of concentration will be chosen by students upon consultation with an instructor in the Department of Accounting. A written report must be submitted and a presentation must be made.

ACT 4634 **Seminar in Management Accounting** **3 (3-0-6)**
Prerequisite : *ACT 3633 Cost Management*

Problems concerning the cost accounting system design, relationship, understanding, and cooperation from other work units involved in data collection and analysis for the purpose of designing a cost accounting system, as well as problems arising from the application of cost accounting concepts to various work systems.

ACT 4641 **Problems in Auditing** **3 (3-0-6)**
Prerequisite : *ACT 3643 Auditing*

Practices and problems in auditing, use of accounting principles in auditing financial statements, patterns for different types of industries, and statements of certified public accountant institutes that often raise important problems for accountants to consider, using case study analysis in teaching and learning.

ACT 4643 **Seminar in Auditing** **3 (3-0-6)**
Prerequisite : ACT 4641 Problems in Auditing

Review of auditing problems, principles and practices in auditing accounts, legal aspects in auditing, and other related topics including the current issues related to auditing.

ACT 4646 **Accounting Information Systems** **3 (3-0-6)**
Prerequisites : *ACT 3643 Auditing*
ACT 3644 Internal Control and Audit

Nature, elements and procedures of the accounting information system including the rational data base concepts and design, system development and documentary techniques as well as the computer based information systems controls, computer fraud and its security, the design of data flow diagrams and system flowchart, accounting cycle of various transactions such as revenue, expenditure and production cycle, payroll cycle and reporting system.

ACT 4647 **Accounting Software Packages** **3 (3-0-6)**
Prerequisites : *MIS 2111Introduction to Management Information Systems*
ACT 4646 Accounting Information Systems

Utilization of computer software applications in accounting, including the systems of general ledger, budgeting, purchasing, selling, inventory, payroll, financial reporting and other means of reports, process of using software applications from the designing of the chart of accounts, entering data, as well as the construction of financial and management reports available for the needs of management for decision-making.

ACT 4648 **EDP Auditing** **3 (3-0-6)**
Prerequisites : *ACT 3643 Auditing*
MIS 2111Introduction to Management Information Systems

Professional auditing work in terms of examining and analyzing computerized financial and non-financial operations in an enterprise to ensure the integrity and reliability of the computerized systems, understanding and appreciation of fundamental concepts of EDP audit, computer audit tools and techniques used in EDP audit, importance of control and audit of mini- and micro-computer systems, EDP controls, and concurrent auditing techniques.

ACT 4649 **Accounting Internship** **3 (135 Hours)**
Prerequisites : *Senior standing (Accounting Major)*
Completion of at least 100 credits

Accounting field work practice in organization of at least 135 hours, providing opportunity to students to gain knowledge and skills from the real-world of Accounting profession, application of accounting theory and concept, enhancing competencies in analyzing, synthesizing and problem solving in accounting profession under the actual situation.

AD 2100 **Consumer Insight** **3 (3-0-6)**

Framework for customer insights, aspect of consumer decision-making and application of these insights into communication and marketing propositions, fundamentals of customer value management, research tools and techniques for developing customer knowledge, customer insights and for becoming more customer-focused in the context of all communication campaign such as advertising, public relations, performance communication as well as the new media communication.

AD 2101 **Idea Generation in Advertising** **3 (2-2-5)**

Practical tools and methods of how to generate ideas, its application in marketing communication planning, and the exploration of inspiration sources of idea such as consumer insights, arts, as well as interesting research finding for the students to be able to apply those inspiration to their own projects.

AD 2102 **Principles of Marketing Communication** **3 (3-0-6)**
Prerequisite : *MKT 2280 Principles of Marketing*

General characteristics in communication and marketing communication process, including the analysis of structure, principles, and the relations of advertising, public relations, sales promotion, sales personnel and independent marketing.

AD 3102 **Advertising Media Planning** **3 (3-0-6)**
Prerequisite : *CA 2018 Consumer Insight*

Media selection that focuses on the quality and benefit of media suited to the purpose, types of target audience, timing and media cost in buying efficiently, including survey of strategies of advertising media planning, creative media purchase, evaluation of assessment, frequency and rates to reach the target audience, and market share.

AD 3103 **Advertising Creative Strategy (English)** **3 (2-2-5)**
Prerequisite : *CA 2018 Consumer Insight*

Communication management and creation of advertisement for print, radio and television broadcasting, development of advertising from definition to creation of advertising strategy, from creative strategy to advertising execution with emphasis on print, radio, television, film and poster in English.

AD 3104 **Advertising Creative Strategy (Thai)** **3 (2-2-5)**
Prerequisites : *CA 2018 Consumer Insight*

Communication management and creation of advertisement for print, radio and television broadcasting, development of advertising from definition to creation of advertising strategy, from creative strategy to advertising execution with emphasis on print, radio, television, film and poster in Thai.

AD 3106 **Art Direction** **3 (2-2-5)**
Prerequisites : *CA 1021 Introduction to Advertising and Branding*

Art direction, development of basic art skills, its impact in terms of color combination, layout format, typography and visual composition in both print and TV on effective advertising.

AD 3107 **Copywriting (Thai)** **3 (2-2-5)**
Prerequisite : *AD2102 Principles of Marketing Communication*

Copywriting in Thai through analysis of effectiveness of advertisements in the media, significant characteristics of advertisements appropriately applied, and practice in the art of copywriting in Thai.

AD 3108 **Copywriting (English)** **3 (2-2-5)**
Prerequisite : *AD 2102 Principles of Marketing Communication*

Copywriting in English through analysis of effectiveness of advertisements in the media, significant characteristics of advertisements appropriately applied, and practice in the art of copywriting in English.

AD 3112 **Brand Communication** **3 (3-0-6)**
Prerequisite : *AD 3101 Principles of Marketing Communication or*
MKT3102 Integrated Marketing Communication (For Marketing students)

Theories and principles of brand communication, brand positioning and repositioning, brand equity measurement, brand leverage and integrated brand communications, including current topics of branding.

AD 3113 **Customer Relationship Management** **3 (3-0-6)**
Prerequisite : *AD 2102 Principles of Marketing Communication*

Theories, practices, and applications of direct database and e-commerce marketing strategies, consumer and business-to-business marketing, integration of online and offline marketing strategies, and management of customer relationships.

AD 3114 **Interactive Advertising and Marketing Communication** **3 (3-0-6)**
Prerequisite : *CA 1021 Introduction in Advertising and Branding*

The course covers an implementation of interactive advertising and marketing communication, including the identification and analysis of in-depth interactive data to create the effective interactive models, method to utilize the new media to gain interactivity which is an enhancement of the involvement the consumers have in advertising.

AD 3117 **Advertising and Popular Culture** **3 (3-0-6)**
Prerequisite : *CA 1021 Introduction to Advertising and Branding*

A study of advertising and popular culture. Students will explore advertising from various perspectives of culture and popular culture. The course involves the understanding how these cultures affect creativity and audience and how influencer marketing works in popular culture.

AD 3119 **Advertising and Marketing Communication Research** **3 (2-2-5)**
Prerequisite : *CA 2019 Communication Arts Research*

Various roles of advertising and marketing communication research in advertising and brand communication, implication of research methodology and process, including conducting quantitative and qualitative research as part of campaign planning.

AD 3120 **Integrated Marketing Communication Planning and Strategy** **3 (2-2-5)**
Prerequisite : *AD 2102 Principles of Marketing Communication*

Planning and Management of advertising and marketing communication campaign, including integration of various communication tools, media strategy formulation, selections and measurement of campaign effectiveness. The course focuses on strategic communication that aligns with business and marketing planning to collide with business and entrepreneurship orientation

AD 3121 **Strategic Situation Analysis** **3 (3-0-6)**
Prerequisite : *AD 2102 Principles of Marketing Communication*

The course focuses on an analysis in many dimensions; including business analysis, marketing analysis, brand analysis, and communication analysis. The analysis involves examination and evaluation of the internal and external elements and will be used to forecast trends and opportunity in a particular company's market effectively.

AD 3122 **Presentation Design for Campaign Planning** **3 (2-2-5)**
Prerequisite : *AD 3103 Advertising Creative Strategy (English)*
or AD 3104 Advertising Creative Strategy (Thai)

The course focuses on development of presentation design and presentation elements that are impactful and effective for campaign planning and campaign presentation. The course involves individual and group presentation for the students to learn leadership and teamwork skills during presentation design process.

AD 3123 **Corporate Brand Communication** **3 (3-0-6)**
Prerequisite : *AD 3112 Brand Communication*

Concepts, theories, principles, and case studies of strategic corporate brand management and communication at local, regional, and global levels. Understanding brand architecture, brand hierarchy, and brand role at the corporate level. Conducting brand audit to measure brand equity, recognizing problems, and proposing strategic recommendations. Using tools of brand communication to build brand equity in various brand scenarios.

AD 3124 **Strategic Brand Positioning** **3 (3-0-6)**
Prerequisites : *AD 3112 Brand Communication*

Case studies of strategic brand positioning of local, regional, and global brands. Understanding competitive landscape, identifying direct and indirect competitors, and analyzing competitor brand identity to conclude points-of-parity and points-of-difference. Targeting and profiling primary and secondary targets to identify and define effective brand position and brand personality.

AD 3125 **Production Design for Advertising and Brand Communication** **3 (2-2-5)**
Prerequisites : *AD 3103 Advertising Creative Strategy (English)*
or AD 3104 Advertising Creative Strategy (Thai)

Using innovation and creativity for visual and audio production across traditional and new media platforms for advertising and brand communication, branded-content design and production, and integration of various types of media.

AD 3126-30 **Selected Topics in Advertising I** **3 (3-0-6)**
Prerequisite : *CA 1021 Introduction to Advertising and Branding*

The course emphasizes on an exploration and analysis of selected topics in advertising. The topic will be announced semester by semester.

AD 3131-35 **Selected Topics in Advertising II** **3 (2-2-5)**
Prerequisite : CA 1021 Introduction to Advertising and Branding

The course emphasized on an exploration and practice of selected topics in advertising. The topic will be announced semester by semester.

AD 4100 **Seminar in Advertising** **3 (3-0-6)**

Facts and conditions in relation to problems, concerns and ethical issues in advertising, trends and new possibilities of advertising as communication tools, including analyzing the current situations and proposing possible solutions or opportunities for such situation, plus critical thinking towards dilemmas and perspectives of certain topics.

AD 4108 **Basic Copywriting (English)** **3 (2-2-5)**
Prerequisite : *AD 3101 Principles of Marketing Communication or*
MKT3102 Integrated Marketing Communication (For Marketing students)

Copywriting in English through analyzing the effectiveness of advertisements in the media, significant characteristics of advertisements appropriately applied, and practice in the art of copywriting in English.

AD 4116 **Advertising Workshop I** **6 (6-2-10)**
Prerequisite : *BG 2000 English III*
CA 1021 Introduction in Advertising and Branding
CA 2019 Communication Arts Research
AD 2102 Principles of Marketing Communication
AD 3119 Advertising Research and Marketing Communication

Training in advertising and communication planning through the study of marketing trends, analysis of data, planning of marketing promotion. Students will be trained to work as advertising agency under the supervision of the instructor.

AD 4117 **Advertising Workshop II** **6 (6-2-10)**
Prerequisite : *AD 4116 Advertising Workshop I*

A continuing training at a higher level in producing advertisements based on the advertising strategy.

AE 1100 **Core Flying: Single-Engine Flight – Ground** **3 (3-0-6)**

Regulations, safety, pre-solo operations, cross-country planning, airspace, chart use, communications, weather, performance, weight and balance, aerodynamics, and decision-making.

AE 1101 **Theory of Single-English Flight** **3 (3-0-6)**
Prerequisite or Co-requisite : AE 1100 Single-Engine Flight – Ground

Pilot's Operation Handbook (POH), Standard Operating Procedure (SOP), Checklist, Preflight Inspection, Entry/Leave Training Area, Pattern T/G, Taxi Check, NAV Check, Turn and Slip Check, Flight Control Check and Air Work, Brief Mission Card, METAR, TAF, Flight Plan, NOTAM before Flight

AE 1200 **Core Flying: Single-Engine Flight - Flight** **2 (0-3-2)**
Prerequisite or Co-requisite : AE 1100 Core-Flying: Single-Engine Flight – Ground

Flying practice to be done according to AE 1100 Core Flying: Single-Engine Flight - Ground

AE 1910 **Problem-based Training in Aircraft Maintenance I** **1 (0-3-2)**

Skill training on the aeronautic engineering and training at the actual work site.

AE 1911 **Problem-based Training in Aircraft Maintenance II** **1 (0-3-2)**

Skill training on the aeronautic engineering and training at the actual work site.

AE 1920 **Problem-based Training in Aircraft Maintenance III** **1 (0-3-2)**

Skill training on the aeronautic engineering and training on the actual work site.

AE 2100 **Basic Flying: Single/Multi-Engine - Ground** **3 (3-0-6)**
Prerequisite or Co-requisite : AE 1100 Core-Flying: Single-Engine Flight–Ground

Instrument flying regulations, safety, operations, navigation systems, chart use, weather, flight planning, decision-making, and crew resource management.

AE 2200 **Basic Flying: Single/Multi-Engine-Flight I** **1 (0-3-2)**
Prerequisite or Co-requisite : AE 1200 Core Flying: Single-Engine-Flight

Fight practice to be done according to AE 2100 Basic Flying: Single/Multi-Engine — Ground

AE 2201 **Basic Flying: Single/Multi-Engine-Flight II** **1 (0-3-2)**
Prerequisite or Co-requisite : AE 2200 Basic Flying: Single/Multi-Engine-Flight I
AE 2202 Basic Flying: Multi-Engine Operations

Training in maneuvers and procedures required for instrument flight test in order to be endorsed with instrument rating in pilot license.

AE 2202 **Basic Flying: Multi-Engine Operations** **2 (1-3-4)**
Prerequisite or Co-requisite : AE 1100 Core Flying: Single-Engine Flight – Ground

Multi-engine rating, multi-engine aerodynamics, maneuvers and procedures, engine-out operations, safety, operations, flight planning, and decision-making

AE 2203 **Basic Flying: Operational Procedures** **1 (1-0-2)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight – Ground*

Operational procedures related to the safe operations of flight, operational procedures prescribed in ICAO annex 6: Operation of Aircraft, national and international aviation law.

AE 2300 **Basic Flying: Flight Communications** **1 (1-0-2)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight – Ground*

Radio Telephony (RT) communications which lie at the base of procedural flying in the professional aviation environment, standard phraseologies and terminologies used in international aviation environment.

AE 2401 **Basic Flying: Air Law** **3 (3-0-6)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight – Ground*

International air law, JAR-OPS1 and ICAO documents and annexes relevant to international conventions and agreements.

AE 2402 **English for Aviation** **3 (3-0-6)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight- Ground*
AE 2100 Basic Flying: Single/ Multi-Engine - Ground
AE 2300 Basic Flying: Flight Communications

English language used in aviation communications, practice of the reading skill to fully understand Route Manual and Flight Operations Manual, practice of ATC and radiotelephony exchange, the functionally created statements, questions and responses in English as required by the nature of the job and responsibility in both oral and written forms, including communication in English with ATC by using correct structures and pronunciation patterns in order to be understood by both native and non-native speakers of English.

AE 2501 **Maintenance English I** **1 (0-3-2)**

Basic reading and writing English which is used in maintenance, and technical terms for maintenance.

AE 2502 **Maintenance English II** **1 (0-3-2)**

Advanced English in maintenance related to components and systems of aircraft, reading of technical documents and formal aircraft documents.

AE 2700 **Fundamental Aircraft: Propulsion Theory** **2 (2-0-4)**

Introduction to basic fundamental theory of aerospace propulsion system, background in the design and operation of different types of propulsion systems for aerospace applications to design, development, operation and maintenance of propulsion systems.

AE 2701 **Fundamental Aircraft: Aircraft Engine** **3 (3-0-6)**

Basic fundamental theory of piston and gas turbine engine, thermodynamics, mathematical model of each part of piston and gas turbine engine, the working cycle of this heat engine, Basic Gas Turbine Design, Gas Turbine Assembly - Design, Metallurgy and Cooling ,Gas Turbine Main Auxiliaries, Gas Turbine Safety and Fire Protection ,Gas Turbine Operation, Gas Turbine Maintenance.

AE 2702 **Fundamental Aircraft: Aerodynamics** **2 (2-0-4)**

Basic knowledge of aviation, namely fluid dynamics, introduction to flight, flight dynamics, types of aircraft and behaviors of aircraft onboard.

AE 2703 **Fundamental Aircraft: Aircraft Structure** **3 (2-3-6)**

Basic aircraft structure both theory of basic structure and strength of material, including fatigues and components of airframe and joints.

AE 2704 **Fundamental Aircraft: Aircraft Material** **3 (2-3-6)**

Basic theory and basic knowledge of aircraft material, types of material especially composite material including the analysis of the problem and fixing.

AE 2705 **Fundamental Aircraft: Aircraft Performance** **3 (2-3-6)**

Fundamentals of propellers and jet aircraft performance, equation of motion, level flight, gliding, climbing including range and endurance based on FAA requirement.

AE 2901 **Fundamental Aircraft: Practical Verification** **1 (0-3-2)**

Practice of the theoretical knowledge in "Fundamental Aircraft". The practical assignment related to the topic is given.

AE 3300 **Intermediate Flying: Route Manual and Pilot Applications** **3(3-0-6)**
Prerequisite : AE 2203 Basic Flying: Operational Procedures
Or Co-requisite : AE 3301 Intermediate Flying: General Navigation
AE 3502 Intermediate Flying: Radio Navigation

Application of the rules and regulations stated in Route Manual for all phases of flight from pre-flight planning until landing of the aircraft which include pre-flight planning, en-route charts, approach and landing charts, meteorological rules and regulations, operations and information.

AE 3301 **Intermediate Flying: General Navigation** **3 (3-0-6)**
Prerequisite : AE 1100 Core Flying: Single-Engine Flight – Ground

All aspects of classical air navigation from basic pilot navigation to advanced plotting, use of flight computers, maps and related charts for navigation

AE 3302 **Intermediate Flying: Flight Performance and Planning I** **3 (3-0-6)**

Knowledge and principles to enable the pilot and future captain to check that an aircraft is correctly loaded and balanced for safe and efficient operations which include theories required to operate an aircraft safely in all phases of flight: take-off, climb, cruise, descent and landing, as well as typical aircraft types.

AE 3303 **Intermediate Flying: Flight Performance and Planning II** **3 (3-0-6)**
Prerequisite : AE 3302 Intermediate Flying: Flight Performance and Flight Planning I
or Co-requisite : AE 3500 Intermediate Flying: Airframes and Aircraft Systems

Practical flight planning instruction based upon aircraft such as the Boeing and Airbus, as well as aspects of flight planning such as the weather factor.

AE 3304 **Intermediate Flying: Meteorology** **3 (3-0-6)**

All aspects of meteorology and its application to flight operations, meteorology and weather forecasting which contribute greatly to flight safety, how weather-related, in-flight hazards arise and how they should be predicted, avoided and or dealt with.

AE 3310 **Aircraft Maintenance: Maintenance Human Factor** **1 (1-0-2)**

Factors that might cause damage in maintenance, theory of human behavior and proactive model including how to avoid accidents during maintaining aircraft and maintenance safety.

AE 3311 **System: Technical Document System** **3 (3-0-6)**

Common and manufacturing aircraft manual, service letters, service bulletin and other issued documents, which are presented in terms of ATA system for working in maintenance.

AE 3312 **Aircraft System: Logistics** **2 (2-0-4)**

Logistics or maintenance and material support, how to supply the material or spare parts during conducting maintenance in order to avoid lack or not-in-time materials, systematic management based on basic logistics.

AE 3400 **Intermediate Flying: Advanced Aerodynamics** **3 (3-0-6)**

Basic aerodynamic theory to transonic and supersonic flight to help professional pilots master the fundamental principles upon which flight depends and which are essential to a full understanding of the flight characteristics of whichever aircraft they may operate.

AE 3401 **Avionics** **3 (3-0-6)**

Basic theory of avionics including the indicators and instrument used on aircraft, usefulness of this system and problems that might occur.

AE 3411 **Aircraft System: Aviation Acts and Airworthiness Regulations** **3 (3-0-6)**

Aviation Acts, Airworthiness Regulation. Laws which relate to maintenance and flight operation based on FAA and EASA.

AE 3500 **Intermediate Flying: Airframes and Aircraft Systems** **3 (3-0-6)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight – Ground*

Eight systems which comprise of the essential components of the modern aircraft, every part of the aircraft in details from the basic structure, hydraulic, fuel, air conditioning, anti-icing and flight-control systems to the emergency equipment and landing gear.

AE 3501 **Intermediate Flying: Power Plants and Instrumentations** **3 (3-0-6)**

Engine design and engine operation considerations as well as recognition of engine malfunctions, flight instruments, warning and recording equipment and automatic flight control systems.

AE 3502 **Intermediate Flying: Radio Navigation** **3 (3-0-6)**
Prerequisite : *AE 1100 Core Flying: Single-Engine Flight – Ground*

Radio navigation facilities available for the navigation of aircraft during departure, en-route and approach, as well as the radar facilities used for the control of aircraft and for in-flight safety, and the latest Global Navigation Satellite Systems (GNSS).

AE 3511 **Aircraft System: Aircraft Communications** **1 (1-0-2)**

Introduction to basic fundamental theory of communication technology, communication equipment and systems using in aviation, signal flow chart and how to understand the communication system.

AE 3512 **Aircraft System: Ground Support Equipment** **2 (1-1-4)**

Types of Ground Support Equipment (GSE) which are used to support during conducting maintenance, including how to handle and provide maintenance to GSE, units such as airline or maintenance company to be responsible for GSE.

AE 3513 **Aircraft System: Non-Destructive Inspection** **3 (2-3-6)**

Basic theory, current methods of Non-Destructive Inspection (NDI) used for aircraft structures, level of NDI, technique and tools.

AE 3700 **Commercial Flight I** **1 (0-3-2)**
Prerequisite : *AE 2201 Basic Flying: Single/ Multi-Engine- Flight II*

Training in the maneuvers and procedures necessary to meet the standards contained in the commercial pilot practical test standards, and training in cockpit resources management and safe flying practices.

AE 3701 **Commercial Flight II** **1 (0-3-2)**
Prerequisite : *AE 2201 Basic Flying: Single/ Multi-Engine- Flight II*

Continued training in the maneuvers and procedures necessary to meet the standards contained in the commercial pilot practical test standards, and training in cockpit resources management and safe flying practices.

AE 3702 **Commercial Flight III** **1 (0-3-2)**
Prerequisite : *AE 2201 Basic Flying: Single/ Multi-Engine- Flight II*

Continued training in the maneuvers and procedures necessary to meet the standards contained in the commercial pilot practical test standards, and training in cockpit resources management and safe flying practices.

AE 3703 **Commercial Flight IV** **1 (0-3-2)**
Prerequisite : *AE 2201 Basic Flying: Single/ Multi-Engine- Flight II*

Continued training in the maneuvers and procedures necessary to meet the standards contained in the commercial pilot practical test standards, and training in cockpit resources management and safe flying practices.

AE 3705 **Commercial Flight - Ground** **3 (3-0-6)**

General knowledge of commercial flight: advanced aerodynamic, predicting performance, controlling weight and balance, emergency procedures, commercial decision making, maximum performance in takeoffs & landings, maximum performance in maneuver

AE 3710 **Aircraft Maintenance: Aircraft Maintenance I** **3 (2-3-6)**

Basic aircraft maintenance which concerns the importance, the meaning, the program of maintenance and the organization, and general regulations related to maintenance.

AE 3711 **Aircraft Maintenance: Aircraft Maintenance II** **3 (2-3-6)**

Relationship between the operation of flight and maintenance in airline or maintenance repair station, each part of section in maintenance organization, discussion of problems in maintenance management to understand the up-to-date situation in both local and global region.

AE 3712 **System: Hydraulic and Pneumatic System** **3 (2-3-6)**

Basic fundamental theory of hydraulic and pneumatic power system and their applications in various aircraft systems, Pascal's law in an opened and closed chamber and its application, different components consisting in a simple hydraulic system, functional principle of each component in hydraulic system. Students will learn to design a simple hydraulic system, read a flow chart diagram and perform maintenance on the system involving hydraulic system.

AE 3713 **Aircraft System: Landing Gear and Brake System** **3 (2-3-6)**

Basic functional principle of landing gear and brake system, how to service and maintain landing gear systems and related components including wheels, brakes, indication systems and warning systems.

AE 3714 **Aircraft System: Fuel System** **3 (2-3-6)**

Basic fundamental theory and functional principle of fuel system, how to safely service aircraft with correct rated fuel and theory towards the maintenance of aircraft airframe fuel systems, advises on aircraft fuel systems removal, repair, and installation maintenance procedures and policies, diagnoses fuel system and component malfunctions, recommendations of corrective actions and resolutions of problems using technical publications and analytic techniques.

AE 3715 **Aircraft System: Powerplant** **3 (2-3-6)**

Basic fundamental theory and functional principle of an aircraft power plant system, all the equipment which work together with the propulsion system, flow chart of power system which supports the aircraft power, functional principle of each part and how to perform maintenance on power plant system.

AE 3716 **Aircraft System: Stability and Weight & Balance System** **3 (2-3-6)**

Stability of aircraft based on basic physics and flight dynamics, basic of Weight and Balance (W&B), including tools, schedule and method, discussion of importance and problems.

AE 3800 **Aircraft System: Aircraft Electrical System** **3 (2-3-6)**

Basic fundamental theory of aircraft electrical system technology, equipment and sources of electrical supply using in aviation, electrical flow chart and how to understand the communication.

AE 3900 **Seminar in International and Domestic Navigation** **3 (3-0-6)**
Prerequisite : *AE 2100 Basic Flying: Single/Multi-Engine-Ground*

Domestic and flight regulations and evaluation of their impacts on long-range domestic and international flights, use of ICAO operational requirements and typical air carrier Ops SPECS to plan domestic and international flights, high-altitude airspace, navigation, and approach procedure chart interpretation, concepts of MNPS and RVSM airspace, dispatch procedures, ETOPS, ETP, drift down, track messages, LRN accuracy checks, Oceanic Air Traffic Control clearances, international METARs and TAFs and emergencies and contingencies while on oceanic tracks, communication systems requirements and methodology which include satellite, digital, and analog devices.

AE 3901 **Aircraft Maintenance: Practical Verification** **1 (0-3-2)**

Practice of the theoretical knowledge in "Aircraft Maintenance Aircraft". The practical assignment related to the topic is given.

AE 4300 **Intermediate Flying: Crew Resources Management and Flight Safety 1 (1-0-2)**

Human error and reliability, error chain, error prevention and detection, organizational factors, company safety culture, stress and stress management, fatigue and vigilance, information acquisition and processing, situational awareness, workload management, aeronautical decision making, communication and coordination inside and outside the cockpit, leadership and team behavior synergy, automation and philosophy of the usage of automation, basic flight safety concepts, theories of cause of accident, Human Factors Failure Analysis Classification System (H-FACS), and case study of both incident and accident.

AE 4301 **Intermediate Flying: Human Performance and Limitations** **3 (3-0-6)**

Limitations of the human body operating in an aviation environment as well as dealing with all the aspects of the decision making process relevant to the pilot.

AE 4700 **Commercial Pilot License Instructor** **3 (3-0-6)**
Prerequisite : *Obtain commercial pilot license preferably with instrument and multi-engine rating*

Fundamental instructions required to be the flight instructor for airplane which include learning process, human behavior, effective communication, teaching methods, critique and evaluation, and professional development.

AE 4701 **Commercial Pilot License Instructor : Flight I** **2 (0-6-2)**
Prerequisite : *Obtain Commercial Pilot License Single-Engine and instrument rating*
AE 4700 Commercial Pilot License Instructor

Training in the maneuvers and procedures necessary to meet the standards contained in the flight instructor practical test standards, Single-Engine Land with Instrument Airplane Rating, training in cockpit resources management and safe flying practices, associated ground instructions which include completion of the fundamentals of instruction, the flight instructor airplane, and the flight instructor instrument written test.

AE 4702 **Commercial Pilot License Instructor : Flight II** **2 (0-6-2)**
Prerequisite : *Obtain Commercial Pilot License multi-engine and instrument rating*
AE 4700 Commercial Pilot License Instructor

Training in the maneuvers and procedures necessary to meet the standards required to add the Multi-Engine Flight Instructor Rating, additional instruction in advanced multi-engine flight crew training techniques including cockpit resources management and safe flying practices.

AE 4901 **Aircraft System: Practical Verification** **1 (0-3-2)**

Practice of the theoretical knowledge in "Aircraft System Aircraft". The practical assignment related to the topic is given.

AE 4904 **Special Problems in Aeronautic Engineering I** **3 (3-0-6)**

Selected problems in aeronautic engineering. Students will be supervised to do research on certain problems in aeronautic engineering.

AE 4905 **Special Problems in Aeronautic Engineering II** **2 (2-0-4)**
Prerequisite : *AE 4904 Special Problems in Aeronautic Engineering I*

Selected problems in aeronautic engineering. Students will be supervised to do research on certain problems in aeronautic engineering.

AE 4906 **Special Problems in Aeronautic Engineering III** **1 (1-0-2)**
Prerequisite : *AE 4905 Special Problems in Aeronautic Engineering II*

Selected problems in aeronautic engineering. Students will be supervised to do research on certain problems in aeronautic engineering.

AE 4930 **Advanced Topics in Aeronautic Engineering I** **3 (3-0-6)**

Most current advancements in a particular field of study as determined by the instructor of the course. The topic of each semester depends on the varied interests of the students or the research requirements.

AE 4931 **Advanced Topics in Aeronautic Engineering II** **2 (2-0-4)**
Prerequisite : *AE 4930 Advanced Topics in Aeronautic Engineering I*

Most current advancements in a particular field of study as determined by the instructor of the course. The topic of each semester depends on the varied interests of the students or the research requirements.

AE 4932 **Advanced Topics in Aeronautic Engineering III** **1 (1-0-2)**
Prerequisite : *AE 4931 Advanced Topics in Aeronautic Engineering II*

Most current advancements in a particular field of study as determined by the instructor of the course. The topic of each semester depends on the varied interests of the students or the research requirements.

AI 3201 **Biological Material and Biodegradation** **3 (2-3-5)**
Prerequisites : *BS 1005 Principles of Biology and*
BS 1006 Biology Laboratory

Properties and mechanisms of biodeterioration in natural materials important in Agro-industry, techniques used in assessing the extent and causes of deterioration, damage reduction strategy and technique, including biodeterioration in the environment, and corresponding laboratory sessions.

AI 3202 **Introduction to Agro-Industry** **2 (2-0-4)**
Prerequisites : *BS 1001 General Chemistry and*
BS1005 Principles of Biology

Meaning and importance of agro-industry to the economy of the country, factors and composition of agro-industry, types of agro-industrial products and the value adding processes.

AI 3203 **Instrumentation and Control in Agro-Industrial Process** **3 (2-3-5)**
Prerequisites : *BS 1001 General Chemistry*
BS 1201 Physics for Bioscience
BS 1202 Physics Laboratory for Bioscience

Principles and application of instruments involved in biotechnology and their variation in control system, their roles in production efficiency and stability and their application in research, application of mathematics and physics models to convert the signal and the control system in agro-industry process, and corresponding laboratory sessions, principles, method and maintenance of basic and advanced instruments such as centrifuge, autoclave, incubator, HPLC etc.

AI 3204 **Processing of Agricultural Product I** **3 (2-3-5)**
Prerequisite : *AI 3202 Introduction to Agro-Industry*

Chemical, physical and biological properties and characteristics of agricultural raw materials, factors and processing principles for converting agricultural raw materials into industrial products. This course is also combined with laboratory sessions.

AI 3205 **Biochemical Engineering** **3 (3-0-6)**
Prerequisites : *BS 2006 Basic Biochemistry and*
BS 2011 Introduction to Microbiology

Applications of biological organisms and their enzymes in the bioprocesses and the enzyme technology, bioprocess economics, applied enzyme kinetics, fermentation kinetics, metabolic stoichiometry, transport phenomena, sterilization techniques, bioreactor design and operation, upstream and downstream processes and optimization in the process scale up.

AI 3206 **Agro-Industry Management and Marketing** **3 (3-0-6)**
Prerequisite : *ECO 2200 Introduction to Economics*

Basic principles of marketing and management which can be applied to use with agricultural products which include environmental factors in Agro-industry, consumer's buying behavior, marketing research, product development, accounting, pricing strategy, distribution channel, and promotion strategy in with the examples and the case studies of agro-industrial products.

AI 3207 **Unit Operation of Agro-Industry I** **3 (2-3-5)**

Concepts and principles of engineering for various unit operations in agro-industry, topics include pumps, heat exchangers, evaporators, dryers, refrigerators, boilers, retorts, and size reduction equipment, and corresponding laboratory sessions.

AI 3208 **Standards and Regulations of Agricultural Products** **2 (2-0-4)**
Prerequisite : *AI 3202 Introduction to Agro-Industry or*
FT 3101 Introduction to Food Technology

Legal and scientific issues involved in the national and international regulations of agricultural products and foods, philosophy underpinning the application of regulation statutes, roles and responsibilities of Thai FDA and international organizations e.g. WTO and its agreements etc., Food Act B.E. 2522, food standards, Codex, risk analysis, and nutrition labeling and sources of information necessary for communication with government and public are also included.

AI 3209 **Microbial Physiology** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Microbial structures and functions to understand how physiology relates to microbial growth and survival. Use of bacteria as the primary model and are focused on the molecular aspect of cell growth, structure and functions, cell envelope, cellular metabolism and genetics, and corresponding laboratory sessions

AI 4208 **Processing of Agricultural Product II** **3 (2-3-5)**
Prerequisite : *AI 3204 Processing of Agricultural Product I*

Processing methods of agricultural products into food products and non-food products including fruit and vegetable, cereal, meat, milk, rubber, wood and textile and packaging of the products, and corresponding laboratory sessions.

AI 4209 **Unit Operation for Agro-Industry II** **3 (2-3-5)**
Prerequisite: *AI 3207 Unit Operation for Agro-Industry I*

Concepts and principles of engineering for various unit operations in separation processes which Topics include distillation columns, extractors, adsorption columns, absorption towers, membrane separators, crystallizers, filters, and centrifuges, and corresponding laboratory sessions.

AI 4211 **Fermentation Process** **3 (2-3-5)**
Prerequisite : *AI 3205 Biochemical Engineering*

Principles of isolation, modification and storage techniques of industrial microorganisms, nutrients needed for microbial growth and media optimization, optimization and control processes during upstream, fermentation and downstream processes in batch, continuous and fed batch bioreactors, and corresponding laboratory sessions.

AI 4212 **Tissue Culture Techniques and Application** **3 (2-3-5)**
Prerequisites : *BS 1005 Principles of Biology and*
BS 1006 Biology Laboratory

Techniques and physiological basis of plant tissue culture used in research and industry, commercial laboratories culture media, organogenesis, somatic embryogenesis and micropropagation, and corresponding laboratory sessions.

AI 4213 **Agro-Industrial Quality Control** **3 (2-3-5)**
Prerequisite : *SA 1201Statistics I*
AI 4208 Processing of Agricultural Product II

Agro-industrial production as a systematic and controllable process, acceptance sampling plans for analysis and control of quality, quality management, quality control, quality assurance and quality improvement, quality assurance systems, Total Quality Management and ISO series within food factory, and corresponding laboratory sessions.

AI 4215 **Agro-Industry Preservation and Packaging** **3 (2-3-5)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Reasons and factors relating to raw material and product spoilage, storage and preservation methods, principles of packaging that include packaging materials used in transportation and distribution, their properties, forms and applications, and corresponding laboratory sessions.

AI 4216 **Fiber Technology** **3 (2-3-5)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Principles in production of natural fiber, sources of raw material, processing methods used in Fiber Technology, research and development of natural fiber and application as agro-industrial, and corresponding laboratory sessions.

AI 4217 **Essential Oil Technology** **3 (2-3-5)**
Prerequisite : *BS 2006 Basic Biochemistry*

Composition, physical and chemical characteristics of essential oils, sources of raw material, extraction, purification and use of essential oils, and corresponding laboratory sessions.

AI 4218 **Agro-Industrial Product Development** **3 (2-3-5)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

New products and product development system for agro-industry in laboratory and industry, generation and screening of new product ideas, design of product concept, product design specifications, prototype development and process development, sensory testing and testing of consumer acceptability, shelf life evaluation, commercialization of new products and evaluation of launch and hand-on experience in laboratory.

AI 4219 **Sugar Technology** **3 (2-3-5)**
Prerequisites : *BS 2006 Basic Biochemistry and*
AI 4208 Processing of Agricultural Product II or
FT 4108 Industrial Food Processing II

Chemical and physical properties of sugar, sugar processing and by-products from sugar industry, quality control and development of new sugar products to be used in other industries, and corresponding laboratory sessions.

AI 4220 **Post Harvest Technology** **3 (2-3-5)**
Prerequisites : *BS 2006 Basic Biochemistry and*
AI 4208 Processing of Agricultural Product II or
FT 4108 Industrial Food Processing II

Principles underlying physiological changes in fresh agricultural produces, harvesting methods and post harvest technology to handle the post harvested crops in order to maintain the crop qualities or to delay the changes involved in deterioration of the crop qualities and, corresponding laboratory sessions.

AI 4221 **Alcoholic Beverage Technology** **3 (2-3-5)**
Prerequisite : *BT 3015 Industrial Fermentation*

Current technologies used in production of alcoholic beverage, and monitoring of impact of fermentation variables on microbial performance and product quality, distillation principles and practices, production technology of brandy, whiskey, rum, vodka, gins, and other distilled beverages, characteristics of raw materials, fermentation, distillation, and aging, manufacturing processes used in alcoholic beverages production, research development involving the use of biotechnology for the purpose of yield, solving quality related problems and stimulation innovation, an introduction to management, marketing and economics of most of the alcoholic beverages, review market segmentation and explore alternative, social policy formation, and corresponding laboratory sessions.

AI 4222 **Water and Waste Management** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Water and waste management starting from good preparation of raw material for industry, clean technology, waste controlling, and water management of downstream process to reduce sources of pollution, and corresponding laboratory sessions.

AI 4223 **Waste and By-product Utilization** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Principles and practical issues for using of waste and by-products from industry to find optimum method to produce products from those waste materials, and corresponding laboratory sessions.

AI 4226 **Plant Breeding Technology** **3 (2-3-5)**
Prerequisite : *BS 2017 Genetics*
AI 3202 Introduction to Agro-Industry

Life cycle of monocotyledons and dicotyledons, sexual and asexual reproduction of plant, factors affecting plant growth, plant cultivation techniques and seed storage technology, mechanisms of germination, seed selection, techniques for sexual and asexual propagation. The course also includes the study of plant genetic, inheritance, germplasm bank, the use of genetic engineering to create new plant species and also industrial seed production techniques, and corresponding laboratory sessions.

AI 4232 **Secondary Metabolites of Plant Cells** **3 (2-3-5)**
Prerequisites : *BS 2006 Basic Biochemistry and*
BS 2016 Basic Biochemistry Laboratory

Use of plant cells for production of secondary metabolism products such as alkaloid, monoterpenes, biopolymer, antimicrobial agents and flavors products. The course will also discuss on metabolic regulation of the desired products, genetic manipulation of plant cells with different techniques e.g. recombinant DNA and protoplast fusion techniques, and corresponding laboratory sessions.

AI 4233 **Pulp and Paper Technology** **3 (3-0-6)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Basic knowledge in pulp and paper science and technology, pulping process, pulp bleaching, paper processing, coating of paper, use of non-fibrous additives, measurement of pulp and paper quality, paper recycling process, water treatment in the pulp and paper mill, and new technology in pulp and paper processing.

AI 4234 **Wood Technology** **3 (3-0-6)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Types of wood, natural properties of wood, mechanical properties and degradation, basic principles of wood preservation, processing of wood and commercial uses for wood products as well as safety and quality control in wood manufacturer.

AI 4235 **Rubber Technology** **3 (3-0-6)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Chemical and physical properties of rubber, definition and basis concepts of Caoutechouc, rubber and elastomer, vulcanization, natural rubber latex and coagulation technology, manufacturing of industrial rubber latex sheets, block rubber and rubberized products and recent developments in the biotechnology associated with rubber technology.

AI 4236 **Feed Manufacturing Technology** **3 (3-0-6)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Production of feeds, nutritional requirement of economically important animals, the composition and nutrition characteristics of common feeds, feed formulation, economics of feeding programs for farm animals, plant layout design, selection of appropriate equipment, quality control, feed manufacturing management, safety and sanitation for feed manufacturing industry and also the application of biotechnology to improve quality of feeds.

AI 4237 **Leather Product Technology** **3 (3-0-6)**
Prerequisite : *AI 4208 Processing of Agricultural Product II*

Leather and hide used for industrial purposes and their properties as well as processing technology of leather and hide, equipment and tools used in leather industry, waste and environmental management for leather manufacturer.

AI 4238 **Mushroom Cultivation Technology** **3 (3-0-6)**
Prerequisite : *BT 3015 Industrial Fermentation*

Biology and cultivation of different types of mushroom that is economically important especially for human consumption, preparation of starter culture, support materials and media preparation and sterilization, environmental control for fruiting body formation, preparation of cultivation room or space, cultivation methods and also post harvest technology for mushroom, including mushroom diseases and prevention methods.

AI 4239 **Selected Topic** **3 (2-3-5)**

Discussion and advanced study of a selected topic in the field of Agro-Industry, and corresponding laboratory sessions.

AI 4240 **Bioinformatics** **3 (2-3-5)**

Biological database searching and primer design, DNA and amino acid sequence alignment, phylogenetic analysis, computational program for prediction of gene, genome and protein structures including application of datamining in agriculture, industry and medicine.

AI 4241 **Bacteriology** **3 (2-3-5)**
Prerequisites : *BS 2011 Introduction to Microbiology*

Studies of bacterial morphology, physiology, genetics, taxonomy, practices in isolation, structure, function and classification of bacteria such as actinomycetes, photosynthetic bacteria, archaebacteria, coliform bacteria, etc. Field trips are also included.

AI 4242 **Mycology** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Studies of fungal morphology, physiology, genetics, taxonomy, practices in isolation, structure, function and classification of fungi such as slime mold, water mold, yeast, rust, smut, mushroom, etc. Field trips are also included.

AI 4243 **Algology** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Studies of algal morphology, physiology, genetics, taxonomy, practices in isolation, structure, function and classification various kinds of algae such as blue green algae, green algae, euglenoid, diatom, etc. Field trips are also included

AI 4290 **Special Project** **3 (0-9-4)**

A project involving an aspect of Agro-Industry, design of the study, collection and analysis of experimental data under the faculty member's supervision. A written report and presentation of the research work in a seminar is compulsory.

AI 4291 **Field Trip** **1 (0-3-1)**

Visit to food or Agro-Industrial production facilities to view specific aspects of food processing and management, written report of the tour is required.

AI 4292 **Seminar** **1 (1-0-2)**

Method in preparation and performing a scientific presentation, demonstration of scientific research paper presentation from veteran speakers in the field of biotechnology, food technology and agro-industry. Each student is required to present a selected paper of interest from scientific journals.

AI 4294 **Internship** **Non-credit**

Practical training in Agro-Industry or biotechnology related industry, government sector and/or academic institute of no less than 300 hours to develop skills and confidence after graduation.

AI 4295 **Special Project** **6 (0-18-8)**

A project involving an aspect of Agro-Industry, design of the study, collection and analysis of experimental data under the faculty member's supervision. A written report and presentation of the research work in a seminar is compulsory.

AR 1102 **Visual Studies and Communication** **3 (2-2-5)**

Composition of abstract visual art using elements, such as shape, form, space, figure and ground, color, and texture. Design experimentation through various methods of communication, such as drawing painting, collage, folding, carving and model making. Emphasis given to the aesthetics of composition, idea manifestation, and communication skills.

AR 1104 **Fundamentals of Architectural Design** **3 (2-2-5)**

Theory and architectural components and the basic design relationship between form, function in order to fulfill the perfection of architectural design.

AR 1106 **Architectural Drawing** **3 (2-2-5)**

Methods of drawing used in architecture and design profession i.e. orthographic projection, perspective projection, shade and shadow and drawing technique in pencil, and ink.

AR 1107 **Introduction to Creative Culture** **3 (3-0-6)**

Introduction to contemporary trends in design and art in the context of creative culture, visual, emotional and intellectual awareness of humankind's creativity, investigation of the developing, role, and influences of designers and artists on our society, promoting students' understanding and appreciation of art and design.

AR 1108 **History of Art and Architecture** **3 (3-0-6)**

Historiographical method and techniques and contextual reading and interpretation, surveys of art and architecture in the ancient world, Classical art and architecture, Medieval art and architecture, Renaissance and Baroque art and architecture, and the eighteenth century art and architecture.

AR 1300 **Preparation for Architectural and Design Studies** **Non credit (80 Hours)**

Basic freehand sketch techniques, principles of perspective sketch, and graphic presentation, basic Two – dimensional and Three – dimensional visual composition.

AR 2106 **History of Architecture I** **3 (3-0-6)**

Architectural history from the Prehistoric era to the Enlightenment periods, spanning both Western and Eastern civilizations. Comparative reviews incorporating research and analysis of the tendencies and forms of architecture, its concept, philosophy, and also construction methods as well as contextual influences posing on the consequent architecture, i.e., geographical, sociocultural, political, and technological factors by presenting a larger historical perspective by a chronological process and, expectantly, furthering the understanding of world events and their relationships to the development of architecture.

AR 2109 **Building Technology and Construction I** **3 (2-2-5)**

Introduction to small building construction, standard timber construction methods, short span beams, column and floor joist, properties of basic construction materials such as timber, concrete, masonry and studio work.

AR 2110 **Building Technology and Construction II** **3 (2-2-5)**
Prerequisite : *AR 2109 Building Technology and Construction I*

Medium building construction using reinforced concrete construction methods, light frame steel for the roof and principles of structural system, properties of building materials such as steel, glass and other standard building products and studio work.

AR 2111 **Introduction to Computer-Aided Design** **3 (2-2-5)**

Computer-aided design application for creating both two dimensional architectural drawing and three dimensional modeling, animation, rendering, representation.

AR 2202 **Architectural Design I** **6 (2-8-8)**
Prerequisite : *AR 1104 Fundamental of Architectural Design*

Introduction to architectural design of intimate-scale by considering basic related factors such as space, measure, structure, site, tectonics, program, and habitation, poetic meaning, human needs and the interaction of persons with the natural and built environment.

AR 2204 **Architectural Design II** **6 (2-8-8)**
Prerequisite : *AR 2202 Architectural Design I*

Continuation of practice from Architectural Design I, broader architectural dimensions, multi-user private and small-scale public design problems, how architecture fits contextually into existing circumstances, and how poetic meanings relate to built forms, analysis of existing places and synthesis incorporating the more complex multi-dimensions of architectural environments.

AR 2304 **Structural Design** **3 (3-0-6)**
Prerequisite : *AR 2306 Structural Mechanics*

Principles and concept of structural design in architecture, properties of materials, design criteria of materials selection and type of structure for structural form and member, survey of current and future structural technology.

AR 2305 **History of Architecture II** **3 (3-0-6)**
Prerequisite : *AR 2106 History of Architecture I*

Architectural history from the Industrial Revolution to the 1960's Late Modernism, comparative reviews incorporating research and analysis of the tendencies and forms of architecture, its concept, philosophy, and also construction methods, contextual influences posing on the consequent architecture, i.e., geographical, sociocultural, political, and technological factors.

AR 2306 **Structural Mechanics** **3 (3-0-6)**

Analysis of structural members under apply loads, loads and reactions, moment and bending, shear, stress and strain, rigid-body concept and free-body diagram, elastic stability of beams and frames, lateral stability of beams and columns, mechanical properties of materials.

AR 2307 **Structural Design Principle in Architecture** **3 (3-0-6)**

Fundamentals of analysis of structural members under apply loads, and behaviors of force upon structure, static equilibrium of structure, mechanical properties of materials, basic concept and design criteria of structural design in architecture and materials selection

AR 2308 **History of Modern Architecture and Later** **3 (3-0-6)**
Prerequisite: *AR 1108 History of Art and Architecture*

Architectural history from the Industrial Revolution to the 1960's Late Modernism, comparative reviews incorporating research and analysis of the tendencies and forms of architecture, its concept, philosophy, and also construction methods, contextual influences posing on the consequent architecture, i.e., geographical, sociocultural, political, and technological factors.

AR 3101 **Introduction to Computer - Aided Design** **3 (2-2-5)**

Basic understanding of using computer as Architectural communication tool, AUTOCAD program for creating Architectural drawing and representation, introduction to basic three dimensional modeling/ rendering and animation.

AR 3106 **Building Environmental Control I** **3 (3-0-6)**

Basic knowledge in building system and environmental control, water supply system, drainage system, water treatment system, sewage disposal, electrical system, fire protection system, communication system, security control system, and basic passive design application of shading device.

AR 3107 **Building Environmental Control I** **3 (3-0-6)**
Prerequisite : *AR 3104 Building Environmental Control I*

Advanced knowledge and practice of the building technology in relation to the building systems, natural resources and energy consumption and management, sustainable design concept and application.

AR 3108 **Building Equipment and Systems** **3 (2-2-5)**

Fundamental design principles of building equipment and systems, water supply and sanitary system, air conditioning system, electricity and lighting systems, fire protection systems, vertical and horizontal transportation system, communication system, security system, smart building systems and studio work.

AR 3200 **Theory and Concept in Architecture** **3 (3-0-6)**

Contemporary architectural theories and concepts, from the late Modern period to the present time, through the study of significant texts and buildings of the sentimental architects and theorists, investigating the formal, technological, social, political, and economical debates at issue within the discipline, with emphasis given to evaluate and articulate the interactions between theory and practice, thereby enabling students to formulate and assess strategies for the making of architecture.

AR 3203 **Architectural Design III** **6 (2-8-8)**
Prerequisite : *AR 2204 Architectural Design II*

Continuation of practice from Architectural Design II with moderate complex level, developing the design process skills through conceptualization, analysis, synthesis, visualization of architectural design at all levels of correlation of context, conceptualization in value, identity and aesthetic quality in architectural design and exploration of a medium scale public building.

AR 3207 **Architectural Design IV** **6 (2-8-8)**
Prerequisite : *AR 3203 Architectural Design III*

Continuation of practice from Architectural Design III with more complexity, experiment and application of a wide span structure, development of space and building form through the expression of structure, building envelope, materials, site planning, and space arrangement of building for tropical climate concerning aesthetics and utility system of building, and exploration of a medium scale public building.

AR 3307 **Building Technology and Construction III** **3 (2-2-5)**
Prerequisite : *AR 2110 Building Technology and Construction II*

Composite building materials and construction methods, large span pre-stressed and post-tensioned systems for floor and beam, fundamental principles of prefabricated – construction system and curtain wall and studio work.

AR 3308 **Building Technology and Construction IV** **3 (2-2-5)**
Prerequisite : *AR 3307 Building Technology and Construction III*

Introduction to design and construction principles of long span structure, high-rise building and their behavior and studio work.

AR 3309 **Architectural Design Methods** **3 (3-0-6)**

Parallel investigation in conjunction with the design studio in order to substantiate architectural knowledge through the discussion of actual architectural case studies, correlation between conceptual foundation, learned in the studio context, physical, and formal building and implementation in design practice, multi-dimensional organization of an architectural project, such as planning, formation, and execution. The transitional knowledge shall project a comprehensible realism, upon which students shall base their creativity for further application and learning.

AR 3310 **Fundamentals of Site and Landscape Planning** **3 (2-2-5)**

Shaping of the surroundings through a thorough analysis of issues starting from land, soil, and vegetation to social and economic factors to best determine a possible site layout.

AR 3311 **Fundamentals of Building Information Management** **3 (2-2-5)**

Integration of building information management (BIM) in architectural design and construction processes, data integration, collaboration methods, innovative applications and environments in project life-cycle.

AR 3312 **Architectural Programming** **3 (3-0-6)**

Programmatic elements in architecture, typological analysis, factors involving functional determinant, behavior psychology of users, context and peculiarity of programming, area requirement calculation, law and regulation for programming, case study analysis, marketing and investment analysis for creating programming.

AR 4101 **History of Thai Architecture** **3 (3-0-6)**

Components of Thai Architecture from Sukhothai to Rattanakosin periods, various influence and development of Thai Architecture, influences of culture from outside and analysis of unique Thai Architecture in different periods of time.

AR 4106 **Methods of Research and Data Processing** **3 (3-0-6)**

Principles and regulations of appropriate architectural research in conjunction with quality and quantity to support research, history and conservation, research in technology, marketing, social work and behavior involving architecture and case study analysis.

AR 4203 **Architectural Design V** **6 (2-8-8)**
Prerequisite : *AR 3207 Architectural Design IV*

Continuation of practice from Architectural design IV, complexities of building programs and spaces that must be integrated through correspondence of design process and building systems, relationships of contextual, spatial and programmatic factors as determinants in cluster buildings planning, and exploration of a medium to large scale public building.

AR 4205 **Architectural Design VI** **6 (2-8-8)**
Prerequisite : *AR 4203 Architectural Design V*

Continuation of practice from Architectural design V, importance of built environments responsive to urban context and communities, investigation and analysis the programmatic organization, multi-level of correlation of buildings in an urban fabric, parallel with current urban situation, forming the conceptual background of large scale public architecture relative to macro planning issues.

AR 4207 **Integrated Architectural Design I** **6 (2-8-8)**
Prerequisite: *AR 3207 Architectural Design IV*

Continuation of practice from Architectural design IV, complexities of building programs and spaces that must be integrated through correspondence of design process and multidisciplinary, relationships of contextual, spatial and programmatic factors as determinants in architectural design, exploration of a medium to large scale and high rise public building, collaboration with AR 4305 Building Technology and Construction V.

AR 4208 **Integrated Architectural Design II** **6 (2-8-8)**
Prerequisite: *AR 4207 Integrated Architectural Design I*

Continuation of practice from AR 4207 Integrated Architectural Design I, investigation and analysis of spatial, programmatic and contextual factors as determinants in cluster buildings planning, importance of built environments responsive to urban context and communities, multi-level of correlation of buildings in an urban fabric, parallel with current urban situation, forming the conceptual background of large scale public architecture relative to macro planning issues, collaboration with major electives II and III.

AR 4301 **Fundamentals of Urban and Regional Planning** **3 (2-2-5)**

Influence of developing city in physical, economics, structures, social work and its environment, relationship between city and its surroundings, process of city and regional design, conceptual design of urban, transportation, and environmental conservation.

AR 4302 **Seminar in Architecture** **3 (3-0-6)**

Architectural seminar involving architectural development from the past to present in terms of theoretical and practice and the task of professional development, problems and obstacles in working and their solutions.

AR 4303 **Practicum in Architecture** **Non-credit (240 Hours)**

A 240 working hour professional training at an architecture firm in order to expose students to all kinds of hands-on experiences and knowledge in the real architectural business world.

AR 4304 **Building Technology and Construction V** **3 (2-2-5)**
Prerequisite: *AR 3308 Building Technology and Construction IV*

Principles of design, construction technology, and structure of high-rise building, advanced building envelop system, collaboration with AR 4206 Integrated Architectural Design I, integration of construction details design and building equipment and systems in architectural design.

AR 5200 **Pre-Thesis in Architecture** **3 (0-6-3)**
Prerequisite : *AR 5203 Architectural Design VII*

Preparation of thesis information, context, theory and facilities of thesis research. The direction will be individually supervised by assigned advisor.

AR 5203 **Architectural Design VII** **6 (2-8-8)**
Prerequisite : *AR 4205 Architectural Design VI*

Continuation of practice from Architectural Design VI, developing design process focusing on multidisciplinary researches pertaining to individual interests, analysis and studying of issues of interest.

AR 5205 **Thesis in Architecture** **9 (0-18-9)**
Prerequisite : *AR 5200 Pre-Thesis in Architecture*

Students work on individual design project of an approved thesis project which investigates either from a theoretical or pragmatic position a subject of sufficient complexity.

AR 5206 **Integrated Architectural Design III** **6 (2-8-8)**
Prerequisite: *AR 4208 Integrated Architectural Design II*

Continuation of practice from AR 4208 Integrated Architectural Design II, developing design process focusing on multidisciplinary researches pertaining to individual interests, analysis and studying of issues of interest, collaboration with major electives IV.

AR 5300 **Professional Ethics and Practices** **3 (3-0-6)**

Ethical conduct of the professionals in the field, relationship between client and designer, designer and staff, an understanding of zoning, building laws, bidding and contracts, and work supervision.

AR 5401 **Building Cost Estimation and Control** **3 (3-0-6)**

Principles of building estimate and control by way of rough and exact estimation, the cost of materials, equipment and cost of labor, quality survey: materials, labor cost and equipment for final decision.

AR 5402 **Fundamentals of Architectural and Urban Conservation** **3 (3-0-6)**

Principles of architectural and urban conservation for evaluation and development, physical environment, economic and social work by government policy to reinforce fundamentals of architectural and urban conservation.

AR 5403 **Advanced Computer - Aided Design** **3 (2-2-5)**

Advanced study of computer-aided design and primary introduction to the creation of work with a design and technology context, narrative, computation, and interactivity. Students will develop their investigations and interests as well as a space for exploration, experimentation, and methodologies.

AR 5404 Construction Management 3 (1-4-4)

Construction methods in relation to the engineer, contractor, architect, and security control for safety purposes, including municipal laws of construction.

AR 5405 Individual Study in Architecture 3 (3-0-6)

Individual study on interesting architectural topics of interest of the students, under the supervision of the lecturers.

AR 5407 Real Estate Development 3 (3-0-6)

Real estate development, procedure of financial investment and property management in city and rural areas.

AR 5409 Architectural Psychology 3 (3-0-6)

Basic concepts of psychology development, fundamentals of psychology, human behavior, mankind and environment.

AR 5410 Thai Architecture 3 (2-2-5)

Different components of Thai architecture as in building bodies, roofs and structures, analysis of different forms and spaces of Thai buildings from past to present time, conducting research on Thai design, architectural characteristics, site planning and appropriate functions.

AR 5413 Project Management 3 (3-0-6)

Feasible programmed instruction of projects, site, economical techniques, professional management, budget analysis and leasing.

AR 5414 Energy Saving 3 (3-0-6)

Unconventional energy saving resources, alternative and renewable energy such as solar energy, wind power, water power, geothermal power and biomass.

AR 5415 Interactive Features Design 3 (2-2-5)

Introduction to the creation of work within a design and technological context, i.e., new media installation, interactive architecture, and intelligent space, developing individual investigations and interests by exploration, experimentation, and implementation.

AR 5416 Façade Design in Architecture 3 (2-2-5)

Theoretical basis for a design understanding for overall performance of façades, examination of the complex interrelationships through a consideration of existing constructions, design criteria in successful design of façades, knowledge of materials, methods of manufacturing and installation.

AR 5417 Interior Design by Architects 3 (2-2-5)

Introduction to interior spatial design and decoration necessary for professional architects incorporating lectures and studio, issues surrounding the interior profession and the architects, survey of contemporary works, principles of shaping and planning interior spatiality, design factors, programs, elements, colors, lighting, tectonic, presentation skills, and decorative materials for both new and renovation projects.

AR 5418 Introduction to Exhibition Design 3 (2-2-5)

Introduction to exhibition design, strategies in designing for exhibitions and trade show booths, various issues ranging from programs space design, conceptual development of a thematic approach, and creation of a presentation system for products, artifacts, or artwork activities as business practices specific to the trade show and exhibit design industry, and the effective use of computer renderings and presentation skills.

AR 5419 Special Topics in History, Theory and Technology in Architecture 3 (3-0-6)

Specialized topics of interest in history, theory and technology of architecture and urbanism.

AR 5420 **Light, Perception and Culture** **3 (3-0-6)**

Influences of lighting design to the human perceptual system and the culture of the times, understanding of how human beings react to and interact within light by exploring contemporary theories of perceptual, somatic, and aesthetic response to light, introduction to psychology of lighting design, and the impact of energy ethics on lighting decisions.

AR 5421 **Landscape Architectural Design** **3 (2-2-5)**
Prerequisite: *AR 3310 Fundamentals of Site and Landscape Planning*

Basic Landscape design, survey landscape design history and theory, landscape planning, styles and modes of landscape design, hardscape and plant materials, presentation techniques, and landscape architectural design project.

AR 5422 **Contemporary Theory and Concept in Architecture** **3 (3-0-6)**

Contemporary architectural theories and concepts, postmodern theories, emphasis on leading architects, analysis and synthesis of architectural thoughts of current world.

AR 5423 **Sustainable Building Design** **3 (2-2-5)**

Principle of the passive and active building design, high performance building, resources and energy management, renewable energy solutions, and various sustainable design applications.

AR 5424 **Introduction to Design-Build** **3 (2-2-5)**

Design research and design thinking methodology on prototype, materials and tectonics, technology and innovative design and construction, construction detail design by hands-on.

ART 0011 **Intensive Drawing** **Non-Credit**

This course introduces basic drawing techniques and is designed to increase direct observation skills. Emphasis is placed on the fundamentals of drawing in relation to scale, proportion and shading. Students work in black media on sketch paper from a variety of subjects to demonstrate basic representational imagery by exploring mark making, value, line and line quality.

ART 1001 **Drawing** **3 (2-2-5)**
Prerequisite : *ART 0011 Intensive Drawing*

Principles of drawing, types of drawing tools and equipment, includes paper types, various medium implementation, shading, and shadowing, scale and proportion, composition preparatory process in the creation of intermediate and advanced art and design work, including a required field trip.

ART 1002 **Dimensional Foundation** **3 (2-2-5)**

Study the terminology of design elements, form relationships, and design principles of 2-dimensional design utilized by all aspects of visual art. Practice on the utilization of each component following basic design principles in visual language and build up design vocabulary and its repertoire, using a wide variety of materials and methods.

ART 1003 **Color Theory** **3 (2-2-5)**

A basic and practical understanding of the principles of color theory in regards to hue, value, saturation, shade and tone, color relationships and schemes as they apply to the visual communication design process. Explore the psychological, perceptual, historical, cultural and symbolic aspects and meanings of color. Develop an understanding of the practical application of color theories, focusing on the interaction and relativity of color, through hands-on experience in a variety of media.

ART 1005 **Painting** **3 (2-2-5)**
Prerequisite : *ART 1001 Drawing*

Introduction to painting and its principles, theory of colors, tools and equipment, types of colors and its characteristics, technique on medium implementation, individual expression under practical and a theoretical understanding, presentation and critique on assignments, including a required field trip.

ART 1006 **3 Dimensional Foundation** **3 (2-2-5)**
Prerequisite : *ART1002 2 Dimensional Foundation*

A continuation from 2-dimensional design principles unfolding into the third dimension. Emphasize on fundamental terminology, concepts, theory, and application. Practice revolves around the principles of three dimensional visual abstractions. Understand the role of dominant, subdominant, and subordinate elements played in 3D form. Explore a variety of processes and materials to assist form and space relationships.

ART 1007 **Figure Drawing** **3 (2-2-5)**
Prerequisite : *ART 1001 Drawing*

Introduction to human anatomy, structures, types of figure drawing including gesture drawing, contour drawing, tonal modeling, shading and shadowing, including life drawing in studio with real observation on nude figures

ART 1208 **Computer Graphics Foundation** **3 (2-2-5)**

Introduction to computer for design, software and hardware, vector and raster-based graphics and its nature, digital file development, principles of graphics design process, techniques and printing options.

ART 1507 **History of Western Art I** **3 (3-0-6)**

An introduction to the history of Western art from prehistoric times to the dawn of the Renaissance emphasizing the place of visual arts in the history of civilization. Examine historical, cultural, religious and social conditions and its impacts on human civilization and artists in society through works of architecture, painting, and sculpture.

ART 1604 **Visual Art Media I** **3 (2-2-5)**
Prerequisite : *ART 1011 Intnsive Drawing*

Explore various traditional media in regards to techniques and effects. Emphasize on drawing and painting tools such as pencil, charcoal, color pencil, pen and ink, chalk, pastel, acrylic, and watercolor. Acquire skills in creating representative, abstract and non-objective image through the use of lines, patterns, shapes, textures, value and colors

ART 1605 **Visual Art Media II** **3 (2-2-5)**
Prerequisite : *ART 1604 Visual Art Media I*

Introduce and expose traditional media used in sculpture, printmaking and mix-media. Learn about methods and processes used in printing — relief, intaglio and silkscreen. Introduce a platform for compositional development, design skills and three-dimensional forms. Give attention to visual thinking, exploration, exposure to the qualities and properties of the materials, techniques and processes.

ART 1608 **Computer Graphic** **3 (2-2-5)**

Train in current software and hardware used in the profession design field. Emphasize on vector and raster based applications through basic computer operations and digital workflow specified for design studio practices. Develop and understanding in basic pre-press practice to output artwork in digital and print format.

ART 1709 **Digital Production** **3 (2-2-5)**
Prerequisite : *ART 1608 Computer Graphic*

Study milestones in printing history and traditional printing methods. Understand processes of popular commercial printing methods. Train how to prepare digital pre-press work and artwork for digital screen output. Learn software related to digital paperless output and prepare files in different formats — PDF, EPUB — as required.

ART 2009 **History of Art** **3 (3-0-6)**

A chronological survey of Western and Eastern arts, classifications and periods of historical significances and their impacts on human civilization from ancient to contemporary art.

ART 2010 **Typography** **3 (2-2-5)**

Learn and develop skills use Roman alphabets as design tools for visual communication. Explore and investigate historical significance and development of art of marks and lettering from ancient civilizations to contemporary culture. Learn basic principles of type and typesetting in relation to function, arrangement, organizing and composing in visual space. Practicing laying out text using a grid system basic.

ART 2021 **Digital Type and Typography** **3 (2-2-5)**

Foundation of typeface and typography that relate to digital field, both printing and on-screen media. Students study and practice how to create and use an appropriate typeface and layout, to make effectively design.

ART 2112 **Illustration** **3 (2-2-5)**
Prerequisite : *ART 1604 Visual Art Media I*

Develop a sense of balancing practical image-making with creative self-fulfillment. Examine various stylistic approaches used in both a commercial and artistic venue. Acquire skills in both traditional and digital application. Learn to deliver comprehensive package by integrating concept, material handling, techniques, creativity, communication, and presentation.

ART 2311 **Photography** **3 (2-2-5)**

An introduction to photography in regards to history, fundamental concepts and techniques of photographic equipment and materials. Develop basic camera operations and photographic composition.

ART 2513 **History of Western Art II** **3 (3-0-6)**

Study works of art from the early Renaissance to present-day. Discuss the development of stylistic movements in relation to significant historical, cultural, religious, technological, and social contexts. Categorize artists, schools, movements and styles by examining and interpreting artists' intentions through the interaction of analytical and creative processes.

ART 2615 **Visualization** **3 (2-2-5)**

Investigate graphic images presented in various styles to serve different needs and clientele. Learn the uniqueness and characteristics of each graphic form. Train in diverse techniques of sketching and rendering, both hand drawn conventional methods and 2D-3D computer generated imaging applications.

ART 3014 **Thai Art** **3 (3-0-6)**

Introduction to works of Thai art from prehistoric settlements to contemporary art scenes emphasizing the places of visual arts in the history of Asian art and culture. Categorize and characterize periods, kingdoms and styles by examining historical, cultural, religious and social conditions and its impact on human civilizations and artistic sensibilities. Study from museums, historical parks and other outdoor venues.

ART 3016 **History of Modern Design** **3 (3-0-6)**

Examine changing developments in graphic design, industrial design, interior design, architecture, fashion, furniture, and decorative arts from early 20th century to the present. Study modern design as an extension of creativity in relation to demand, technology and production, standards, fine arts, economic, social and political impacts, mass culture, and the dynamics of consumption.

ART 3022 **Thai Inspiration** **3 (2-2-5)**

Inspirations of Thai arts, culture, folks, crafts, architecture and lifestyle, the course encourages students to get inspiration and apply those inspirations for research and report, individual or group assignments, to make a simple design works. The excursion will be organized for students in order to study from existing site such as temple, museums, historical site, local market, etc.

ART 3117 **Internship** **3 (160 hours)**
Prerequisite: *A portfolio review as required by the program*

Professional practice in an organization that provides an apprenticeship both in design and business for 160 working hours with a satisfactory performance evaluated by the organization supervisor.

ART 3718 **Folk Art in South East Asia** **3 (3-0-6)**

Survey the development of handicraft in Southeast Asia region through a historical, economic, social and cultural perspective. Explore local and authentic craft heritage in textile, earthenware, woodcraft and metal smith. Learn to appreciate and value local wisdom and innovation. Explore and engage in field surveys of local communities, museums and galleries.

ART 3720 **Time Base Media** **3 (1-4-4)**
Prerequisite : *ART 1608 Computer Graphic*

Study the impact and characteristics of temporal conditions in creating visual messages for communication. Train in video camera operation, lighting, scene set-up and cinematography. Learn basic video editing, composite still text and images, along with video and sound clips. Render video with required formats used in professional practice.

ART 3721 **Interactive Media** **3 (1-4-4)**
Prerequisite : *ART 1608 Computer Graphic*

Learn to create and assess different strategic layering of interactive content in regards to framework, functionality, hierarchy, accessibility, navigation and user experiences. Understand on-demand temporal sequencing. Practice and experiment with Content Management System website creation. Prepare and integrate multimedia content with device dependence optimization.

ART 3922 **Basic Drawing** **3 (2-2-5)**

Introduce basic techniques needed for the fundamentals of drawing. Explore visualizing the physical world with formal elements and techniques in line, contour, form, light and shade, texture, value and perspective in representing still life's and other subjects. Graphic media used includes pencil, charcoal, pen and ink.

ART 3923 **Thai Painting** **3 (2-2-5)**

Study the basic Thai motifs and patterns through painting techniques of Lai Thai in various periods. Explore traditional processes to contemporary media, while examining Thai styles applied to fashion, product design, interior design and decorative art. Understand concepts and themes of Thai traditional painting through historical context.

ART 3924 **Print Making** **3 (2-2-5)**

Introduce basic printmaking methods of relief print, intaglio and serigraphy. Learn different techniques from various traditional printmaking processes such as monoprint, letterpress, wood cut, wood engraving or screen printing. Experiment with numerous printing materials and substrate. Explore ideas and possibilities to carry works forward to computer incorporated imagery for graphic design.

ART 3925 **Creative Photography** **3 (2-2-5)**

Learn the art of capturing image in a fun, curious and experimental way. Explore various styles of digital photo taking both in color and in black and white. Incorporate design principles, traditional photography techniques with digital post processing software to attain desirable look and feel. Use an art criticism process to evaluate, explain and measure artistic growth.

ART 4019 **Aesthetics** **3 (3-0-6)**

Study different ideologies of philosophers' viewpoints in sensory experiences distinctively to art, beauty and human conditions from classical period to the 20th century. Reconstruct the philosophical, historical, cultural, and institutional significances that enabled the emergence of both art and its appreciation as an intellectual expression. Apply critical thinking based on sounded judgment from different perspectives in issues pertaining to art and design both globally and locally.

ART 4926 **History of Asian Art** **3 (3-0-6)**

Survey the evolution and expansion of the material culture and artistic production in India, China, Japan, Korea, and Southeast Asia, from antiquity to contemporary art. Discuss and focus on works of paintings, sculpture, calligraphy, architecture, monuments and artifacts in a variety of media. Examine historical, political, religious, social, and visual aspects of the art, while considering themes such as art forms, techniques, patronage, relationships of Asian traditions, modernity and tradition, and ideas of representation in Asia.

BG 0008 **General Chemistry Laboratory** **1 (0-3-2)**
Prerequisite or Co requisite : BG 1108 General Chemistry

Experiments to be done according to BG 1108 General Chemistry

BG 1001 **English I** **3 (2-3-6)**

Lower intermediate academic English, with activities to foster reading, writing, listening and speaking skills in English through communicative activities in a meaningful academic context.

BG 1002 **English II** **3 (2-3-6)**
Prerequisite : *BG 1001 English I*

Intermediate academic English, reinforcing fluency and grammar with task-driven oral and writing exercises, developing vocabulary and sentence writing skills with combined reading comprehension exercises and writing practice.

BG 1108 **General Chemistry** **3 (3-0-6)**

Stoichiometry and basis of the atomic theory; properties of gas, liquid, solid and solution; chemical equilibrium; ionic equilibrium; chemical kinetic; electronic structures of atoms; chemical bonds; periodic properties; representative elements; nonmetal and transition metals.

BG 1204 **Calculus I** **3 (3-0-6)**

Function, limits, continuity, differentiation, integration, introduction of numerical computation, formula for interval approximation, differentiation and line integration, surface integration and volume integration, infinite series, Fourier series and integrals.

BG 1205 **Calculus II** **3 (3-0-6)**
Prerequisite : *BG 1204 Calculus I*

Space vectors, matrices and determinants, linear analytic geometry, differential calculus of multivariable functions, vector analysis, linear integrals, surface integral and volume integrals.

BG 1211 **Physics I** **3 (3-0-6)**

Mechanics of particles and rigid Bodies, properties of matters, fluid mechanics, heat, vibrations, waves.

BG 1212 **Physics Laboratory I** **1 (0-3-2)**
Prerequisite or Co-requisite : BG 1211 Physics I

Experiments to be done according to BG 1211 Physics I.

BG 1213 **Physics II** **3 (3-0-6)**
Prerequisite : *BG 1211 Physics I*

Elements of electromagnetism; alternating current (A. C.) circuits; fundamental electronics; optics; modern physics.

BG 1214 **Physics Laboratory II** **1 (0-3-2)**
Prerequisite or Co-requisite : BG 1213 Physics II

Experiments to be done according to BG 1213 Physics II

BG 1221 **Computer Programming** **3 (3-0-6)**

Computer concepts; computer components; Hardware and software interaction; Current programming language; Programming practices.

BG 1301 **Fundamentals of Statistic** **3 (3-0-6)**

Descriptive statistics, probability theory and inferential statistics, summarizing of data in tables and graphs, computation of descriptive statistics, rules of probability, probability distributions, confidence interval estimate of population parameters, hypothesis testing and simple linear regression.

BG 1400 **Business Law I (Civil & Commercial)** **3 (3-0-6)**

Legal principles and practices of civil and commercial laws, fundamental principles of law, legal relationship between persons, nature of law, definition, types, interpretation, application, and cancellation of law and the judicial system, law on persons, types and capacity of persons, things, property, movable and immovable property, juristic acts, contract, obligation, torts, prescription, specific contracts e.g. purchase and sell contract, exchange, gift, hire of property, hire-purchase, hire of works, hire of services, carriage, loan, deposit, surtyship, mortgage, pledge, agency, brokerage, and insurance.

BG 1401 **Business Law II (Partnership & Company)** **3 (3-0-6)**
Prerequisite : *BG 1400 Business Law I*

Law of juristic person namely partnership and limited company, relationship among partners, shareholders and third person, establishment, management, auditing, increasing and decreasing of registered capital, dissolution and liquidation, relationship with the commercial bank concerning the bill of exchange, promissory note, cheque, and other legal instruments.

BG 2000 **English III** **3 (3-3-7)**
Prerequisite : *BG 1002 English II*

Advanced English for academic and career purposes, emphasizing organization of ideas and clarity of expression and understanding.

BG 2001 **English IV** **3 (3-3-7)**
Prerequisite : *BG 2000 English III*

Advanced English for academic and career purposes, emphasizing critical and analytical skills, and formulating logical and coherent opinions.

BG 2207 **Engineering Mathematics** **3 (3-0-6)**
Prerequisite : *BG 1205 Calculus II*

First-order and higher-order ordinary differential equations, difference equations, functions of complex variable and their applications in engineering.

BG 2208 **Discrete Mathematics** **3 (3-0-6)**

Teachings of major world religions, the role of conscience, self-development in the moral arena, building self-esteem, self-knowledge, and good habits, distinguishing the right from the wrong, doing the right and refraining from the wrong, attaining a more fulfilling life.

BG 2209 **Statistics for Engineers** **3 (3-0-6)**
Prerequisite : *BG 1204 Calculus I*

Sets and probability, random variables, probability distribution, continuous and discrete models, parameters approximation, reliability range, hypothesis tests, regression and linear correlation.

BG 2212 **Applied Statistics** **3 (3-0-6)**
Prerequisite : *BG 1204 Calculus I*

Sets and probability, random variables, probability distribution, continuous and discrete models, parameters approximation, reliability range, hypothesis tests, regression and linear correlation.

BG 2301 **Information Technology for Nurses** **2 (1-3-4)**

Application of current information technology to healthcare and nursing services, the specific applications or programs in the clinical information system, computer based patient record and the advantages of utilizing nursing informatics in clinical management, administration, education, and research.

BIS 1141 **Business Software Applications** **0 (0-1-1)**

Training of students how to use various software packages for personal and business applications with emphasis on word processing, electronic spreadsheet, Internet applications, and presentation tools.

BIS 2180 **Information Technology** **3 (3-0-6)**

Types of information technology including system unit, I/O devices, storage devices, communications devices, software, data and information processing, functions and their applications in businesses.

BIS 3315 **Programming and Algorithms** **3 (2-2-6)**
Prerequisites : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Concepts in programming based on selected programming languages, essential programming tools, logics and algorithms, as well as program coding and debugging.

BIS 3340 **Computer Tools in Research** **0 (0-1-1)**
Prerequisites : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Training of how to use statistical software tools to conduct research including data collection, processing and presentation, and software analytical features.

BIS 3348 **Principles of Multimedia** **3 (2-2-6)**
Prerequisite : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Introduction to the theories and concepts of various multimedia types: image, audio, video and animation. The basic issue of creating and editing multimedia with the tools and techniques of digital media application programs will be covered. Students will learn both the aesthetic and technical aspects of multimedia design.

BIS 3587 **Principles of Electronic Commerce** **3 (3-2-5)**
Prerequisites : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Principles of electronic commerce with emphasis on how to establish electronic commerce together with its necessary mechanism, HyperText Markup Language (HTML), web-developing tools, multimedia, skills and techniques in implementation of e-commerce, and multimedia concepts.

BIS 3617 **Web Design and Programming** **3 (2-2-6)**
Prerequisite : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Design and management of websites for electronic business applications, aligning electronic business models with website designs, planning a website, programming for website, using web development and design tools, and evaluating website effectiveness.

BIS 3635 **Database Systems** **3 (2-2-6)**
Prerequisite : *BIS 1141 Business Software Applications*
BIS 2180 Information Technology

Data models with focus on relational database systems and design through entity-relationship diagram and normalization, database management system (DBMS), query, integrity and security of database.

BIS 3666 **Information Systems Analysis and Design** **3 (3-0-6)**
Prerequisite : *BIS 3635 Database Systems*

Methodical approach that emphasizes on analysis of the existing systems with business flow diagrams using the strategies, tools and techniques of system analysis and design, conducting feasibility study to design interfaces.

BS 1001 **General Chemistry** **3 (3-0-6)**

Fundamental chemistry including atomic theory and electronic structure of atom, bonding theory, stoichiometry, periodic table as a survey of representative and transition elements and periodic properties, gas and kinetic theory of gas, acids/bases chemistry including acid base chemical equilibrium, oxidation-reduction and basic thermodynamics.

BS 1002 **General Chemistry Laboratory** **1 (0-3-1)**

Prerequisite or co-requisite : BS 1001 General Chemistry

Safety in laboratory and use of basic chemical instrument, experimentation techniques in measurement and accuracy, molecular structure, chemical reactions, determination of pH of solution and titration, relative quantity, colligative properties of solution, techniques and basic theory in qualitative analysis.

BS 1005 **Principles of Biology** **3 (3-0-6)**

Life, prokaryotic and eukaryotic cell structure and functions of organelle in the cells, cell division, and gamete production, pattern of inheritance, gene expression, energy and photosynthesis, animal cells and plant cells, ecology, behavioral science and evolution.

BS 1006 **Biology Laboratory** **1 (0-3-1)**

Prerequisite or co-requisite : BS 1005 Principles of Biology

Laboratory corresponding to BS 1005 Principles of Biology, general concepts of microscope usage, plant and animal cell structure, somatic cell division including the production of reproductive cells, energy and photosynthesis.

BS 1007 **Organic Chemistry** **3 (3-0-6)**

Fundamental theories of organic chemistry involving the classification of organic compounds according to their functional groups, nomenclature and structure, reactions of organic molecules including synthesis and reaction mechanisms.

BS 1008 **Organic Chemistry Laboratory** **1 (0-3-1)**

Prerequisite or co-requisite : BS 1007 Organic Chemistry

Safety in laboratory and use of apparatus, physical characteristics of organic substances including melting point, boiling point, solubility, and analytical techniques of organic substances, separation, purification, and techniques used for the identification of functional groups in organic compounds.

BS 1009 **Organic Chemistry** **3 (3-0-6)**

Introduction to the structures and chemical bonds of carbon compounds, nomenclature, types of organic reactions, free radical reactions, ionic reactions, stereochemistry, hydrocarbon compounds, benzene and benzene derivatives, alcohols, ethers, epoxides, aldehydes, ketones, carboxylic acids and carboxylic acid derivatives, phenol compounds, amines and azo dyes.

BS 1010 **Organic Chemistry Laboratory** **1 (0-3-1)**

Prerequisite or Corequisite : BS 1009 Organic Chemistry

Fundamental practice in organic chemistry concerning the properties organic compounds, separation or extraction, purification, distillation, significant tests for functional groups.

BS 1101 **Calculus I for Bioscience** **3 (3-0-6)**

Changing of value with respect to factors, differentials, second and higher order differential, and basic differentiation, basic integration, definite and definite integration, and higher order integration, applications of basic calculus, sketching the curves, optimization, surrounded area by curves, volume of geometrics and calculus questions.

BS 1103 **Calculus for Bioscience** **3 (3-0-6)**

Changing of value with respect to factors, differentials, second and higher order differential, basic differentiation, basic integration, indefinite and definite integration, higher order integration, applications of basic calculus, i.e. sketching the curves, optimization, surrounded area by curves, volume of geometrics and calculus questions, multivariable function, changing of value of multivariable function with respect to factors, chain rules for multivariable function, partial derivative and its application; 3-D geometrics function by rectangular coordinate, cylindrical coordinate and spherical coordinate; evaluation of the area and volume of those 3-D geometric shapes

BS 1201 **Physics for Bioscience** **3 (3-0-6)**

Basic knowledge of physics including units, vector, force and motion, Newtonian motion, work and energy, conservation of energy and momentum, fluids mechanics, internal energy and fundamental heat transfer, thermodynamics, waves and sound, electricity and magnetism, light and color and introduction to advance physics for bioscience.

BS 1202 **Physics Laboratory for Bioscience** **1 (0-3-1)**
Prerequisite or Corequisite : BS 1201 Physics for Bioscience

Laboratory course corresponding to BS 1201 Physics for Bioscience.

BS 2004 **Analytical Chemistry** **1 (0-3-1)**
Prerequisite : *BS 1001 General Chemistry*

Quantitative chemical analysis, steps involved in the preparation and analysis of a sample, analysis techniques using gravimetric and volumetric methods, especially, acid-base titration, precipitation titration, redox titration as well as spectroscopy methods.

BS 2005 **Analytical Chemistry Laboratory** **1 (0-3-1)**
Prerequisite or co-requisite : BS 2004 Analytical Chemistry

Chemistry analysis exercises emphasized on quantitative chemical analysis of chemical samples by combining theories and techniques, including chemical sample preparation and analysis techniques using gravimetric and volumetric methods, especially acid-base titration, precipitation titration, redox titration technique.

BS 2006 **Basic Biochemistry** **3 (3-0-6)**
Prerequisite : *BS 1007 Organic Chemistry*

Structure, function and metabolism of biomolecules including carbohydrates, lipids, amino acids, protein and nucleic acids, characteristics, classification and functions of proteins, enzymes and vitamins, the introduction to gene regulation and genetic engineering.

BS 2007 **Basic Biochemistry Laboratory** **1 (0-3-1)**
Prerequisite or co-requisite : BS 2006 Basic Biochemistry

Laboratory corresponding to BS 2006 Basic Biochemistry, preparation of buffers, analysis of biomolecules properties, use of laboratory equipment and instruments.

BS 2008 **Physical Chemistry** **3 (3-0-6)**
Prerequisite : *BS 1001 General Chemistry*

Unit conversions, physical properties of gas and kinetic theory of gas, energy and work, the first law of thermo-dynamics, entropy, the second and third laws of thermodynamics, free energy and applications of thermodynamics.

BS 2011 **Introduction to Microbiology** **3 (2-3-5)**
Prerequisites : *BS 1005 Principles of Biology and*
BS 1006 Biology Laboratory

Overview of microbiology in both theoretical and practical aspects, eukaryotic and prokaryotic microorganisms, viral biology, growth and metabolisms of microorganisms, microbial genetic, classification and identification of microbes, roles of microbes to human, environment and in the industries, and corresponding laboratory sessions.

BS 2013 **Engineering Drawing for Bioscience** **1 (0-3-1)**

Drawing techniques, lettering, geometric construction, orthographic projection, dimensioning and section view, and isometric view.

BS 2014 **Genetics and Its Food Application** **3 (2-3-5)**
Co-requisite : *BS 2011 Introduction to Microbiology*

Principles of classical genetics, Mendel's principles, exception of Mendel, chromosome mapping, molecular genetics which includes the structure and functions of DNA, extrachromosomal inheritance, central dogma, control of gene expression, evolutionary genetics, and quantitative and qualitative genetics. Introduction to genetically modified (GM) foods and its safety, detection of genetic contaminants using PCR and other food applications along with corresponding laboratory sessions.

BS 2015 **Analytical Chemistry Laboratory** **1 (0-3-1)**
Prerequisite or Corequisite : BS 2014 Analytical Chemistry

Chemistry analysis practices emphasizing on quantitative chemical analysis of chemical samples by combining theories and techniques, including chemical sample preparation and analysis techniques using gravimetric and volumetric methods, especially acid-base titration, precipitation titration, redox titration technique and spectroscopy.

BS 2016 **Basic Biochemistry Laboratory** **1 (0-3-1)**
Prerequisite or corequisite : BS 2006 Basic Biochemistry

Qualitative and quantitative analysis of biomolecules, including, carbohydrates, lipids, proteins, nucleotides and enzymes.

BS 2017 **Genetics** **3 (2-3-5)**
Prerequisite or Co-requisite : BS 2011 Introduction to Microbiology

Principles of classical genetics, Mendel's principles and exception of Mendel, sex determination, sex linkage and chromosome mapping, molecular genetics which includes the structure and functions of DNA, DNA replication, transcription, translation, control of gene expression and extrachromosomal inheritance, study of evolutionary genetics, quantitative and qualitative genetics, selection and breeding of microorganisms, genetics related to microbes, and corresponding laboratory sessions.

BS 2018 **Engineering Drawing for Bioscience** **1 (0-3-1)**

Basic and standard of drawing, lettering, applied geometry, theory and technique of orthographic drawing, pictorial drawing, dimensioning, section view, plant layout and assembly drawing

BS 4001 **Ecology, Conservation and Environmentalism** **3 (3-0-6)**
Prerequisite : *BS 1005 Principles of Biology*

Biological productivity in ecosystem and limiting productivity and perturbation, interaction between species, factors in population growth and the ecological balance, protection activities of the environment from pollution or destruction concerning conservation, improvement and sustainability of natural resources.

BT 2011 **Introduction to Biotechnology** **3 (3-0-6)**
Prerequisite : *BS 2006 Basic Biochemistry or*
Co-requisite : *BS 2011 Introduction to Microbiology*

Introduction and historical perspective of biotechnology, the relationship between traditional biotechnology and modern biotechnology, examples of application drawn from agriculture, medicine, and molecular biotechnology, commercial dimension of the discipline of biotechnology in market place.

BT 3015 **Industrial Fermentation** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Selection of microbial culture, and the use of microorganism for the production of industrial products, food products, enzymes, antibiotics and organic compounds, cultural improvement, emphasizing on the metabolic regulation of the pathways that generate fermentation products from yeast and other microbial fermentations, and genetic manipulation of industrial microorganisms, and corresponding laboratory sessions.

BT 3016 **Enzyme Technology** **3 (2-3-5)**
Prerequisite : *BS 2006 Basic Biochemistry*

Structure and functions of enzymes, including enzyme kinetics, regulation and inhibition, effect of pH and temperature, production and extraction of enzymes by means of mechanical, physical or chemical disruption of plant, animal or microbial cells, techniques such as purification, immobilization and isolation of enzymes as catalysts, and corresponding laboratory sessions.

BT 3017 **Principles of Research** **3 (3-0-6)**

Introduction to research methodology, experimental design, hypothesis generation, literature review, collection and analysis of the data, use of spread sheet packages to perform statistical analysis, summarizing and writing a research report, presentation, and ethical principles of a researcher.

BT 3018 **Genetic Engineering** **3 (2-3-5)**
Prerequisites : *BS 2006 Basic Biochemistry*
BS 2007 Basic Biochemistry Laboratory
BS 2012 Genetics or BS 2014 Genetics and Its Food Application

Molecular biology and techniques of genetic engineering, application of enzymes, vectors, and host gene isolation, detection of recombinant genes, strategies of gene cloning, genomic libraries, cDNA synthesis, gene identification, application of genetic engineering, ethical issue in genetic engineering, and corresponding laboratory sessions.

BT 3019 **Principles of Research** **3(3-0-6)**

Introduction to research methodology, experimental design on analysis of variance and multiple comparison tests, completely randomized, randomized block and latin square designs, factorial experiment, split plot design, analysis of covariance, hypothesis generation, literature review, collection and analysis of data, use of spread sheet packages to perform statistical analysis, summarizing and writing a research report, presentation, and ethical principles of a researcher.

CA 1001 **Introduction to Communication** **3 (3-0-6)**

Principles of communication, definition and types of communication, including principles of intrapersonal communication, interpersonal communication, small group communication, public communication and mass communication.

CA 1002 **Introduction to Photography and Cinematography** **3 (2-2-5)**

Basic theories and practice of photography and cinematography, uses of equipment, composition, principles of setting, types of lens through the applications in digital photography. Students will be assigned to create photographs suitable for various types of communication.

CA 1021 **Introduction to Advertising and Branding** **3 (3-0-6)**

Theories in advertising and branding, basic principles of advertising and branding, role of advertising and branding, products and services to consumers, analysis of products, markets and consumers. The course also covers process of the media selection, judgment of executions for advertising and branding, function and services of advertising and branding agency, including ethics and responsibility in the professions.

CA 1022 **Introduction to Public Relations** **3 (3-0-6)**

Basic principles of public relations, process of public relations, target group and equipment in public relations work, characteristics of public relations in organizations, such as business organizations, government departments and public charity organizations, including ethics for public relations.

CA 1023 **Introduction to Live Event Creation and Management** **3 (2-2-5)**

Basic principles and the process of communication through live shows, event and performance, etc. including work flow, personnel and job allocation needed in putting up live show as well as considerations to be made for a stage and a broadcast.

CA 1024 **Introduction to Digital Media Communication** **3 (2-2-5)**

The course addresses the influential histories of communications media and technological development, focusing on the shift from analog to digital practices and cultures that began mid-century and continues to the present, the development of motion picture, radio, television and new media, general program production, function and relationship between different personnel involved, including basic production of digital media projects.

CA 1025 **Computer Graphic Design** **3 (2-2-5)**

This course covers the basic concept of 2D computer graphic and how to transfer sketches to a computer such as designing an icons, vector and raster poster. Basic computer hardware, color theory and typography will be included into this course as well. Students will use standard computer and graphic software to reinforce communication skills

CA 2003 **Presentation Technique** **3 (2-2-5)**

Various techniques in presentation, public speaking and the use of audio-visual equipment in presentation to help students develop communication skills.

CA 2013 **Utilization of Multimedia Tools** **3 (2-2-5)**
Prerequisite : *MKT3102 Integrated Marketing Communication (For Marketing students)*

Strategies to use broadcast and multimedia applications for communication to get students familiar with multimedia tools and various computer applications for creation of communication materials.

CA 2019 **Communication Arts Research** **3 (3-0-6)**
Prerequisite : *BG 1203 Fundamentals of Statistics*

Principles and methods of research process, framework, and methodology, including application of methods in research for development of projects in communication campaign.

CA 4010 **Law and Ethical Concerns for Communication** **3 (3-0-6)**

Freedom, rights, duties, responsibilities and ethical considerations of communication professionals, libel law, printing regulation, copyright law, advertising regulations and self-regulations, telecommunication and broadcasting regulations, internet regulations, rating and censorship of entertainment materials.

CE 2102 **Data Structures and Algorithms** **3 (3-0-6)**
Prerequisite : *BG1221 Computer Programming*

Various type of data structures, e.g., array, string, stack, queue, dequeue, tree, binary tree, B-tree, AVL – tree; data searching and sorting, storage allocation; coding; table handling.

CE 2103 **Object-Oriented Programming** **3 (3-0-6)**
Prerequisite : *BG1221 Computer Programming*

Object-oriented software coding paradigm and implementation through hands on experience using a cross platform compiler. Basic syntax, data structures, operators, loops, functions, arrays, strings, pointers. Class design, Object instances, data encapsulation (public, private, protected), operator overloading, pass by reference/value, use of inheritance and interfaces, using polymorphism with up/down casting, applying abstraction in the design process separating code into interface and implementation.

CE 2104 **Software Design and Development** **3 (3-0-6)**
Prerequisites : *CE 2103 Object-Oriented Programming*

Software design principles and practices; design patterns; software reuse; testing; event driven programming and concurrency; graphical user interface design and development; Team development.

CE 2703 **Introduction to Computer Systems** **3 (3-0-6)**

Digital computer organization, memory unit, input-output device units, A/D conversion, D/A conversion, computer interface, procedure control, multiutilization, multiprogramming, multiprocessing, on-line computer systems, processing program, system design.

CE 2704 **Digital Logic Design** **3 (3-0-6)**
Prerequisites : *BG 1213 Physics II*
BG 2208 Discrete Mathematics

Number system; logic combination: logic systems and Boolean algebra, comparator; Karnaugh map, tabulation method; combination logic circuit: adder, subtract, multiple output circuits, encoder, decoder, multiplexer, demultiplexer, ROMD, sequential circuits: synchronous and asynchronous circuits, flip-flops, counter circuits, registers.

CE 2705 **Digital Logic Design Laboratory** **1 (0-3-2)**
Prerequisite or Co-requisite : CE 2704 Digital Logic Design

Experiments on the designs of Gate, digital and switching circuits; interconnection of logic modules, counter, control circuits, arithmetic units, memories and small computer circuits.

CE 2709 **Computer Architecture** **3 (3-0-6)**
Prerequisite : *CE 2703 Introduction to Computer Systems*
CE 2704 Digital Logic Design

Architecture of a general-purpose computer, design methodology, basic concepts of computer control, memory hierarchies, input-output organization, advanced computer architecture.

CE 3001 **Commercial Application Programming** **3 (3-0-6)**
Prerequisite : *CE 2101 Introduction to Data Structure*
or CE 2102 Data Structure and Algorithms

Language fundamentals, Library IDE (Integrated Development Environment) and high-level languages used in developing a commercial application.

CE 3003 **Mobile Applications Development** **3 (3-0-6)**
Prerequisite : *CE 2103 Objet-Oriented Programming*

Principles of mobile application design and development including mobile application development life-cycle, tools and frameworks for development, user interface design, user

CE 3103 **Computer Operating Systems** **3 (3-0-6)**
Prerequisites : *BG 1205 Calculus II*
CE 2101 Introduction to Data Structures
or CE 2102 Data Structures and Algorithms

Components and types of operating systems, command interpreter, management of main storage, file storage, data management, I/O management, device management; resource protecting; freestanding systems, disk operating systems, real-time operating systems, multiprocessor operating systems.

CE 3104 **Software Engineering** **3 (2-3-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Software design techniques; problem definition; function design; modular program; program design; hierarchy input and output process; detailed design; decision tables; pseudo code; debugging test data; software reliability; software maintenance; design and development of large scale software.

CE 3105 **Microprocessor Programming Using Assembly & C** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Computer architecture, operation and instruction; programming languages; assembly language programming; arithmetic programs; loops and arrays; mnemonic operations; subroutines; characteristic and operation of assemblers, interfacing assembly with the high-level language (C language), using C to interact with hardware.

CE 3106 **Programming Languages** **3 (3-0-6)**
Prerequisites: CE 2101 Introduction to Data Structures
or CE 2102 Data Structures and Algorithms
HTM 3102 Introduction to Tourism Management

Definition of language including specification of syntax and semantics; programming techniques of selected modern languages; language structures; data types; run-time environment.

CE 3109 **Database Management Systems** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Models and theories of database design: hierarchical, network, and relational/non-relational models; data description languages and relational query languages; query facilities, data integrity and file security; related database technologies such as XML, JSON, and noSQL databases.

CE 3111 **Sales PromotionDesign and Analysis of Algorithms** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Techniques of design and analysis of algorithms for internal and external sorting, searching and margins; NP-hard problems.

CE 3707 **Microprocessor Systems Design** **3 (3-0-6)**
Prerequisite : *CE 2709 Computer Architecture*

Microprocessor architecture; control unit; memory; input-output units; microprocessor construction; registers; index and stack pointers; addressing modes; interfacing techniques (RAM, ROM, ...); micro-processor programming.

CE 3901 **Digital Audio/Video Coding Technique** **3 (3-0-6)**

Basics technique of audio/video encoding.

CE 4002 **Introduction to Broadcasting Technology** **3 (3-0-6)**
Prerequisite : *CE 4228 Data Communication and Networking*

Current technology using in the broadcasting technology e.g. Broadcasts protocol, video editing technology.

CE 4108 **Operations Research** **3 (3-0-6)**
Prerequisite : *BG 2207 Engineering Mathematics*

Scientific methods of operations research, linear programming, dynamic programming, game theory, queuing theory, simulation, and applications of these techniques to industrial operations.

CE 4109 **Information Systems Analysis and Design** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Data and information; data processing system; information system design; data storage and data classification; error detection; file and form design, sequential, indexed, VSAM, ISAM.

CE 4110 **Compilers** **3 (3-0-6)**
Prerequisite : *CE 3106 Programming Languages*

Programming language structures; compiling systems, lexical analysis, syntax and semantics analysis, parsors, symbol table, error diagnostics and recovery, code generation, examples of typical compilers.

CE 4114 **Data Mining** **3 (3-0-6)**
Prerequisite : *CE 3109 Database Management Systems*

Fundamental concepts of data mining; data mining methodologies; classification; association rules; clustering.

CE 4201 **Image Processing and Computer Vision** **3 (3-0-6)**
Prerequisites : *CE 1100 Computer Programming for Engineer*
or BG 1220 Fundamental of Computer Processing
or BG 1221 Computer Programming or Equivalent

Introduction to digital image processing including such topics as digital image representation, analysis of images represented in different formats, edge detection, image segmentation, object recognition, motion analysis.

CE 4207 **System and Network Programming** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Syntax and semantics of C++ applied to object oriented programming concept of abstract data type, classes, data hiding, polymorphism and inheritance. General introduction to UNIX operating system and UNIX file system, and use of UNIX system calls in C++.

CE 4221 **Network Applications and Technology** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms

Internet/Intranet technologies, Web technologies, protocols, and applications including HTML, JavaScripts, modern scripting languages OGL, Java, Web Services, REST, XML, JSON, relational and nonrelational databases, security, Internet engineering effort, parameters of the technical Internet/Intranet environment, contributing technologies of today's Internet/Intranet, emerging Internet's applications and technologies.

CE 4223 **Advanced Computer Networks** **3 (3-0-6)**
Prerequisites : *CE 4222 Computer Networks*
or CE 4228 Data Communications and Networking

Hardware and software organization for computer communication networks, using the 7-layer Open System Interconnection Reference Model and IP protocol suite as a basis for study, typical designs for computer network protocols from the hardware through the communications software and application software levels, using LAN, TCP/IP and OSI protocols as examples including internetworking concept and technology.

CE 4224 **Telecommunication Network Laboratory** **1 (0-3-2)**
Prerequisite : *Completion of 90 Credits*

Setup and test LAN network (Ethernet), install and setup the Network Operating System, window NT, Novell NetWare, and UNIX, including network management system, network printer, file transfer etc. Setup and operate Internet Server and Client.

CE 4225 **Computer and Network Security** **3 (3-0-6)**
Prerequisites : *CE 4222 Computer Network*
or CE 4228 Data Communication and Networking

Security technique for both network and database. Cryptography technique; concept, scheme, secret key; public key, Hash algorithm, authentication and digital signature. Firewalls, World Wide Web security, and Internet security protocol are discussed in details in both theory and practice.

CE 4226 **Network Systems Analysis and Design** **3 (3-0-6)**
Prerequisites : *CE 4222 Computer Networks*
or CE 4228 Data Communications and Networking

Analysis and design of networks; methods to analyze the existing networks, redesign the existing network or design and evaluate the network; queuing theory, traffic analysis, security, reliability, availability and flexibility.

CE 4227 **Mobile and Wireless Networks** **3 (3-0-6)**
Prerequisites : *CE 4222 Computer Networks*
or CE 4228 Data Communications and Networking

Wireless communication system; theory, principle of mobile communication system; characteristic and impact of radio propagation; modulation techniques; speech coding; diversity channel coding; multiplexing technique; interconnection components for mobile communication system; standards of current mobile communication, 3G, 4G, 5G and beyond; cellular systems: multiple access and interference management, capacity of wireless channels, multiuser capacity; MIMO system; wireless data networks with an emphasis on protocols above the physical layer.

CE 4228 **Data Communication and Networking** **3 (3-0-6)**
Prerequisites : *TE 3000 Principles of Communications*
or TE 3003 Fundamental of Communication Systems

Introduction to data communications and networks; layered network architecture; point-to-point protocols and links; delay models in data networks; medium-access control protocols; flow control; error control; local area network; switching network; routing in data networks; network security; cloud network, architecture and system; standards.

CE 4229 **Introduction to Cloud Computing** **3 (3-0-6)**
Prerequisites : *CE 4222 Computer Networks*
or CE 4228 Data Communications and Networking

Introduce the concepts of Cloud Computing as new computing paradigm. The course will expose students with various terminology, principles, and applications. Also, students will learn technological aspects of distributed systems and databases, virtualization, data parallelism, performance analysis, cloud services, networking, and security.

CE 4301 **Fundamental of Internet of Things** **3 (3-0-6)**
Prerequisites : *CE 4221 Network Applications and Technologies*
EE 3705 Microprocessors and Microcontrollers

Introduction to the Internet of Things (IoT) including microcontroller or microprocessor based systems that can control physical world; key components of IoT and networking; full stack software development; IoT design considerations and constraints; interfacing between devices and physical world.

CE 4302 **Introduction to Big-Data** **3 (3-0-6)**
Prerequisites : *CE 3109 Database Management Systems*

Big data analysis, tools, and techniques; Management of structured and unstructured data; Processing and Querying large data sets.

CE 4713 **Advanced Computer Architecture** **3 (3-0-6)**
Prerequisite : *CE 2709 Computer Architecture*

Microcomputer, minicomputer and mainframe architectures; computer systems organizations pipeline processors, stack, multi-processors.

CE 4714 **Fault-Tolerant Computer** **3 (3-0-6)**
Prerequisite : *CE 2704 Digital Logic Design*

Maintainable and diagnosable design techniques; test generation algorithms; Boolean difference; simulation for design verification; self-checking logic circuits; error detection and correction codes; redundancy techniques; design of simplified testing.

CE 4715 **Artificial Intelligence** **3 (3-0-6)**
Prerequisites : *CE 2101 Introduction to Data Structures*
or CE 2102 Data Structures and Algorithms
CE 2703 Introduction to Computer Systems

Intelligent Agents, Problem solving by searching, DFS, BFS, A* search, Greedy search, proposition logic, first order logic, forward chaining backward chaining, basic probability and Bayesian logic, Fuzzy logic, Decision networks, learning: Supervised learning, theory of learning, neural networks, support vector machines, machine language translation and visual perception.

CE 4901 **Computer Engineering Project I** **1 (0-3-2)**
Prerequisite : *Completion of 100 credits*

Study and development of project in Computer and Network Engineering. Students must submit reports at the end of the semester.

CE 4902 **Computer Engineering Project II** **2 (0-6-3)**
Prerequisite : *CE 4901 Computer Engineering Project I*

Continuation of project done in Computer Engineering Project I. Report is also required at the end of the semester.

CE 4903 **Advanced Topics in Computer Engineering** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Topic of current interest and new developments on computer engineering.

CE 4904 **Special Problems in Computer Engineering** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Investigation of special problems assigned by the instructor with the consent of the Faculty; a written report is required.

CE 4907 **Computer Engineering Industrial Training** **3 (0-9-6)**
Prerequisite : *Consent of the Chairperson*

Student needs to apply for internship from Company that dealing in Computer Engineering field. Student need to submit a report regarding their duty assigned to the responsible faculty.

CEL 1101 **Sight Reading Lab I** **1 (0-2-1)**

Introductory lab for musicians to further develop listening skills, reading notation, concepts of rhythm, intervals, chord changes, time-feels, and grooves applied to singing rhythms and pitches simultaneously; sight-reading which include lead sheets, sheet music, and specific arrangements

CEL 1102 **Sight Reading Lab II** **1 (0-2-1)**
Prerequisite : *CEL 1101 Sight Reading Lab I*

A continuation of Sight Reading Lab I. Additional concentration on singing on chordtones, seventh chords, minor chords, and modes in different time-feels and grooves

CEL 1651 **Jazz Ensemble I** **1 (0-2-1)**

Live performance workshops providing development of ensemble techniques, improvisational skills and building repertoire in jazz styles.

CEL 1652 **Jazz Ensemble II** **1 (0-2-1)**
Prerequisite: *CEL 1651 Jazz Ensemble I*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

CEL 2651 **Jazz Ensemble III** **1 (0-2-1)**

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

CEL 2652 **Jazz Ensemble IV** **1 (0-2-1)**
Prerequisite : *CEL 2651 Jazz Ensemble III*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

CEL 3651 **Jazz Ensemble V** **1 (0-2-1)**
Prerequisite : *CEL 2652 Jazz Ensemble IV*

Further development of techniques as ensemble players and study of selected repertoire to performance standard

CEL 3652 **Jazz Ensemble VI** **1 (0-2-1)**
Prerequisite : *CEL 3651 Jazz Ensemble V*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

CEL 4651 **Jazz Ensemble VII** **1 (0-2-1)**
Prerequisite : *CEL 3652 Jazz Ensemble VI*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

CEL 4652 **Jazz Ensemble VIII** **1 (0-2-1)**
Prerequisite : *CEL 4651 Jazz Ensemble VII*

Further development of techniques as ensemble players and study of selected repertoire to performance standard

CGI 1201 **Computer Graphics Design Studio I** **3 (2-2-5)**

Fundamentals of design and sketch development to create basic concept design such as shape and form, object, layout and composition.

CGI 2203 **Computer Graphics Design Studio II** **3 (2-2-5)**
Prerequisite : *CGI 1201 Computer Graphics Design Studio I*

Fundamentals of concept design in 2 dimension drawing and application to the 2 dimensional designs such as character, page layout, and application to other media.

CGI 2204 **Introduction to 3D Modeling** **3 (1-4-4)**
Prerequisites : *ART 1208 Computer Graphics Foundation*
ART 1007 Figure Drawing

Principles of 3-D space and 3 dimensional modeling techniques, such as object modeling, procedures for texture mapping, lighting and rendering, construction of basic digital 3-D models of character and environment. Final render of 3D model is required for class to analyze and criticize in terms of technique and aesthetics.

CGI 2205 **Motion Graphics Design** **3 (1-4-4)**
Prerequisite : *ART 1208 Computer Graphics Foundation*

Concepts related to motion graphics using still images, live-action video, and three-dimensional computer graphics in conjunction with software programs such as Adobe After Effects, Adobe Premiere, Adobe Photoshop, Vegas, and various sound tools.

CGI 2207 **Animation Concept and Story telling** **3 (2-2-5)**
Prerequisite : *ART 1007 Figure Drawing*

Introduction to diversity of animation aesthetics from industrial processes to individual personal expression, historical contexts and methods as well as contemporary trends and techniques. oral and written critique supported by practical investigation into personal aesthetic choice, examination of a number of approaches for adaptation of story content to cinematic form, how to transpose ideas through 2-D storyboards and animatics to 3-D asset creation for pre-visualizing storyline.

CGI 2208 **Computers Graphics Design Studio III** **3 (2-2-5)**
Prerequisite : *CGI 2203 Computer Graphics Design Studio II*

Techniques and concepts of animation such as, 2D animation, stop motion, turn table for character and walk cycle.

CGI 2235 **Introduction to Motion Picture** **3 (2-2-5)**

Fundamentals of video production techniques and overview of film and moving images. By combining theory and hands-on exercises, students are expected to develop the technical, analytical and critical foundations necessary in the video preproduction, production and postproduction process. Students may be required to produce a variety of short film projects.

CGI 2236 **Introduction to Sound Design** **3 (1-4-4)**

Sound design principles as applied to motion pictures and interactive systems, phenomenology of sound with an introduction to acoustics, exploration of creative use of sound, introduction to field recording, use of digital audio workstations, use of original sound recordings from an extensive sound library.

CGI 3025 **CGI Internship** **1 (120 hours)**
Prerequisite : *CGI 3210 Computer Graphics Design Studio IV*

Professional practice by working in a company which provides design business such as graphics design, computer graphics, photography and/ or advertising design. This course requires 120 hours working and satisfactory performance evaluated by a company supervisor.

CGI 3209 **3D Animation** **6 (1-10-7)**
Prerequisites : *CGI 2204 Introduction to 3D Modeling*
CGI 2208 Computer Graphics Design Studio III

3-D Animation with emphasis on weight, pose and mechanics of character movement, use of 2-D animation skills to thumbnail and creation of rough animations that help push their 3-D poses, basic principles of modeling and rigging as applied to a series of very different characters. Students explore basic tools and apply them to various anatomical problems to find modeling and rigging solutions for character motion.

CGI 3210 **Computer Graphics Design Studio IV** **3 (2-2-5)**
Prerequisite : *CGI 2208 Computer Graphics Design Studio III*

Development of a uniqueness of story, sense of style and material as alternative for formulated traditional animation or digital animation, employ imagery and design theory such as compositions, value and colors to narrate the story and complete the design for animation and film production.

CGI 3211 **Cinematic Lighting and Rendering** **3 (1-4-4)**
Prerequisite : *CGI 2204 Introduction to 3D Modeling*

Lighting and rendering issues needed in the animation production work flow, technical and aesthetic overview of lighting for studio, presentation, cinema and visual effects, as well as tonal evaluation of images, color temperature and color theory, technical issues which include shadows, soft shadow control, light types, lighting setup and control, raytracing, mental ray.

CGI 3212 **Computer Graphics Design Studio V** **3 (2-2-5)**
Prerequisites : *CGI 3210 Computer Graphics Design Studio IV*
CGI 2207 Animation Concept and Storytelling

The course prepares students for professional careers by enhancing their collaboration expertise through projects. Development of student skills in communication, management, critical thinking, and problem-solving. Developing and conceptualize creative and design challenges. Students projects will vary on multiple aspects in mock-up of industry environment.

CGI 3213 **Digital Image for Digital Production** **3 (1-4-4)**
Prerequisites : *ART 1007 Figure Drawing*
CGI 2203 Computer Graphics Design Studio II

Digital image principles as applied to digital production, exploration of creative use of images in the real production of animation, film and visual effects with emphasis on techniques of photo retouching.

CGI 3214 **Movement Analysis and Integration** **3 (1-4-4)**
Prerequisite : *CGI 3209 3D Animation*

Character emotion and physical movement, realistic movements simply from a movement of a bouncing ball to a much more complicated walk cycle, professional choreography, how human body moves with the correct speed and gravity.

CGI 3220 **Digital Compositing** **3 (1-4-4)**
Prerequisite : *CGI 3230 Cinematography for Visual Effects*

Students will learn to composite with digital photography based on the concepts of traditional compositing ideas. Students will learn to use digital SLR cameras, apply digital darkroom techniques, creatively manage transparency, and develop an understanding of lighting and perspective with the use of compositing software.

CGI 3227 **Lip Sync and Facial Expressions for Animation** **3 (1-4-4)**
Prerequisite : *CGI 3209 3D Animation*

The course emphasized on facial expression and lip sync techniques, animating with the recorded dialogue, referencing footage, Timing and Spacing, lip syncing, fundamental of emotion, graph editor; working with camera movement will be analyzed and discuss in class.

CGI 3228 **Introduction to Rigging** **3 (1-4-4)**
Prerequisites : *CGI 2204 Introduction to 3D Modeling*
CGI 2208 Computer Graphics Design Studio III

This course teaches students how to design and create basic rigging and set up 3D characters for animation production. Students will design character based or mechanical model on two-dimension sketches and drawings starting from an idea to fully develop that is ready to be used in various fields such as games and animation.

CGI 3230 **Cinematography for Visual Effects** **3 (1-4-4)**
Prerequisites : *CGI 2202 Introduction to Motion Picture*
CGI 2204 Introduction to 3D Modeling
CGI 2208 Computer Graphics Design Studio III

Student will learn the foundation of cinematography for visual effects industry from pre-production to post-production including green screen shooting, various scale objects and set extension.

CGI 3231 **Digital Material for Texturing** **3 (1-4-4)**
Prerequisites : *CGI 2204 Introduction to 3D Modeling*
CGI 2208 Computer Graphics Design Studio III
CGI 3213 Digital Image for Digital Production

Student will learn the foundation concept in texturing material object base on aged and profile of hard surface to organic object, at the end of the class students will be able to applied the seem less, 2D and 3D texture to the 3D object.

CGI 3233 **Advanced 3D Modeling and 3D Visualization** **3 (1-4-4)**
Prerequisite : *CGI 2204 Introduction to 3D Modeling*

Advance Process and technical oriented in 3D modeling to visualize the design in the professional way. The courses will analyze and criticize in terms of technique and aesthetics.

CGI 3234 **Character Design** **3 (1-4-4)**

Introducing the basic to advance theory about designing characters for various purposes. Student will learn to create functional character designs while developing their skills in drawing and using computer software. Student will practice designing variety styles for characters and what it needs to make appealing and iconic character design.

CGI 3236 **Visual Effects** **3 (1-4-4)**
Prerequisite : *CGI 3230 Cinematography for Visual Effects*

Techniques of compositing especially rotoscoping, chroma-keying, matte creation, how to seamlessly blend CG and live action film together and render it with professional multi-pass rendering and time-based compositing techniques.

CGI 4223 **Art Thesis I** **3 (2-2-5)**
Prerequisites : *CGI 3212 Computer Graphics Design Studio V*
CGI 3025 CGI Internship
BG 2000 English III

Students are required to choose their own topics related to their field of study and develop a project. The project has to be approved by the Computer Generated Imagery Thesis Committee. Students must complete the project and present it to the committee with all documents included.

CGI 4224 **Computer Graphics Design Portfolio** **3 (2-2-5)**
Prerequisite : *CGI 3212 Computer Graphics Design Studio V*

Preparation of students for professional situations through the creation of individual demo reels, interactive portfolio, video on-line, cross-platform developments and issues concerning aesthetics, resumes, web sites and portfolios by emphasizing on business structure, studio hierarchy in both areas (animation studio and interactive studio), production bidding, media distribution, employee evaluation and professional growth, aspects of business in order for students to attain and sustain a professional career.

CGI 4225 **Art Thesis II** **6 (1-10-7)**
Prerequisite : *CGI 4223 Art Thesis I*

The class project continues from CGI 4223 Art Thesis I. In this class students will concentrate on their technical orientation related to their project's achievement. Technical and aesthetic skill set of the advanced skill will be discussed through the exploration of projects. Students continue to develop content delivery, story and technical mastery with emphasis on the identification and utilization of individual strengths in the context of a production environment. Students must finish their final project and organize their Art Thesis Exhibition in public.

CGI 4229 **Advanced 3D Character Animation** **3 (1-4-4)**
Prerequisite : *CGI 3227 Lip Sync and Facial Expression*

This course emphasized on how to develop their animation skills, techniques and principles of animation. The course is focusing on the animation pipeline and workflow following the actual animation production. Students will be able to analyze animation and discuss as professionals.

CGI 4232 **Matte Painting for Visual Effects** **3 (1-4-4)**
Prerequisites : *CGI 2207 Animation Concept and Story Telling*
CGI 2208 Computer Graphics Design Studio III

Student will learn the foundation of matte painting. Students are introduced to the digital tool set and technique for create 2D image use for background and set extension for matte painting, including 2.5D and camera projection technique

CIS 1501 **Instrumental Instruction I** **2 (1-2-3)**

Development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice

CIS 1502 **Instrumental Instruction II** **2 (1-2-3)**
Prerequisite : *CIS 1501 Instrumental Instruction I*

Further development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice, based on student's selection of instrument and improvement from the previous course.

CIS 1551 **Secondary Instrumental Instruction I** **2 (1-2-3)**

Secondary instrument of instrumental instruction at the beginning level.

CIS 1552 **Secondary Instrumental Instruction II** **2 (1-2-3)**
Prerequisite : *CIS 1551 Secondary Instrumental Instruction I*

Further development from the previous course.

CIS 2503 **Instrumental Instruction III** **2 (1-2-3)**
Prerequisite : *CIS 1502 Instrumental Instruction II*

Further development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice, based on student's selection of instrument and improvement from the previous course.

CIS 2504 **Instrumental Instruction IV** **2 (1-2-3)**
Prerequisite : *CIS 2503 Instrumental Instruction III*

Further development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice, based on student's selection of instrument and improvement from the previous course.

CIS 2553 **Secondary Instrumental Instruction III** **2 (1-2-3)**
Prerequisite : *CIS 1552 Secondary Instrumental Instruction II*

Further development from the previous course.

CIS 2554 **Secondary Instrumental Instruction IV** **2 (1-2-3)**
Prerequisite : *CIS 2553 Secondary Instrumental Instruction III*

Further development from the previous course.

CIS 3505 **Instrumental Instruction V** **2 (1-2-3)**
Prerequisite : *CIS 2504 Instrumental Instruction IV*

Further development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice, based on student's selection of instrument and improvement from the previous course.

CIS 3506 **Instrumental Instruction VI** **2 (1-2-3)**
Prerequisite : *MC 3355 Junior Recital*

Further development of performance techniques and interpretation of fine art music. Principal instrument: guitar, bass, drums, piano, woodwind, brass or voice, based on student's selection of instrument and improvement from the previous course.

CMP 1151 **Jazz Theory I** **3 (3-0-6)**
Prerequisites : *MU 1151 Theory of Music I*
MU 1251 Ear Training I

Major key harmony: secondary and extended dominant relationships, available tensions, melodic construction and motif development. Principles of linear harmonic continuity and guide tone lines. Minor key harmony; subdominant minor. Blues theory and chord progressions. Melodic rhythm, form, and melody/harmony relationship

CMP 1251 **Jazz Arranging I** **3 (3-0-6)**
Prerequisite : *CMP 1151 Jazz Theory I*

Musical concepts of melody, rhythm, harmony, and form as applied to the principles and techniques of writing and arranging for the rhythm section (drums, bass, guitar, keyboards, basic percussion) and a lead-line for a solo instrument, two horns (Trumpet plus alto or tenor saxophone), or voice with focus on the conceptual process of combining individual components to create a musically satisfying arrangement.

CMP 1252 **Jazz Arranging II** **3 (3-0-6)**
Prerequisite : *CMP 1251 Jazz Arranging I*

Properties of the trumpet, alto saxophone, tenor saxophone, trombone, and baritone saxophone, and the writing/arranging processes of standard and spread voicings, approach techniques, melodic embellishment, and guide tone backgrounds with focus on application of processes to soli and background writing for two-, three-, four- , and five- part combinations of these instruments.

CMP 2152 **Jazz Theory II** **3 (3-0-6)**
Prerequisites : *CMP 1151 Jazz Theory I*
MU 1252 Ear Training II

Analysis and application of major and minor key harmony; subdominant minor and modal interchange; chord scale theory. Review of melodic construction and melody/ harmony relationship; individual note analysis of melodies. Substitute dominant and related II-7 chords; diminished chord patterns; modulation.

CMP 2153 **Jazz Theory III** **3 (3-0-6)**
Prerequisites : *CMP 2152 Jazz Theory II*
MU 2253 Ear Training III

Principles of modern chord progression: deceptive resolutions of secondary dominants; dominant seventh chords without dominant function; contiguous dominant motion. Review of melodic construction, form, and melody/ harmony relationship; modal interchange; pedal point and ostinato; modal harmony and modal composition; compound chords

CMP 2250 **Jazz History** **3 (3-0-6)**

A survey of jazz music starting from their early roots, major artists, regional influences and sub-genres of the styles.

CMP 3250 **Evolution of Blues-Rock** **2 (2-0-4)**

Survey of Blues and its root to Rock music, beginning of rock in each decade from 1960's until today.

CMP 3251 **Evolution of Popular Music** **2 (2-0-4)**

Survey of Blues, Jazz and R&B progressing and simplified into Popular Music, development of popular music in 20th century in each decade until today.

CMP 4110 **Jazz Composition** **2 (1-2-3)**
Prerequisite : *CMP 2153 Jazz Theory III*

Systematic approach to the art of composing in the jazz idiom. Exploration of melodic, harmonic, and rhythmic principles. Standard jazz song form. Analysis of jazz standards. Arranging considerations applied as a means of enhancing a composition. Projects for small jazz group required.

CN 0400 **Chinese for Beginners I** **3 (3-0-6)**

Chinese sound system and pronunciation, focusing on Pinyin (Chinese Romanization system), basic Chinese characters and simple conversation.

CN 0401 **Chinese for Beginners II** **3 (3-0-6)**
Prerequisite : *CN 0400 Chinese for Beginners I*

Basic vocabulary and sentence patterns to develop the listening and speaking skills in daily life.

CN 1400 **Introduction to Chinese** **3 (3-0-6)**

Mandarin sound system, pronunciation, writing of Chinese characters, fundamental Chinese grammar and every day sentence patterns.

CN 1401 **Chinese I** **3 (3-0-6)**
Prerequisite : *CN 1400 Introduction to Chinese*

Basic conversations and texts concerning everyday life to broaden basic vocabulary and Chinese grammar.

CN 1430 **Listening and Speaking in Chinese I** **1 (1-0-2)**

Practice of listening and speaking simple sentences and daily-life conversations with emphasis on correct pronunciation.

CN 1431 **Listening and Speaking in Chinese II** **1 (1-0-2)**
Prerequisite : *CN 1430 Listening and Speaking in Chinese I*

Practice of listening and speaking conversations in everyday situation focusing on fluency.

CN 2401 **Chinese II** **3 (3-0-6)**
Prerequisite : *CN 1401 Chinese I*

Conversations and texts in the intermediate level to expand the number of vocabulary and knowledge of grammatical structures.

CN 2402 **Chinese III** **3 (3-0-6)**
Prerequisite : *CN 2401 Chinese II*

Reading texts on Chinese life and culture focusing on advanced grammatical points and oral expressions.

CN 2431 **Chinese Oral Comprehension and Expression I** **2 (2-0-4)**
Prerequisite : *CN 1431 Listening and Speaking in Chinese II*

Listening to topics related to general interests and oral practice of summary on the selected topics.

CN 2432 **Chinese Oral Comprehension and Expression II** **2 (2-0-4)**
Prerequisite : *CN 2431 Chinese Oral Comprehension and Expression I*

Listening to conversations and texts related to Chinese culture and current situations and practice of recounting events and stories from the selected topics and actual experience.

CN 3403 **Chinese IV** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Reading of academic texts, practice of writing a short paragraph, and introduction to literary Chinese: vocabulary, expressions, sentence structures, and idiomatic usage.

CN 3420 **Integrated Chinese Skills** **3 (3-0-6)**
Prerequisite : *CN 3403 Chinese IV*

Enhancement of four Chinese language skills in daily and business application.

CN 3433 **Chinese from Audio-Visual Media** **3 (3-0-6)**
Prerequisite : *CN 3436 Business Conversation I*

Modern Chinese ways of life from audio-visual aids, and practice of recounting, analytical and discussion skills.

CN 3436 **Chinese Business Conversation I** **3 (3-0-6)**
Prerequisite : *CN 2432 Chinese Oral Comprehension and Expression II*

Practice of conversations on topics related to business context.

CN 3437 **Chinese Business Conversation II** **3 (3-0-6)**
Prerequisite : *CN 3436 Chinese Business Conversation I*

Further practice of conversations on business topics and development of fluency and accuracy of the speech.

CN 3441 **Chinese Reading and Oral Report** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Development of reading skills of texts related to current social, economic situations and practice of gathering information and presenting oral reports.

CN 3450 **Introduction to Chinese Writing** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Practice of writing different kinds of sentences including simple, compound and complex sentences, book reports, summaries, diaries, letters and essays in the given topic.

CN 3451 **Communicative Writing in Chinese** **3 (3-0-6)**
Prerequisite : *CN 3450 Introduction to Chinese Writing*

Practice of writing descriptions, passages, notes, announcements, invitation, agenda, minutes, product description, product instructions and advertisement.

CN 3463 **Introduction to Chinese Culture** **3 (3-0-6)**
Prerequisite : *CN 3403 Chinese IV*

Development of Chinese culture from the Xia dynasty to the modern era focusing on significant historical events, ways of life and main accomplishments in the science, arts and literature and specific features of Chinese influence on the world.

CN 3470 **Translation I: Chinese-Thai** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Methods and techniques of translation from Chinese to Thai and practice of translation of sentences, paragraphs, articles and texts.

CN 3481 **Chinese for Tourism** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

General knowledge and Chinese terminology in tourism industry, description of Thailand's tourist attractions in Chinese, duties and responsibilities of tour guides and practice of Chinese oral communication as a tour guide.

CN 3482 **Chinese for Hotels** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

General knowledge and Chinese terminology in hotel industry, duties and responsibilities of personnel in hotel industry and practice of Chinese communication in hotel industry context.

CN 3483 **Chinese for Service Industries** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Vocabulary, expressions, and conversations used in service industries: airlines, hospitals, restaurants, banks, and Immigration.

CN 3484 **Chinese for Office Management** **3 (3-0-6)**
Prerequisite : *CN 2402 Chinese III*

Knowledge and skills for office management in Chinese, work etiquettes, practice of spoken Chinese in office and writing messages, work schedules, memoranda, agenda and minutes.

CN 4433 **Public Speaking in Chinese** **3 (3-0-6)**
Prerequisite : *CN 3437 Chinese Business Conversation II*

Basic principles and practice of public speaking for persuasive purposes, selection and evaluation of materials for speech, thought organization, voice and non-verbal communicative means.

CN 4436 **Advanced Business Conversation in Chinese** **3 (3-0-6)**
Prerequisite : *CN 3437 Chinese Business Conversation II*

Practice of conversations for business purposes and oral practice of presenting the information, idea and argumentation concisely and systematically.

CN 4440 **Reading in Business Chinese** **3 (3-0-6)**
Prerequisite : *CN 3403 Chinese IV*

Development of reading proficiency in business-related materials, writing summaries and reviews.

CN 4442 **Reading in Chinese Newspapers** **3 (3-0-6)**
Prerequisite : *CN 3403 Chinese IV*

Chinese newspaper reading skills and understanding of expressions and styles used in news writing.

CN 4452 **Business Writing in Chinese** **3 (3-0-6)**
Prerequisite : *CN3451 Communicative Writing in Chinese*

Technical terms and formats in business writings, various forms of correspondences and business correspondences including resumes and applications.

CN 4460 **Survey of Chinese Literature** **3 (3-0-6)**
Prerequisite : *CN 3403 Chinese IV*

Overall development of Chinese literature from the beginning to the present day, and reading selections in prose, poetry, fiction and drama.

CN 4471 **Translation II: Thai-Chinese** **3 (3-0-6)**
Prerequisite : *CN 3470 Translation I: Chinese-Thai*

Methods and techniques of translation from Thai to Chinese and practice of translation of sentences, paragraphs, articles and texts.

CN 4491 **Seminar on Selected Topics** **3 (3-0-6)**
Prerequisite : *Consent of Instructor*

Discussion of selected topics in using Chinese or business Chinese and current issues of interest.

CN 4492 **Chinese Internship** **3 (0-9-3)**
Prerequisite : *Completion of at least 105 credits and approval from the Department*

Opportunity to practice of Chinese and application of business knowledge in the real business settings, either private or public organizations under the direct supervision of a designated supervisor and Faculty members.

CPS 1151 **Jazz Improvisation I** **1 (0-2-1)**

Basic concepts of improvisation: techniques, scales, and analysis of classic solos in a variety of idioms, including but not limited to Blues, Rock, Country, and Ethnic traditions, assimilation of these influences into what is commonly called "Jazz Improvisation". Students will complete 6 projects per semester, using computer and/or live performances in class.

CPS 1152 **Jazz Improvisation II** **1 (0-2-1)**
Prerequisite : *CMP 1151 Jazz Improvisation I*

Further development of improvising skills. Continuation of computer and/or live performances in class.

CPS 2151 **Jazz Improvisation III** **1 (0-2-1)**
Prerequisite : *CMP 1152 Jazz Improvisation II*

Further development of improvising skill. Continuation of computer and/or live performances in class with primary emphasis on Jazz and Fusion Jazz improve techniques.

CPS 3051 **Jazz Repertoire I** **2 (1-2-3)**

Entering level of popular Jazz songs, recognize the melody and chord progression.

CPS 3052 **Jazz Repertoire II** **2 (1-2-3)**
Prerequisite : *CPS 3051 Jazz Repertoire I*

Intermediate level of popular Jazz songs, recognize the melody and chord progression.

CPS 3451 **Jazz Ear Training I** **2 (1-2-3)**
Prerequisite : *MU 1252 Ear Training II*

Recognizing pitch, rhythm, harmony, and timbre by ear with emphasis on practical performance experience and utilization of the student's instrument in class, dictation, sight singing, transcription, and memorization projects.

CPS 3452 **Jazz Ear Training II** **2 (1-2-3)**
Prerequisite : *CPS 3451 Jazz Ear Training I*

Continuation of Jazz Ear Training I. Development of recognizing pitch, rhythm, harmony, and timbre by ear with emphasis on practical performance experience and utilization of the student's instrument in class. Some dictation, sight singing, transcription, and memorization projects.

CS 1201 **Computer Programming I** **3 (3-0-6)**

History of computer, components of a computer system, coding and numbering systems, algorithm and development process of algorithms and expression of algorithms in terms of flowchart and pseudo code, implementation of algorithms using one of the high level languages that are used widely in the industry with emphasis on the nature and structure of the language, techniques of programming for both numerical and non-numerical processing, structure of the programming languages and how to develop structured programming.

CS 1202 **Computer Programming II** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Algorithms development to solve more complex problems, analysis of more complicated programs as well as modification of the programs, string processing, searching and sorting algorithms, and abstract data types such as linked list, stack, and queue, second high level language which will be widely used in the further courses with emphasis on characteristics of the structured programming and modular programming, application of basic data structures and algorithms to solve various complicated problems.

CS 2101 **Mathematics Foundation for Computer Science** **3 (3-0-6)**

Discrete mathematics as the basis of computer science, set theory, relation and function, recursive functions, logic and logical proving, mathematical reasoning, graph theory, tree, algebraic structure, probability, model of computation and automata.

CS 2201 **Data Structures and Algorithms** **3 (3-0-6)**
Prerequisite : *CS 1202 Computer Programming II*

Analysis of complexity of algorithms, various data structures including array, string, stack, queue, dequeue, tree, graph, set and heap, applications and analysis of algorithms developed employing the data structures mentioned above including time and memory requirement analysis of various searching and sorting algorithms.

CS 2202 **Computer Architecture** **3 (3-0-6)**

Computer system components, combinatory circuits, sequential circuits, micro-operations using flip-flop, registers, adder and counter, computational operations and control of micro-operations, design of memory unit, design of set of instructions, design of parallel processing as well as SISD, SIMD, MISD, and MIMD architectures.

CS 2203 **Programming Languages** **3 (3-0-6)**
Prerequisite : *CS 1202 Computer Programming II*

Computer programming languages on comparative basis with special consideration on syntax, semantics, and implementation, emphasizing on suitability of programming languages for various data manipulations and situations: exception handling, subroutines, visibility rules, concurrency and memory management.

CS 2204 **Database Systems** **3 (3-0-6)**
Prerequisites : *CS 2201 Data Structures and Algorithms*

Database systems and database management, types of database systems emphasizing on relational database, functional dependency, normalization, query optimization, integrity and security of database systems, and concurrency control.

CS 2205 **Operating Systems** **3 (3-0-6)**

Components and functions of operating systems, uniprogramming, multi-programming, multitasking, multithreading, resource management functions of operating systems, process scheduling algorithms, device management algorithms, virtual memory management, and classical problems related to operating systems such as deadlock, starvation and concurrency.

CS 2206 **Computer Networks** **3 (3-0-6)**

Fundamentals of computer networks, network devices and services, role of protocol layers, protocol basics and network protocols, inter-operability issues, Open System Interconnection (OSI) reference model and TCP/IP, addressing and naming schemes, network types and topologies, wired and wireless networks, network media, Local Area Network (LAN) and Wide Area Network (WAN) technologies, network security basics.

CS 3200 **Senior Project I** **3 (3-0-6)**
Prerequisite : *Third-year student status with at least 72 credits completed*

Specific project which requires students to design and develop a concrete program or system, analyze the problem, define the solution and design the system by applying the various computer science concepts. The advisor whom the students select will guide them throughout the project development. The students must give presentation which includes oral examination.

CS 3201 **Algorithms Design** **3 (3-0-6)**
Prerequisites : *CS 2101 Mathematics Foundation for Computer Science*

Techniques for designing algorithms using divide and conquer, greedy method, dynamic programming and backtracking by emphasizing on analysis of efficiency, design techniques for NP problem domain.

CS 3411 **Human Computer Interaction** **3 (3-0-6)**

Basic knowledge about human behavior, interaction between humans and computers, overview of research areas in human-computer interaction, design of computer interfaces to fit with the concepts of usability, accessibility and trustworthiness.

CS 3412 **ICT Project Management 3** **(3-0-6)**

Project planning, budgeting, prototyping, implementing, and monitoring; resource management, terms of reference, service level agreement, dispute resolution, ICT system development methodologies in practice.

CS 3413 **Software Architecture and Design** **3 (3-0-6)**

Introduction to software architecture, definitions and distinctions, benefits, key concerns, and primary techniques in software architectural design patterns.

CS 3414 **Software Engineering** **3 (3-0-6)**
Prerequisite : *CS 1202 Computer Programming II*

Software life cycle, analysis of requirements, structured software design, development, implementation, testing, and maintenance of software, reusable software, documentation and software manuals, and software project management.

CS 3415 **Software Engineering Workshop** **3 (3-0-6)**
Prerequisite or Corequisite : CS 3414 Software Engineering

Application of techniques and methods of software engineering in realistic projects covering most phases of the software development life cycle.

CS 3416 **Software Quality Assurance** **3 (3-0-6)**

Introduction to software quality, incorporating quality into software projects, quality measurements, software and requirement defects, quality attributes of requirements document, quality design concepts, software development and SQA, software inspection and testing, standards, practices, conventions and metrics, process management and improvement.

CS 3417 **Software Verification and Validation** **3 (3-0-6)**

Theory and practice of software testing, including such topics as syntax testing, mutation testing, tools for software testing, testing specifications, black-box and white-box testing, code inspections, metrics, usability testing, testing documentation, website testing, security testing, beta testing, quality assurance, and software safety.

CS 3421 **Artificial Intelligence Concepts** **3 (3-0-6)**
Prerequisite : *CS 1202 Computer Programming II*

Fundamental concepts in AI and its purpose as well as different disciplines in the field, mathematical theorem proving, natural language processing, image processing, robotics, expert system and various techniques used in knowledge representation, searching, induction and heuristic algorithms, case studies related to specific AI applications including expert system, language translation, voice processing, and others, use of popular programming languages such as Prolog and LISP to solve AI related problems.

CS 3422 **Introduction to Big Data Analytics** **3 (3-0-6)**

Foundational techniques and tools required for big data analytics, deployment of structured lifecycle approach to data science and big data analytics projects, visualization techniques and tools to analyze big data and create statistical models, usage of tools such as HaDoop, MapReduce, and Giraph.

CS 3423 **Data Mining** **3 (3-0-6)**

Fundamental concepts of data mining, widely used techniques/algorithms and tools, preprocessing, exploratory data analysis, classification, clustering, association analysis and region discovery.

CS 3424 **Data Warehousing and Business Intelligence** **3 (3-0-6)**

Fundamental data warehouse concepts including data warehouse architecture, development methodology, data modeling, database design for data warehousing, ETL processes, and business intelligence applications.

CS 3425 **Intelligent System Development** **3 (3-0-6)**

Foundations of intelligent systems, intelligent agents, problem-solving by searching, stochastic searches, learning, genetic algorithms, and neural-networks.

CS 3426 **Multiprocessor programming** **3 (3-0-6)**

Introduction to threading and parallel programming, OpenMP and MPI, loop-level parallelism, parallel regions, synchronization issues, performance tuning and tools.

CS 3427 **Numerical Analysis** **3 (3-0-6)**
Prerequisite : *CS 1201 Mathematics Foundation for Computer Science*

Analysis of precision levels in numerical computations, algorithm constructions for mathematical problem-solving such as finding roots of various equations, interpolation, differentiation and integration, finding of terms and sum of series with emphasis on the writing of programs to solve complex numerical problems.

CS 3431 **Android Application Development** **3 (3-0-6)**

Development fundamentals for handheld devices, mobile user experience and usability, designing and implementing applications efficiently under the restrictions of limited resources, programming development frameworks and life cycle on Android Platform, and deployment of application on Android devices.

CS 3432 **iOS Application Development** **3 (3-0-6)**

Development fundamentals for handheld devices, mobile user experience and usability, designing and implementing applications efficiently under the restrictions of limited resources, programming development frameworks and life cycle on iOS Platform, iOS Software Development Kits (SDK), Xcode, development environment (IDE) and Objective-C programming language for iPhone/iPad, and deployment of application on iPhone/iPad.

CS 3433 **Enterprise Application Development** **3 (3-0-6)**
Prerequisite: *CS 2204 Database System*

Architecture and platform of choice for building and deploying n-tier, web-based, transactional, and component-based enterprise applications, high-level overview of enterprise application architecture, individual programming API's and technologies that constitute at Web tier and business tier, security, persistence, transaction.

CS 3434 **Introduction to Game Development** **3 (3-0-6)**

Theory and practice of developing computer games, architecture of games, game development workflow, usage of game engine/level design tools, scripting languages, artificial intelligence, game physics, game graphics, UI design/development.

CS 3435 **Game Design and Development Workshop** **3 (3-0-6)**

Theory and practice of computer game design, computer game history, taxonomy of computer games, past and present game platforms, game play, game documentation and workflow, UI/UX design, human and psychological aspects of game design, and current trends in the game industry/market.

CS 3436 **UI/UX Design and Prototyping** **3 (3-0-6)**
Prerequisite : *CS 2201 Data Structures and Algorithms*

Overview of design thinking process, persona and empathy development, user stories and scenarios, brainstorming, ideation, wireframes and storyboards, prototyping, mockups, visual design, information architecture design, interaction design, usability design and testing.
Fundamental concepts of graphics construction using computer, data structure for computer graphics and techniques for creating, storing, transformation, translation, rotation, clipping, and animation, use of commercial graphics packages and use of high-level languages to write computer graphics programs.

CS 3443 **Computer Network Security** **3 (3-0-6)**
Prerequisite : *CS 2206 Computer Network*

Introduction to network security, security principles, network threats and vulnerabilities, security threats mitigation and countermeasures, use of network security protocols, technologies, tools/appliances e.g. firewalls, IPS, IPSec, VPN to develop a security infrastructure, and audit, design, and implementation of secured networks.

CS 3444 **Image Processing** **3 (3-0-6)**
Prerequisite : *CS 2201 Data Structures and Algorithms*

Introduction to digital image processing including such topics as digital image representation, compression techniques, coding techniques, analysis of images represented in different formats, as well as optical character recognition techniques based on image processing to recognize Thai and English alphabetic.

CS 3445 **Enterprise Database System** **3 (3-0-6)**

Introduction to the enterprise-level database systems, database architecture, DBMS installation and configuration issues, performance optimizing, monitoring and tuning, user management and database security, back-up and recovery.

CS 3446 **Cloud Computing** **3 (3-0-6)**

Basic characteristics of cloud computing: applications, platforms and infrastructure, service and deployment models of distributed computing over a network, principles of cloud-based secure networking, cloud computing solutions and challenges.

CS 3447 **Information Retrieval & Search Engines** **3 (3-0-6)**

Principles of information storage and retrieval systems, organization, representation, and access to information, categorization, indexing, and content analysis, data structures for unstructured data, design and maintenance of such databases, indexing and indexes, retrieval and classification schemes, use of codes, formats, and standards, analysis, construction and evaluation of search and navigation techniques, search engines.

CS 3448 **Recommender System** **3 (3-0-6)**

Concepts of recommender system, fundamental techniques for building recommender system such as collaborative based, content-based, knowledge-based and hybrid recommendation approaches, techniques and approaches used to evaluate the quality of the recommendations, guidelines on matching recommendation technologies and domains, and recent developments and applications of recommender systems.

CS 3449 **Machine Learning** **3 (3-0-6)**

Construction of computer programs that will automatically improve their performance through experience, primary approaches to machine learning, including inductive inference of decision trees, case-based learning, neural network learning, statistical learning methods, and Bayesian learning.

CS 3450 **Systems Analysis and Design** **3 (3-0-6)**

Roles and importance of information system in organizational structure with regard to strategic planning and decision making, relationship among different information systems within an organization and role of computer systems in information system, various computer technologies which can be used to implement information systems as well as efficient management of information system to meet the various needs of different levels of organizational hierarchy.

CS 3452 **Theory of Computation** **3 (3-0-6)**
Prerequisite : *CS 2101 Mathematics Foundation for Computer Science*

Methods of computation, sequential computation, parallel computation, logic circuits, finite-state machine, deterministic and non-deterministic machine, regular and non-regular set, push-down automata, Turing machine, computability and non-computability, halting problem, examples of class P and class NP problems, theories and techniques for various computational problems which are the basis of computer science.

CS 3453 **Web Application Development** **3 (3-0-6)**
Prerequisite : *CS 1202 Computer Programming II*

Hypertext Markup Language (HTML) or dynamic HTML (DHTML), scripting language, such as Visual Basic Scripting Edition or Microsoft Jscript®, knowledge and skills required to develop web application using n-tiers architecture, designing, building, and deploying web application.

CS 4200 **Senior Project II** **3 (3-0-6)**
Prerequisite : *Fourth-year student status with at least 100 credits completed*

System development project from the industry. Students have to work with the companies under the supervision of their advisor throughout the project. The students must give presentation which includes oral examination.

CS 4400 **Seminar in Computer Science** **3 (3-0-6)**
Prerequisites : *Senior students with the consent of the instructors*

Seminar on topics in advanced or new technology in the field of computer science. An expert or professor in the specific field may be invited to give lectures. Each student must study some specific topics, make presentation and exchange questions with others.

CS 4401 – 99 **Selected Topics** **3 (3-0-6)**
Prerequisite : *Senior students with the consent of the instructors*

Special topics that are appropriate for detailed study and research. The topic selected depends on the students' needs and the instructors' requirements and is in accordance with the current changes in computer science in that period.

DA 1121 **Basic Mathematics and Statistics** **3 (3-0-6)**

Basic foundation in mathematics and statistics such as algebra, trigonometry, collection of data, summarizing data in tabulation, graphical and numerical, and elementary of probability.

DA 2101 **Calculus I** **3 (3-1-7)**
Prerequisite : *DA 1121 Basic Mathematics and Statistics*

Rate of change, limits, finding limits and continuity, derivatives of function, chain rule, techniques of differentiation and its application, L'Hopital's rule. Integration, integration techniques and application of integrals.

DA 2103 **Principles of Statistics** **3 (3-1-7)**
Prerequisite : *DA 1121 Basic Mathematics and Statistics*

Introduction of statistical methods such as collection of data, tabulation, statistical computation of average and variance, introduction to probability, sampling distribution, statistical estimation and test of hypotheses for one population and two populations, Analysis of Variance (ANOVA), and Chi-square test.

DA 2203 **Probability and Statistical Methods** **3 (3-1-7)**
Prerequisite : *DA 2103 Principles of Statistics*

Quantitative methods such as correlation analysis, linear regression, introduction to time series forecasting, nonparametric statistical methods, quality control and decision making.

DM 2401 **Media Context Analysis** **3 (3-0-6)**
Prerequisite : *CA1024 Introduction to Digital Media Communication*

A study of media content, this course will teach the students how to analyze various forms of media and the impact it has on the society. They will understand the evolution of the content, why changes taking place and where the industry trend is going in the future.

DM 2402 **Narrative** **3 (3-0-6)**
Prerequisite: *CA1024 Introduction to Digital Media Communication*

A study of story-telling, this course will explore various genre and narrative structure. Student will be taught the four types of literary elements (plot, theme, setting, and character). Students will also learn how to format their own plot professionally before it can be applied to a digital media project.

DM 2403 **Digital Media Production and Management** **3 (2-2-5)**
Prerequisite : *CA1024 Introduction to Digital Media Communication*

A study of digital media and motion picture workflow, in this course, the students will learn about the production process and management for digital media. They will also be taught role and responsibilities for each production crew as well as production related terminologies.

DM 2404 **Digital Media Design** **3 (2-2-5)**
Prerequisite : *CA 1025 Computer Graphic Design*

Introduction to the fundamental of art and design for digital media which starts with the understanding of the basic principles of design. The essential learning offers in this course will furnish understudy of a visual dialect that enables aptitude in design communication and art direction

DM 3400 **Internship (For DM Students Only)** **3 (200 Hours)**

Students will apply to study with professionals in digital media industry. Students will learn the day-to-day process of creating digital media by professionals within the industry and receive hands on experience working in the field. They will also be asked to analyze and report on their experience.

DM 3401 **Cinematography** **3 (2-2-5)**
Prerequisite : *CA1024 Introduction to Digital Media Communication*

This course is designed to give students an introduction to the technical and conceptual aspects of cinematography through short format filmmaking. This class will explore the tools and techniques that will help them communicate the visual language of cinematography. Students will receive hands-on experience with a professional cinematographer while completing group and individual projects.

DM 3402 **Editing Concept** **3 (2-2-5)**
Prerequisites : *CA1024 Introduction to Digital Media Communication*

A study of various editing technique used in production, this course will teach the student how to combine shots together that will tell a coherent story. It will start with the basic types of editing which are continuity editing and montage, but will also explore various cutting techniques and the effect it has on the story-telling as well as the emotional response from the audience.

DM 3403 **UI and UX Design** **3 (2-2-5)**
Prerequisites : *DM 2401 Media Context Analysis*

The study of designing for interactive media, this course will emphasize on how to create user friendly design with clear and easy to understand user interface that will result in positive feedback from users. The students will learn how to conduct observational research as well as prototype testing to ensure that the message is clear and their design is successful.

DM 3404 **Digital Motion Graphic** **3 (2-2-5)**
Prerequisite : *CA 1025 Computer Graphic Design*

A study of motion graphic, this course will teach about various effects and animation techniques used in post-production. The students will learn how to animate element such as text and vector in order to incorporate them with the footage. They will also use compositing software to create various type of visual effect in a professional way.

DM 3405 **Website and Application Design** **3 (2-2-5)**
Prerequisite : *CA 1025 Computer Graphic Design*

This course is an introduction to web design and application design. Students will learn how to plan the project planning process, how to critique the web and application project, and how to design and create website based on the grids system and text-formatting to enhance the web pages and application design. Student are introduced to developing website by using HTML (Hypertext Markup Language) and CSS (Cascading Style Sheet) and understanding the purpose of designing application and website.

DM 3406 **Sound Design for Digital Media Communication** **3 (2-2-5)**
Prerequisite : *CA1024 Introduction to Digital Media Communication*

This course offers principles of sound design, music appreciation, sound recording on set, automated dialogue replacement (ADR), sound editing and mastering. Students will become familiarize with the audio equipment, including but not limit to, wireless microphone, boom microphone, and the recording studio.

DM 3421 **Screenwriting** **3 (3-0-6)**
Prerequisite : *DM 2402 Narrative*

A study of fundamentals of screenwriting. The course starts from scratch, with the seed of an idea right up to completing a professional script in accordance with industry standards. The students are trained in ideation, three act structure, developing character, plotting and scene structure. It will establish a common vocabulary for approaching the screenplay and form the basis for upcoming courses in dramatic adaptation, the crime screenplay, and other genres and skills.

DM 3422 **Directing** **3 (2-2-5)**
Prerequisite : *DM 2402 Narrative*
DM 3401 Cinematography

This course will give the students the experiences that the directors have working in the field, specifically how he or she interact with actors, various designers (light, sound, and production) and editors. Students will direct an original dramatic performance that tells a coherent story and emotionally engages the audience.

DM 3423 **Documentary** **3 (2-2-5)**
Prerequisite : *DM 2402 Narrative*
DM 3401 Cinematography

The study of non-fiction filmmaking, which serves as providing answer to an inquiry. Students will develop and produce their own documentary which must answer a question that was proposed at the beginning of the semester. The students will used various non-fiction production methods to tell the stories, including but not limit to : reenactments, interviews, and first-hand field research.

DM 3424 **Digital Content Creation** **3 (3-0-6)**

The course focuses on concepts and principles of digital media, the effect of the media on society, down to idea generation and presentation in digital platform. Students will learn how to transform ideas into writing, video, and audio forms to reach the prospective audience and new media users.

DM 3425 **Lighting** **3 (2-2-5)**
Prerequisite : *DM 3401 Cinematography*

This course is designed to give students an overall competency in motion picture lighting, combining the art of seeing with the science of exposure control. Students learn how to light the actors on the set for the master shot, the close-up, reverse angle and cross key-light setups, as well as lighting for movement and for blue screen effects.

DM 3426 **Innovation and Digital Technology** **3 (3-0-6)**

This course focuses on trend and upcoming innovation and digital technology; student learns the characteristics, roles and functions of innovation and digital technology and implements the knowledge to the digital media for communication.

DM 4401 **Digital Media Communication Workshop I** **6 (4-4-10)**
Prerequisite : *BG 2000 English III*
DM 3404 Digital Motion Graphic
CA 2019 Communication Arts Research
DM 3405 Website and Application Design

A study of pre-production process, this course is the first half of the senior project for digital media communication students. The students must show their understanding of how the market distributes content across wide range of media platforms, including film, television and new media. Alongside the practical skills the students will gain from this course, they will also explore how to manage production process, create successful project pitches and work collaboratively within creative teams.

DM 4402 **Digital Media Communication Workshop II** **6 (4-4-10)**
Prerequisite : *BG 2000 English III*
DM 4401 Digital Media Communication Workshop I

A study of the entire work process of media production, this is the second half of the senior workshop for digital media students. The students will be asked to follow through on their pitch from Digital Media Communication Workshop I and create a complete creative work in a form a movie, documentary, or an interactive application; using all their knowledge acquired from their years of studying within the department.

DM 4403 **Seminar in Digital Media Communication (For DM Students Only)** **3 (3-0-6)**

A study of new media trend and communication technology, this course will help students understand various current issues related to media and the impact they have on society and culture by studying with professional within the industries.

DM 4421 **Advanced Photography and Digital Imaging** **3 (2-2-5)**
Prerequisite : *CA 1002 Introduction to Photography and Cinematography*

Intensive course for students who are interested in professional photography in digital media industry. Classical theories and new approaches are the main content of the course. Students will receive training to help them achieve their professional goal.

DM 4422 **Advanced Directing** **3 (2-2-5)**
Prerequisite : *DM 3403 UI and UX Design*

A study of solving problem with user-centered design with user research to create the best solution. Students will learn to create personas, user flows, wireframes, and visual mockups using prototype tools. Students will also have to perform variety of methods of usability testing and become comfortable with presenting, selling, defending, and critiquing their work in professional level.

DM 4423 **Advanced UI and UX Design** **3 (2-2-5)**
Prerequisite : *CA 1021 Introduction to Advertising and Branding*

A study of advertising and popular culture. Students will explore advertising from various perspectives of culture and popular culture. The course involves the understanding how these cultures affect creativity and audience and how influencer marketing works in popular culture.

DM 4424 **Selected Topic in Digital Media (For DM Students Only)** **3 (2-2-5)**

Students will learn about the latest in digital media technology development in communication, as well as the effect it has on culture and society. The content of this course will continue to evolve in order to keep up with the digital media trend.

ECO 1201 **Fundamentals of Microeconomics** **3 (3-0-6)**

Economic decision-making by individuals and firms, determination of quantities and prices of goods in different kinds of markets, determination of wages, and theoretical basis for international trade.

ECO 1202 **Fundamentals of Macroeconomics** **3 (3-0-6)**

Topics in macroeconomics with emphasis on determination of the aggregate level of economic activity, economic growth, analysis of macroeconomic effects of government policies, short-run economic instability such as unemployment and inflation, as well as and long-run economic growth .

ECO 1231 **Principles of Economics** **3 (3-0-6)**

Economic way of thinking : scarcity and opportunity costs; basic tools in economics such as demand-supply model; economic data and measurements : gross domestic product, consumer price index; school of economic thoughts.

ECO 1251 **Statistics for Economists** **4 (4-0-8)**

Application of probability and statistic theory on economic data such as random variables, probability distributions, descriptive statistics, confidence intervals and hypothesis testing, properties of estimators.

ECO 1252 **Calculus I** **3 (3-0-6)**

Function, limits, continuity, differentiation, integration, numerical computation, formula for interval approximation, differentiation and line integration, surface integration and volume integration, infinite series, Fourier series and integrals.

ECO 1253 **Calculus II** **3 (3-0-6)**
Prerequisite : *ECO 1252 Calculus I*

Calculus in space vectors, matrices and determinants, linear analytic geometry, differential calculus of multivariable function, vector analysis, linear integrals, surface integral and volume integrals.

ECO 2200 **Introduction to Economics** **3 (3-0-6)**

Economic concepts and theories in making decisions at individual, market, and aggregate levels focusing on consumer decision, pricing mechanism, demand and supply analysis, market equilibrium, theory of the firm, perfectly and imperfectly competitive market structures, national income accounts, unemployment, inflation, and fiscal and monetary policies.

ECO 2201 **Microeconomics** **3 (3-0-6)**

Microeconomic concepts and theories in making decisions at individual and market levels focusing on pricing mechanism, demand and supply analysis, market equilibrium, consumer behavior, utility maximization, basic economic theories regarding perfectly competitive market and other market structures, input and output markets and the linkage between them, and theories of price determination, profit-maximization, and wage determination.

ECO 2202 **Macroeconomics** **3 (3-0-6)**

Overall picture of economic systems and theories including gross domestic product, national income, economic growth, inflation, saving and investment, foreign exchange market, role of government and Central Bank in fiscal and monetary policies, aggregate expenditure, aggregate demand and supply, balance of trade, balance of payment, mechanism for allocating scarce resources, business cycle, international trade policies, basic economic development, economic problems, and economic decisions.

ECO 2531 **Principles of Microeconomics** **4 (4-0-8)**
Prerequisite : *ECO 1231 Principles of Economics*

Allocation of scarce resources in market economies, theory of consumption and production, demand, supply, market equilibrium, production, cost, roles of firms in various market structures, externalities and efficiencies.

ECO 2541 **Principles of Macroeconomics** **4 (4-0-8)**
Prerequisite : *ECO 1231 Principles of Economics*

Measurement and determination of income and output, inflation, unemployment and economic growth, money supply, banking system and the central bank, government spending, taxation and deficits, and international trade, exchange rates and the balance of payments.

ECO 2551 **Introduction to Econometrics** **3 (3-0-6)**
Prerequisite: *ECO 1251 Statistics for Economists*

Introduction to empirical analysis in economics, such as estimating economic relationships, analyzing economic data, building economic models, regression diagnostics and remedy

ECO 2561 **Economy, Society and Government** **3 (3-0-6)**
Prerequisite : *ECO 1231 Principles of Economics*

Interrelation between economy, society and government, influence of the government policies, and the range of government policies' impacts on both society and economy.

ECO 2631 **Intermediate Microeconomics** **3 (3-0-6)**
Prerequisite : *ECO 2531 Principles of Microeconomics or*
ECO 2201 Microeconomics

Theory of consumer choice : analysis of consumer preference and utility maximization, Theory of production : production maximization, cost minimization and factor demands, analysis of general equilibrium and welfare economics.

ECO 2641 **Intermediate Macroeconomics** **3 (3-0-6)**
Prerequisite : *ECO 2541 Principles of Macroeconomics or*
ECO 2202 Macroeconomics

Modern macroeconomic theories such as Solow and Endogenous Growth Models, Keynesian Model, IS-LM Model, and AD-AS Model including Philips Curve and also illustrates implications of these theories on fiscal and monetary policies.

ECO 2661 **Managerial Economics** **3 (3-0-6)**
Prerequisite : *ECO 2531 Principles of Microeconomics or*
ECO 2201 Microeconomics

Application of Microeconomics theories, demand analysis and consumer utility, production and cost analysis, profit maximization in different market structures namely perfect competition, monopoly, monopolistic competition and monopoly markets, and pricing practices.

ECO 3251 **Business Economics Writing** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Professional English writing skills in the field of economic research and business such as writing summary, writing critique, writing data comment, writing business report and writing research proposal.

ECO 3252 **Information Literacy Skills** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*
ECO 2551 Introduction to Econometrics

Information collecting and analyzing process in a research, including methods for locating and evaluating sources of literature and data, techniques to create effective searching strategies and commonly used methods to analyze literature and data.

ECO 3731 **International Trade** **3 (3-0-6)**
Prerequisite : *ECO 2531 Principles of Microeconomics or*
ECO 2201 Microeconomics

Theories and policies of international trade, neoclassical trade theory and modern trade theory, absolute advantage versus comparative advantage, H-O Model, Standard Trade Model, Inter- and Intra- Industry Trade, instruments of trade policies, trade policies and strategies in both developing countries and advanced countries, and economic integration.

ECO 3732 **Industrial Organization** **3 (3-0-6)**
Prerequisite : *ECO 2631 Intermediate Economics or*
ECO 2661 Managerial Microeconomics

Structure-conduct-performance framework, price theory, competition theory, market structures, differentiated products, and various government policies.

ECO 3733 **Economics of Human Resources** **3 (3-0-6)**
Prerequisite : *ECO 2631 Intermediate Microeconomics or*
ECO 2661 Managerial Economics or
ECO 2551 Introduction to Econometrics

Introduction to the theory and practice of labor economics, determinants of wage rates and employment levels in labor market, contemporary labor policy issues, traditional model of labor demand and labor supply, marginal productivity theory, development of human resources, human capital theory and labor relation.

ECO 3734 **Agricultural Economics and Agri-business** **3 (3-0-6)**

Prerequisite : *ECO 2631 Intermediate Microeconomics or*
ECO 2661 Managerial Economics or
ECO 2551 Introductory Econometrics

Economic theory of agricultural sector, nature of supply, demand and production in agricultural products, market and price risks, market and industry structures, role of the financial market and future exchange in agricultural products, competitive strategy in the world market, and government intervention in agricultural sector.

ECO 3735 **Public Economics** **3 (3-0-6)**

Prerequisite : *ECO 2631 Intermediate Microeconomics or*
ECO 2661 Managerial Economics or
ECO 2551 Introductory Econometrics

Economic analysis of public policy issues, development of up-to-date analytical tools and their application to key policy issues relating to the spending, taxing and financing activities of government.

ECO 3741 **Monetary Economics** **3 (3-0-6)**

Prerequisite : *ECO 2641 Intermediate Macroeconomics*

Analysis of the role of money in the economy, theory of money, importance of the central bank and the role of monetary policy in stabilizing the economy as well as the economic crisis models.

ECO 3751 **Business Cycle and Forecasting** **3 (3-0-6)**

Prerequisite : *ECO 2551 Introduction to Econometrics and*
ECO 2641 Intermediate Macroeconomics

Statistical analysis of business cycle fluctuation, use of econometric and statistical techniques in business environment forecasting.

ECO 3771 **Advanced Microeconomics** **3 (3-0-6)**

Prerequisite : *ECO 2631 Intermediate Microeconomics*
ECO 3773 Mathematical Economics

Uncertainty, expected utility and risk aversion, adverse selection, moral hazard, Intertemporal decision making, static game, sequential game, Nash and subgame perfect equilibrium, pure and mixed strategies, repeated games.

ECO 3772 **Intermediate Econometrics** **3 (3-0-6)**

Prerequisite : *ECO 2551 Introduction to Econometrics*
ECO 3773 Mathematical Economics

Introduction to econometric theory : method of least squares, finite sample and asymptotic properties of least squares estimators, validity of least squares estimators, other regression techniques.

ECO 3773 **Mathematical Economics** **3 (3-0-6)**

Prerequisite : *MA 1200 Mathematics for Business*
ECO 1253 Calculus II

Introduction to the mathematical methods most commonly used in analyzing economic problems such as functions, linear and matrix algebra, unconstrained optimization and constrained optimization.

ECO 4551 **History of Economic Thoughts** **3 (3-0-6)**

Prerequisite : *ECO 2631 Intermediate Microeconomics (or ECO 2661 Managerial Economics)*
ECO 2641 Intermediate Macroeconomics

Economic thoughts of various well known economists; Adam Smith, David Ricardo, Thomas Malthus, John Stuart Mill, Karl Marx, Alfred Marshall, Edgeworth Francis, Leon Walras, and Cournot Augustin, and social welfare and political debates.

ECO 4731 **Economics of Sustainability** **3 (3-0-6)**
Prerequisite : *ECO 2631 Intermediate Microeconomics*
or ECO 2661 Managerial Microeconomics
or ECO 2551 Introduction to Econometrics

Theoretical analysis with discussions on specific environmental policies as applied to water, air pollution, energy, climate change and human health issues, including the evaluation of environmental assets and choices of policy instruments, and the benefits and costs for intervention.

ECO 4741 **International Finance** **3 (3-0-6)**
Prerequisite : *ECO 3741 Monetary Economics*

International monetary theory, macroeconomics in open economy, balance of payments, foreign exchange market, exchange rate systems, theories of exchange rate determination, international financial markets and instruments, international macroeconomic policies.

ECO 4751 **Financial Economics** **3 (3-0-6)**
Prerequisite : *ECO 374 Monetary Economics*
ECO 3773 Mathematical Economics
or FIN 3101 Corporate Finance (for none ECON majors)

Fundamentals of modern financial theory and their applications to the corporate and financial market such as capital budgeting, project evaluation, corporate investment and financing decisions, basic security analysis and investment management.

ECO 4761 **Economics of Strategy** **3 (3-0-6)**
Prerequisite : *ECO 2631 Intermediate Microeconomics*
or ECO 2661 Managerial Economics

Vertical integration, diversification, mergers and acquisition, outsourcing, game theory, pricing rivalry, strategic commitment, asymmetric information, strategic positioning and dynamics of competitive advantage.

ECO 4961 **Economics of Strategy** **3 (3-0-6)**
Prerequisite : *MGT 3940 Business Research Methodology*
Senior Standing with 121 Credits

Development of analytical and research skills to investigate and provide recommendation on economics and business issues. Skills include literature review, data analysis, and report writing.

ECO 4971 **Quantitative Economic Research** **3 (3-0-6)**
Prerequisite : *ECO 3772 Intermediate Econometrics*
Senior Standing with 121 Credits

Research methodology which includes review of past economic research, economic research topic development, literature review, data collection and analysis, as well as development of student's research proposal.

ECO 4972 **Independent Study** **3 (3-0-6)**
Prerequisite : *ECO 4971 Quantitative Economic Research*

Implementation of the research proposal developed in ECO 4971, and presentation of the research result.

EE 2201 **Electric Circuits** **3 (3- 0-6)**
Prerequisite : *BG 1205 Calculus II*
BG 1213 Physics II

Circuit elements, node and mesh analysis, circuit theorems, resistance, inductance, and capacitance, first and second order circuits, phasor diagram, AC power circuits, three- phase systems.

EE 2202 **Electric Circuits Laboratory** **1 (0-3-2)**
Prerequisite : *BG 1214 Physics Laboratory II*
EE 2201 Electric Circuits

Laboratory works to be done according to EE 2201 Electric Circuits.

EE 2203 **Signals and Systems** **3 (3-0-6)**
Prerequisite : *BG 2207 Engineering Mathematics*
EE 2201 Electric Circuits

Continuous-time and discrete-time signal and system; linear time-invariant system (LTI); signal analysis using Fourier transform, Laplace transform, and Z-transform; applications of signal and system; modern techniques in signal and system analysis.

EE 2401 **Electromechanical Energy Conversion** **3 (3-0-6)**
Prerequisite : *EE 2201 Electric Circuits*

Principles of magnetic circuits, definition and interpretation of parameters, calculation of simple and complex magnetic circuits; principles of DC generator, induced electromotive force, armature winding, excitation, armature reaction, commutation, characteristics of DC generators; principles of DC motors and their characteristics, start and speed control of DC motors, principles of transformers, phasor diagram of transformer testings, transformer heat exchanger and ventilation; transformer banking in three phases system, auto transformer.

EE 2402 **Electromechanical Energy Conversion Laboratory** **1 (0-3-2)**
Prerequisite : *EE 2401 Electromechanical Energy Conversion*

Laboratory works to be done according to EE 2401 Electromechanical Energy Conversion.

EE 2605 **Engineering Electronics** **3 (3-0-6)**
Prerequisites : *BG 1213 Physics II*

Semiconductor devices; current-voltage and frequency characteristics; analysis and design of diode circuits; analysis and design of BJT, MOS, CMOS and BiCMOS transistor circuits, operational amplifier and its applications, power supply module.

EE 2606 **Engineering Electronics Laboratory** **1 (0-3-2)**
Prerequisite or Corequisite : EE 2605 Engineering Electronics

Laboratory works to be done according to EE 2605 Engineering Electronics.

EE 3301 **Electromagnetic Fields** **3 (3-0-6)**
Prerequisite : *BG 1205 Calculus II*
BG 1213 Physics II

Electrostatic fields; conductors and dielectrics; capacitance; convection and conduction currents; magnetostatic fields; time-varying electromagnetic fields; Maxwell's equations.

EE 3402 **Electrical Machines** **3 (3-0-6)**
Prerequisite : *EE 2401 Electromechanical Energy Conversion*

Magnetic circuits; principles of electromechanical energy conversion; energy and coenergy in magnetic circuits; single phase and three phase transformers; principles of rotating machines; DC machines; AC machines construction; synchronous machines; single phase and three phase induction machines; protection of machines.

EE 3403 **Electrical Machines Laboratory** **1 (0-3-2)**
Prerequisite : *EE 3402 Electrical Machines*

Laboratory works to be done according to EE 3402 Electrical Machines.

EE 3404 **Feedback Control Systems** **3 (3-0-6)**
Prerequisite : *EE 2203 Signals and Systems*

Linear control systems, open-loop and closed loop automatic control system, fundamental equations, transfer functions, signal flow diagram and zero plot, root locus method, bode diagram, Nichol chart, system stability, phase and gain margin, leading and lagging compensation, transient and steady –state analysis of the system.

EE 3405 **Digital Control Systems** **3 (3-0-6)**
Prerequisite : *EE 3406 Control Systems*

Computer-based control, control theory, basic digital control scheme, principles of signal conversion, basic discrete-time signals, time-domain models for discrete-time systems, z-transform technique, stability on the z-plane, sampling as impulse modulation, sampled spectra and aliasing, filtering, principles of discretization, z-domain description of sampled continuous-time plants, implementation of digital controllers, z-plane specifications of control system design, digital compensator design using frequency response plots, and digital compensator design using root locus plots.

EE 3406 **Control Systems** **3 (3-0-6)**
Prerequisite : *EE 2203 Signals and systems*

Mathematical models of systems; transfer function; system models on time domain and frequency domain; dynamic models and dynamic responses of systems; first and second order systems; open-loop and closed-loop control; feedback control and sensitivity, types of feedback control; concepts and conditions of system stability, methods of stability test.

EE 3601 **Electronic Circuit Design** **3 (3-0-6)**
Prerequisite : *EE 2603 Electronics Circuits Analysis*
or EE 2605 Engineering Electronics

Components of design process of electronic circuits; multiple-input Operational Amplifiers circuit design; power supply design; voltage regulator circuit design; wave shaping circuit design, Bipolar Junction Transistor (BJT) amplifier design, Field-effect Transistor (FET) amplifier design; power amplifier design; digital logic families and their circuits design.

EE 3602 **Electronic Circuits Design Laboratory** **1 (0-3-2)**
Prerequisite : *EE 3601 Electronic Circuit Design*

Laboratory works to be done according to EE 3601 Engineering Electronic Circuit Design

EE 3606 **Electrical Instruments and Measurements** **3 (3-0-6)**
Prerequisite : *EE 2201 Electric Circuits*
EE 2601 Electronic Devices and Circuits
or EE 2605 Engineering Electronics

Units and standard of electrical measurement; instrument classification and characteristics; measurement analysis; measurement of dc and ac current and voltage using analog and digital instruments; power, power factor, and energy measurement; the measurement of resistance, inductance, and capacitance; frequency and period/time - interval measurement; noises; transducers; calibration.

EE 3704 **Embedded Systems** **3 (3-0-6)**
Prerequisite : *EE 3705 Microprocessors and Microcontrollers*

Architecture, features and instruction sets of microcontrollers and DSP processors, interfacing techniques, requirements of power applications, external memory, peripherals, timers, DAC and ADC, sampling and real time considerations, programming, data acquisition. Introduction and development of micro-electro-mechanical (MEMS) technology.

EE 3705 **Microprocessors and Microcontrollers** **3 (3-0-6)**
Prerequisites : *CE 2704 Digital Logic Design*

Fundamental of microprocessors and microcontrollers : architecture, hardware, software, and interfacing.

EE 4201 **Network Theory** **3 (3-0-6)**
Prerequisite : *EE 2201 Electric Circuits*

Components of electric circuits; non-time-varying linear circuit, steady-state analysis for sinusoidal signals, graph network theory, mesh and node analysis, state equation, natural frequency, network function, four terminal network, positive-real function, driving point synthesis with R-R, R-C-L., one-port and two-port synthesis, Foster and Maclaurin network synthesis.

EE 4301 **Introduction to Electromagnetic Compatibility** **3 (3-0-6)**
Prerequisite : *EE 3301 Electromagnetic Fields*

Concepts of Electromagnetic Interferences (EMI) and EMC definitions, sources of EMI and their characteristics, EMI couplings, EMI mitigation and control, EMC standards, EMC testing techniques.

EE 4305 **Digital Signal Processing** **3 (3-0-6)**
Prerequisite : *EE 2203 Signals and Systems*

Continuous-time and discrete-time signals, spectral analysis; decimation and interpolation; sampling rate conversion; DFT; probabilistic methods in DSP; design of FIR, IIR digital filters, multirate systems and filter Banks; Discrete Wavelet Transform; introduction to some DSP applications such as image processing, speech and audio processing, array processing and further current applications.

EE 4401 **Electric Drive** **3 (3-0-6)**
Prerequisite : *EE 3402 Electrical Machines*

Development of electric drives, moment of electric drives, types of duties, electric braking, energy relation during starting and braking, calculation of motions of electric machines using analytical and graphical methods, calculations of motor ratings, important tracking machines, electric circuits and controls of traction machines, sample calculations, industrial applications of electric motors.

EE 4403 **Basic Mechatronics** **3 (3-0-6)**
Prerequisite : *ME 2210 Engineering Mechanics*
or ME 2211 Engineering Mechanics I
or EE 2401 Electromechanical Energy Conversion

Introduction to mechatronics with emphasis on PLC or industrial robots that used in automated manufacturing. Basic knowledge of Pneumatic and Hydraulic equipments will be overviewed.

EE 4501 **Power System Analysis** **3 (3-0-6)**
Prerequisite : *EE 3402 Electrical Machines*

Transmission and distribution networks calculation; load flow; load flow control; symmetrical short circuit analysis; unsymmetrical short circuit analysis; power system stability; economic operation.

EE 4503 **Electrical System Design** **3 (3-0-6)**
Prerequisite : *EE 2401 Electromechanical Energy Conversion*

Basic design concepts, codes and standards, power distribution schemes, electrical wires and cables, raceways; electrical equipment and apparatus, load calculation, power factor improvement and capacitor bank circuit design, lighting and appliances circuit design, motor circuit design; load, feeder, and main schedule, emergency power system, short circuit calculation, grounding system for electrical installation.

EE 4504 **Illumination Engineering** **3 (3-0-6)**
Prerequisite : *EE 2201 Electric Circuits*

Physical radiant and photometric quantities, measurements of light, radiation from incandescent sources, gaseous conduction and phosphorescence, lamps and lighting fitting, light properties of construction materials, interior and exterior lighting calculations.

EE 4505 **Power System Protection** **3 (3-0-6)**
Prerequisite : *EE 4501 Power System Analysis*

Fundamental of protection practices; instrument transformer and transducers; protection devices and protection systems; overcurrent and earth fault protection; differential protection; transmission line protection by distance relaying; transmission line protection by pilot relaying; motor protection; transformer protection; generator protection; bus zone protection; introduction to digital protection devices.

EE 4506 **High Voltage Engineering** **3 (3-0-6)**
Prerequisite : *EE 3301 Electromagnetic Fields*

Uses of high voltage and over voltage in power systems; generation of high voltage for testing; high voltage measurement techniques; electric field stress and insulation techniques, breakdown of gas; liquid and solid dielectric; high voltage testing techniques; insulation coordination.

EE 4518 **Electrical Power Generation, Transmission and Distribution** **3 (3-0-6)**
Prerequisite : *EE 3402 Electrical Machines*

Load curve, diesel power plant, steam power plant; gas turbine power plant, combined cycle power plant, hydro power plant, nuclear power plant, renewable energy sources, type of substation, substation equipment, substation layout, lightning protection, grounding system.

EE 4600 **IC Technology** **3 (3-0-6)**
Prerequisite : *EE 2603 Electronics Circuits Analysis*
or EE 2605 Engineering Electronics

Crystal growth and sample preparation, magnetic cleaning, epitaxial processes, oxidation, diffusion, ion implantation, CVD, metallization, sputtering, lithography, etching, assembly, packaging, IC devices and components such as resistance, capacitors, diode etc., MOSIC, bipolar transistor IC.

EE 4601 **Industrial Electronics** **3 (3-0-6)**
Prerequisite : *EE 3601 Electronic Circuit Design*

Solid-state devices in industry; sensors, light detector, time etc. and their applications, multiphase solid-state rectifier, voltage control, magnetic amplifier, integrated circuits, digital circuits, sequential control, digital control.

EE 4602 **Industrial Instrumentation and Control** **3 (3-0-6)**
Prerequisite : *EE 3404 Feedback Control Systems*
or EE 3406 Control Systems

Analog and digital equipment and measuring instruments; various types of transducers, data processing and displays; study of techniques of system control in industry in order to be able to do some analysis, design, equipment selection and maintenance for the control system in industry.

EE 4701 **Microprocessor Interface Techniques** **3 (3-0-6)**
Prerequisite : *EE 3705 Microprocessors and Microcontrollers*

Revision of 8-bit, 12-bit, 16-bit microprocessors, hardware, using programming in instruction sets. Emphasis will be placed on techniques of interfacing microprocessor to computer systems : (ISA, Serial communication port, Parallel communication port, PCI, SCSI, IDE, A/D & D/A converters). Project work piece and report are required to complete the course requirements.

EE 4705 **Power Electronics** **3 (3-0-6)**
Prerequisite : *EE 2603 Electronic Circuits Analysis*
or EE 2605 Engineering Electronics
and EE 3402 Electrical Machines

Characteristics of power electronics devices, power diode, thyristors, power bipolar; MOSFET, IGBT, characteristics of magnetic material, power transformer core, ferrite core, iron powder core, converters, ac to dc converter, dc to dc converter, ac to ac converter, dc to ac converter.

EE 4706 **Power Electronics Laboratory** **1 (0-3-2)**
Prerequisite : *EE 4705 Power Electronics*

Experiments to be done according to EE 4705 Power Electronics

EE 4901 **Electrical and Electronics Engineering Project I** **1 (0-3-2)**
Prerequisite : *Completion of 100 credits*

Study and development of project in electrical and electronics engineering. Students must submit a report at the end of the semester.

EE 4902 **Electrical and Electronics Engineering Project II** **2 (0-6-3)**
Prerequisite : *EE 4901 Electrical and Electronics Engineering Project I*

Continuation of project done in electrical and electronics engineering Project I. Report is also required at the end of the semester.

EE 4903 **Advanced Topics in Electrical and/or Electronics Engineering** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Topics of current interest and new developments on Electrical and/or Electronics Engineering.

EE 4904 **Special Problems in Electrical and/or Electronics Engineering** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Investigation of special problems assigned by the instructor with the consent of the Faculty : a written report is required.

EE 4907 **Electrical Engineering Industrial Training** **3 (0-9-6)**
Prerequisite : *Consent of the Chairperson*

Student needs to apply for internship from Company that dealing in Electrical Engineering field. Student need to submit a full report regarding their duty assigned to the responsible faculty.

EN 2230 **Listening and Speaking** **3 (3-0-6)**
Prerequisite : *BG 1002 English II*

Intermediate English skills in listening and speaking within the contexts of daily usage, academic and business.

EN 3212 **Communicative Writing Skill Development** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

English writing skill development in business and academic contexts and language structure improvement.

EN 3213 **Business Communication in English** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*
or EN 3212 Communicative Writing Development

Overview of organizational communication, basic principles of Corporate Social Responsibility (CSR) and business English communication using various forms of media.

EN 3234 **English Pronunciation** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Correct American English pronunciation with emphasis on individual sounds, sounds in words, phrases, and sentences for speech intelligibility in academic, social and professional settings.

EN 3240 **Reading in Business English** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Critical comprehension capacity and speed in reading on current issues related to business, interpretation of the structure and objectives of various texts, outlines and short synopses of selected materials as well as discussions on assigned topics.

EN 3270 **Translation : English-Thai** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Purposes, type of texts, methods and techniques of translation from English into Thai, development of skills in analyzing sentence patterns of English language, use of words, idioms and structures for accuracy in meaning and style of the original document, and development of competency to produce equivalent texts in Thai.

EN 3271 **Translation : Thai-English** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Purposes, type of texts, methods and techniques of translation from Thai into English, development of skills in analyzing sentence patterns of Thai language, use of words, idioms and structures for accuracy in meaning and style of the original document, and development of competency to produce equivalent texts in English.

EN 3281 **English for Tourism** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Practice in English for correct and efficient communication in all aspects of travel and tourism.

EN 3282 **English for Hotels** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Practice in English as used in hotel administration, reception, services and business contacts.

EN 3283 **English for International Trade** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

English communicative skills and general concepts of import/export and international business.

EN 3287 **English for Office Management** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

English skills and proficiency for office management, practice in office work arrangement, meeting organization and minutes taking, appropriate work etiquette and professionalism.

EN 3288 **English for Airline Business** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

English communicative skills used in airline business, basic knowledge of the aviation industry and airline works, and specific terminology for airline business.

EN 3289 **English for Music Business** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

English communicative skills for effective learning and participating in music related topics. Discussion of music terminology and journalistic texts of various music genre and music business.

EN 3290 **English for Entrepreneurship** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Study and practice English for work and negotiation to become skilled entrepreneurs in business start-ups.

EN 3291 **Intercultural Business Communication** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Basic elements of culture and communication skills with an emphasis on cross-cultural interpretation and interpersonal communication.

EN 3292 **Grammar Essentials for Professional Life** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Review of the rules of grammar, identifying common grammar errors and refining business writing styles.

EN 3293 **English for Human Resources** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

The development of communication and English language skills needed to perform in a variety of human resources situations including the enhancement of human resources terminologies and phrases used in the international human resources context.

EN 4232 **Business Conversation** **3 (3-0-6)**
Prerequisite : *EN 3213 Business Communication in English (or) BG 2001 English IV*

Practice in conversation on topics related to business, development of efficiency in the oral application of the language in business settings; and effective problem-solving in small groups

EN 4233 **Public Speaking in English** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Develop skills for effective public speaking in English. Focus on methods and practices for better informative and persuasive speaking, speech organization and visual aids.

EN 4241 **Critical and Analytical Reading** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Development of critical and analytical reading skills, identification of various types of rhetorical strategies, analysis of global current socio-economic and humanitarian issues.

EN 4254 **Academic Writing** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Advanced writing skills for communication within academic and business contexts in an internationally accepted documented format.

EN 4256 **Introduction to Business Research Writing** **3 (3-0-6)**
Prerequisite : *EN 3212 Communicative Writing Development*

Methodology and tools in business research, practice in writing for clarity and efficiency with correct terminology, and summaries in business research documents.

EN 4257 **Understanding and Note-taking in Business Context** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*
or EN 3213 Business Communication in English

Advanced skills in understanding, note-taking and summarizing in a variety of business context.

EN 4258 **Reading in English Journalism** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Analysis of various forms of journalism including domestic and international news, business news, columns, editorial, letter to the editor and feature stories together with the impact of newspapers and online journalism on society.

EN 4262 **Reading of Modern Viewpoints** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Reading and discussions of texts representing recent thoughts and views on human civilization, global citizenship, international affairs and analysis of articles published in a variety of fields

EN 4272 **Translation in Business English** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV OR*
EN 3270 Translation : English-Thai
or EN 3271 Translation : Thai-English

Translation of business contents in printed materials and media from English into Thai and Thai into English.

EN 4291 **Seminar in Business English** **3 (3-0-6)**
Prerequisite : *By consent of the instructor*

Seminar on selected topics related to business or business English, case study in a form of workshop and/or panel discussion for efficient communicative and leadership skills.

EN 4292 **Business Article Writing** **3 (3-0-6)**
Prerequisite : *BG 2001 English IV*

Theories and practice of business article writing for various types of media.

EN 4293 **Business English Internship** **3 (3-0-6)**
Prerequisite : *By consent of the instructor*

Practice English communication skills in a real world setting and gain practical experience in one of business fields such as hotel, tourism, airline, etc.

FIN 2201 **Principles of Finance** **3 (3-0-6)**
Prerequisite : *MA 1200 Mathematics for Business*

Principles of money, financial system, financial intermediaries, financial markets, interest rate determination, money supply and the impacts of monetary and fiscal policies on money supply, financial statements analysis, pricing of debt instruments, time value of money, foreign exchange system, banking products and services, application of principles of finance on the money management including financial planning, personal investment, budgeting, tax planning, credit management, insurance protection, and retirement planning.

FIN 2700 **Money, Banking and Financial Markets** **3 (3-0-6)**
Prerequisite : *MA 1200 Mathematics for Business*

Financial system, financial intermediaries, financial markets, financial instruments, interest rate determination, term structure and risk structure of interest, time value of money, pricing of debt instruments, financial statement analysis, foreign exchange system as well as wealth management focusing on wealth, insurance protection, retirement planning, fundamentals of investment, and stock investment.

FIN 3101 **Corporate Finance** **3 (3-0-6)**
Prerequisite : *FIN 2201 Principles of Finance*
or ECO 2541 Principles of Macroeconomics

An introduction to corporate financial management and a comprehensive overview of managerial perspectives for financial managers in making effective investment and financing decisions, including time value of money, risk and return, cost of capital, valuation of stocks and bonds, project evaluation using capital budgeting decision-analysis tools, impact of financial leverage on cost of capital and valuation, dividend policy, financial statement analysis, and Microsoft Excel functions for making financial decisions.

FIN 3102 **Business and Economic Analysis for Making Decision** **3 (3-0-6)**
Prerequisite : *FIN 2201 Principles of Finance*
ECO 2202 Macroeconomics

Understanding the working of macroeconomic system to encapsulate the changes in economic environment caused by fluctuations in business activities and policy responses and to investigate their effects on business performance including trends, opportunities and threats to businesses in both real and financial sectors using economic models and the relevant analysis tools to make successful business and financial decisions.

FIN 3201 **Investment** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
ECO 2202 Macroeconomics
Completion of 90 credits

Fundamental knowledge of investment : definitions, theories, and implementations, using quantitative tools such as investment software and investment simulation in making financial decision, including topics such as philosophical basis of investment principles, ethics in investment, risk and expected return relationship, security exchanges and indexes, company and securities analysis, securities valuation frameworks and methodologies of fundamental and technical analysis, portfolio management theories and analysis, capital market theories, capital market efficiency theories, and introduction to fixed income valuation.

FIN 3202 **Financial Reporting and Analysis** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Current practices in corporate financial reporting and fundamental issues relating to asset valuation and income determination, emphasizing on financial statement analysis and interpretation of financial disclosures to help improving risk assessment, forecasting, and decision making, analyzing the firms' financial statements and disclosures to determine how the firms' particular accounting choices reflect the underlying economic of the firms, including topics on the assets side such as inventory, equity investment, PPE, and intangibles and liabilities side on long-term debt, convertible securities, employee pensions, leases, and deferred tax as well as revenue and expense recognition issues, computation of diluted earnings per share, basic financial statement analysis of cash flows, and generally accepted accounting principles that affect the format and presentation of the financial statements.

FIN 3203 **Bank Management** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Theories, practices and management of banking including the analysis of bank performance, essential elements in bank management : assets and liabilities management, capital management, liquidity management, credit management, risk management, organization and structure of banking industry, banking regulatory standards and impacts of bank regulatory changes, and current issues in the banking industry.

FIN 3211 **Fixed Income Securities** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Fixed income instruments and fixed income markets such as technical terms, properties of fixed income securities, assessment of value of fixed income instruments, techniques used to analyze the market, assessment and control of risk, methods to evaluate direction of changes in interest rates and impact of changes in interest rates on pricing, hedging of forwards, futures and swaps, asset-backed securities, and other fixed income derivatives leading to construction of fixed income investment strategies to achieve expected return on investment.

FIN 3212 **Real Estate Investment and Entrepreneurs** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Practical skills to evaluate, acquire, and manage institutional and family-owned real estate portfolios, development of business plans and the evaluation of alternative strategies : financial statement analysis of corporate real estate, real estate valuation and models, real estate investment decision making and portfolio, project development process and lender requirement, real estate laws, mortgage value, dealing with appraisal of real estate development projects, financial strategies, risk and return analysis of real estate, Real Estate Investment Trusts (REITs), infrastructure funds, Thailand futures funds, and a written real estate proposal requesting for a bank loan as an real estate entrepreneur.

FIN 3221 **Financial Feasibility Planning** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*

Theories with practice to assess structure, procedures and data of an investment project in order to evaluate its feasibility, investment opportunities, relationship between financial feasibility and other related factors : economic feasibility, marketing feasibility, technical feasibility, organizational feasibility, and legal framework in making successful investment decision.

FIN 3231 **Financial Feasibility Planning** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Theories with practice to assess structure, procedures and data of an investment project in order to evaluate its feasibility, investment opportunities, relationship between financial feasibility and other related factors in making successful investment decision, capital budgeting process including financial projection, cost of capital, and evaluating the return from investment, as well as, the new techniques in evaluating the investment opportunities.

FIN 3232 **Venture Capital and Entrepreneurial Finance** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 90 credits

Venture capital, financing new or small and medium sized enterprises : techniques for forecasting and planning the firm's investment needs, identifying and valuing business opportunities, sources of capital and characteristics, new venture strategy, planning, valuation and financing, financial forecasting and contracting, venture capital market, choices of financing, and investors' perspectives of valuation.

FIN 3233 **Export-Import Procedure and Financing** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*

International trade regulation, import-export documentations and procedures, customs regulation, methods and techniques used to finance international, export-import financing within Thailand, government's and financial institutions' rules, regulations and services, financial markets for export-import financing instruments, risk-return aspects of international trades, exchange rate risk measurement and management.

FIN 3234 **Central Banking System and Policy** **3 (3-0-6)**
Prerequisite : *FIN 2201 Principles of Finance*
or ECO 2541 Principles of Macroeconomics

An overview of central bank's roles and its operations, the transmission mechanism of monetary policy interacts with financial markets and commercial banks, the effects of such policy towards financial institutions and economic system of the country, causes and management of banking crises, policies designed to prevent the crises, such as capital adequacy regulations, deposit insurance protection, and lender of last resort function of the Central banks.

FIN 3235 **Managerial Economics** **3 (3-0-6)**
Prerequisite : *ECO 2201 Microeconomics*
ECO 2202 Macroeconomics

Economics concepts and principles from the perspective of managerial economics : economics terminology and reasoning for the improvement of managerial decisions, application of economic theories, methodologies and analysis to develop essential tools for making optimal decision, demand-supply analysis and estimation, production and cost analysis under different market structures, forecasting, competitive analysis, game theory, and decision making under uncertainty.

FIN 3236 **Laws and Practices in Finance** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*

Legal instructions to the application of Thai and international laws, rules, and regulations to finance industry, focusing on financial institutions and listed company regulated by the Bank of Thailand such as capital requirement, liquidity requirement, and deposit guarantee scheme, capital market laws regulated by the Securities and Exchange Commission (SEC) such as issuance of securities, public offering, merger and acquisitions, securities businesses, asset management business and derivatives businesses.

FIN 3237 **Wealth Management and Financial Planning** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*

Foundation of wealth management and financial planning, ethics, roles and responsibilities of financial planners, the major components of wealth management and personal financial planning : investment planning, insurance planning, retirement planning, tax planning, estate planning and financial plan construction.

FIN 3701 **Corporate Finance** **3 (3-0-6)**
Prerequisite : *FIN 2700 Money, Banking and Financial Markets*
or ECO 3713 Economics of Money and Banking

Introduction to corporate financial management and comprehensive overview of managerial perspectives, corporate governance, theories related to corporate investment, financing options, investment decision, project evaluation, time value of money, security valuation, analysis of financial statement, cash flow and leverage, working capital management, cost of capital, capital structure, capital budgeting and dividend policy for corporation.

FIN 3711 **Investment** **3 (3-0-6)**
Prerequisite : *FIN 2700 Money, Banking and Financial Markets*
ECO 2202 Macroeconomics

Fundamental knowledge of investment, definitions, theories, implementations, and decision-making in financial markets and capital markets including philosophical basis of investment principles, ethics in investment, risk and expected return relationship, security exchanges and indexes, company and security analysis, valuation frameworks and methodologies, portfolio management theories and analysis, capital market theories, capital market efficiency, fixed income valuation, and technical analysis.

FIN 3724 **Financial Feasibility Planning** **3 (3-0-6)**
Prerequisite : *FIN 3701 Corporate Finance*

Theories and practice to assess structure, procedures and data of an investment project in order to evaluate its feasibility, investment opportunities, relationship between financial feasibility and other related factors : economic feasibility, marketing feasibility, technical feasibility, organizational feasibility, and legal framework in making successful investment decision.

FIN 3821 **Valuation** **3 (3-0-6)**
Prerequisite : *FIN 3711 Investment*

Business analysis and valuation including evaluation of value and performance of a company, investment opportunity, equity valuation including equity valuation models and techniques, real estate valuation and investment including real estate evaluation models, appraisal of real estate development projects and real estate investment.

FIN 3822 **Bank Management** **3 (3-0-6)**
Prerequisite : *FIN 3711 Investment*

Theories, practices and management of banking including analysis of bank performance, essential elements in bank management, assets, liabilities and capital management, liquidity management, credit management, risk management, organization and structure of banking industry, banking regulatory standards and impacts of bank regulatory changes, and current issues in banking industry.

FIN 3823 **Financial Management** **3 (3-0-6)**
Prerequisite : *FIN 3701 Corporate Finance*
Completion of 90 credits

Financial management with emphasis on practical application and case study approach to strategically evaluate the performance of corporations and create value for shareholders, financial planning and forecasting, cash budgeting, capital structure, capital budgeting, cost of capital, firm valuation, dividend policies, working capital management, corporate risk management, and contemporary issues in financial management.

FIN 4101 **Financial Management** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 109 credits

Financial management with emphasis on practical application and financial decision making using case-study approach to strategically evaluate the firm's performance and maximize value of the firms, topics included financial decision : planning, investing and forecasting such as dividend policy, mergers and acquisitions, corporate and reorganization as well as financing decision : alternative source of financing including hybrid securities, identification and assessment of potential impact of emerging issues regarding finance and financial management, cash budgeting, capital structure, capital budgeting, cost of capital, firm valuation, dividend policies, working capital management, corporate risk management, and contemporary issues in financial management.

FIN 4102 **International Finance** **3 (3-0-6)**
Prerequisite : *FIN 3101 Corporate Finance*
Completion of 109 credits

International finance and international financial environment focusing on the managerial aspects of international financial management from the MNCs' perspectives and analyzing financial problems involved in engaging in international business, international financial markets, international capital flows, foreign exchange policies and systems, policies and strategies adopted by MNCs in assessing, measuring and managing their foreign exchange rate risk exposures and other related risks, and international financing, and capital structure decisions.

FIN 4103 **Derivatives Securities** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 109 Credits

Types of derivative securities, mechanics of their markets, their application for hedging and/or speculation, and their valuation, basic modeling techniques for stock prices and other underlying assets which can be used for valuation of plain derivatives such as forwards, futures, options, and swaps in an arbitrage-less market, practical issues of derivatives trading, valuation, and risk management.

FIN 4104 **Quantitative Analysis for Financial Decision** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 109 Credits

Important quantitative and statistical tools in applied finance, financial markets and risks from a quantitative point of view, relationship between risk and return and models for managing financial risks, emphasizing on three essential fields : finance, statistics and computer programming, exposing to the application of these tools and the key properties of financial data, review of statistics and introduction to time series econometrics, modeling of financial returns, and analysis of financial data using R program.

FIN 4111 **Financial Modeling** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 109 credits

Financial modeling applicable to business solutions, development and implementation of financial models in making financial decision, use of appropriated software in handling complicate financial modeling and large data to simulate and analyze stock price and return, portfolio optimization, fitting and forecasting technique with time series data, and Markov Chain Monte Carlo (MCMC) method for finance.

FIN 4112 **Portfolio Management and Security Analysis** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 109 credits

Portfolio management, theories and models of security analysis, portfolio construction, optimum portfolio and selection process, single-index model and multi-index model, asset pricing model, portfolio performance measurement, as well as developing and testing the investment strategies.

FIN 4201 **Special Topics in Finance** **3 (3-0-6)**
Prerequisite : *FIN4104 Quantitative Analysis for Financial Decisions*
Completion of 127 credits

Ethical and professional standards, alternative investment, contemporary issues in finance and applying theories into real world practices regarding corporate governance, business sustainability, investment banking, merger and acquisition, venture capital, microfinance, Islamic bank, financial law, financial simulation techniques, current situations, and contemporary issues, such as value investing, financial crisis, shadow banking, financial technology, etc.

FIN 4202 **Corporate Strategies and Financial Policies** **3 (3-0-6)**
Prerequisite : *FIN4101 Financial Management*
Completion of 127 credits

Synthesizing of knowledge from various subjects in making corporate decisions including corporate strategy, financial policies and theoretical framework used in making corporate decision focusing on capital structure, mergers and acquisitions, corporate takeovers, corporate, business, and financial strategies, valuation, restructuring, leveraged buyouts, tax implications, corporate governance, investment banking and corporate policies by applying case study and current business situations.

FIN 4211 **Risk Management** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 127 credits

Firm-wide risk and financial risks framework : concepts, process and practical application of analytical techniques in identifying, quantifying, assessing, controlling risk and making risk management decision along with risk regulation and control; financial risks : credit risk, market risk, liquidity risk, counterparty credit risk, settlement risk as well as systematic risk and non-financial risks : strategic risk, business risk, operational risk, policy risk, legal risk, and reputational risk.

FIN 4231 **Behavioral Finance** **3 (3-0-6)**
Prerequisites : *FIN 3101 Corporate Finance*
MGT 2404 Managerial Psychology

A study of how individuals and firms make financial decisions which these decisions might deviate from those predicted by traditional financial or economics theories, existence of psychological biases in financial decision-making, examination of the impacts of these biases on the financial markets and other financial settings, theory and practice of behavioral finance, biases that drive human behavior, prospect theory, common investment mistakes, role of randomness in finance, practical applications of behavioral finance, investigation of how insights of behavioral finance complement traditional finance paradigm, limited arbitrage, style investing, stock valuation, portfolio construction, asset allocation, and risk management.

FIN 4232 **Financial Mathematics** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*

Introduction to the mathematical models used in finance : models for pricing financial instruments, calculus with applications in finance and economics, linear programming, probability, random walks, Brownian motion, lognormal model of stock prices, Black-Scholes theory of options, simulations, basic stochastic process with applications to marginal analysis, asset pricing models, and optimization.

FIN 4233 **Valuation** **3 (3-0-6)**
Prerequisite : *FIN 3202 Financial Management*
Completion of 109 credits

Introduction to valuation, approaches to valuation, riskless rates and risk premiums, estimating risk parameters and costs of financing, measuring earnings, cash flows, estimating growth and terminal value, dividend discount models, free cash flow to equity discount models, firm valuation, estimating equity value per share, relative valuation, and valuation of other assets and firms.

FIN 4234 **Investment Banking** **3 (3-0-6)**
Prerequisite : *FIN 3201 Investment*
Completion of 109 credits

Management, structure, theories, practices and spreadsheet skills of investment banking : due diligence, initial public offering, financing and investing, valuation methodologies, mergers and acquisitions, leveraged buyouts, tax implications and a dealing structure and report.

FIN 4235 **Individual Research in Finance** **3 (3-0-6)**
Prerequisite : *Department approval*
Completion of 127 credits

Individual research by applying theoretical financial concepts and theories to real world issues of an organization in a financial industry in Thailand, with a specific area of concentration selected by students upon the agreement of a supervisor assigned by the Finance Department, with the requirement of a submission of a typewritten report and analysis as well as a professional presentation at the end of the semester.

FIN 4236 **Internship in Finance** **3 (3-0-6)**
Prerequisite : *Department approval*
Completion of 127 credits

Extension of theories beyond the classroom to gain valuable real-world experience from the finance industry, with certain requirements, criteria and the approval from the Finance Department prior to join the internship program at the organization.

FR 0500 **French for Beginners I (Non-Business French Major)** **3 (3-0-6)**
Prerequisite : *nil*

Basics of the French language in listening, speaking, reading, and writing in an interactive and communicative way and day-to-day French.

FR 0501 **French for Beginners II (Non-Business French Major)** **3 (3-0-6)**
Prerequisite : *FR 0500 French for Beginners I*

Intermediate French grammar, practice of listening, speaking reading and writing in simple French in a range of everyday situations.

FR 1500 **Introduction to French** **3 (3-2-7)**

Introduction to fundamental grammar, practice of reading and writing short essay and dialogues on various areas, use of oral comprehension and expressions.

FR 1501 **French I** **3 (3-2-7)**
Prerequisite : *FR 1500 Introduction to French*

Higher level of grammar, reading basic texts and dialogues concerned with everyday life in French-speaking countries and practice of writing paragraph.

FR 2501 **French II** **3 (3-2-7)**
Prerequisite : *FR 1501 French I*

In-depth grammatical structure, reading texts and dialogues concerned with everyday life in French-speaking countries and practice of writing short articles.

FR 2502 **French III** **3 (3-2-7)**
Prerequisite : *FR 2501 French II*

Advanced grammar structure, reading texts and dialogues concerned with everyday life in French-speaking countries and practice of writing short articles with complex sentences.

FR 3501 **Business French I** **3 (3-0-6)**
Prerequisite : *FR 2502 French III*

Understanding of various contexts in business communication, practice of reading, speaking and writing by using business vocabulary.

FR 3512 **Business Communication in French** **3 (3-0-6)**
Prerequisite : *FR 2502 French III*

Review of technical terms in business, various types and forms of letters, practice of listening, reading and writing texts and letters in business context.

FR 3530 **Oral Comprehension and Expression** **3 (3-0-6)**
Prerequisite : *FR 2502 French III*

Practice of listening, oral comprehension and discussion, technique of giving opinion and argument on various topics.

FR 3532 **French Conversation and Discussion** **3 (3-0-6)**
Prerequisite : *FR3530 Oral Comprehension and Expression*

Practice of speaking skills on daily life and business topics, through individual presentations, group and panel discussion pattern.

FR 3534 **French Phonetics** **3 (3-0-6)**
Prerequisite : *FR 2502 French III*

Concepts and principles of phonetics, speech articulators, French speech sounds system, symbols of IPA and transcription, articulatory problems.

FR 3537 **Communicative Skills in French** **3 (3-0-6)**
Prerequisite : *FR 2501 French II*

A thorough structure review, vocabulary enrichment, and development of the four core competencies. It focuses on real-life language use.

FR 3538 **Basic business French** **3 (3-0-6)**
Prerequisite : *FR 2501 French II*

An introduction to the language of business in French. The course enables students with the vocabulary and terminology of the business setting as well as the ability to communicate in French in various professional contexts, for example tourism and hotel industry, airline, etc.

FR 3570 **Translation : French-Thai (or FR3532 French Conversation and Discussion - for foreign students)** **3 (3-0-6)**

Prerequisite : *FR 2502 French III*

Translation of sentences, paragraphs and articles from various sources : extracts from articles, newspapers, books, advertisement and websites, selection of proper words, idioms and structures to convey the accurate meanings and style levels of the original documents.

FR 3581 **French for Tourism** **3 (3-0-6)**

Prerequisite : *FR 2502 French III*

Use of the French language in tourism, a field trip with the professional guide, general knowledge of tourism business and role play in the selected situation.

FR 3582 **French for Hotels** **3 (3-0-6)**

Prerequisite : *FR 2502 French III*

Various dialogues of French as used in hotels and restaurants, reception, services and message taking from inside and outside calls, French-Thai foods and beverages, French wine.

FR 4502 **Business French II** **3 (3-0-6)**

Prerequisite : *FR 3501 Business French I*

In-depth study of business French and advanced French vocabulary through practice of listening, speaking, reading and writing skills.

FR 4540 **Reading in Business French** **3 (3-0-6)**

Prerequisite : *FR 2502 French III*

Techniques of reading articles in business contexts, interpretation of factors and purposes used in the articles, developing outlines and short synopses of selected material and leading discussions on the assigned topics.

FR 4542 **Reading French Magazines and Newspapers** **3 (3-0-6)**

Prerequisite : *FR 3501 Business French I*

Readings and analyses of various articles, with the study of the vocabulary and the context of the articles on the current interest and business oriented. A study of French language press in particular : newspapers, magazines and articles through the internet, and its impact on the French-speaking society and discussion in class by groups or panels.

FR 4572 **Translation in Business French** **3 (3-0-6)**

Prerequisite : *FR 3501 Business French I*

Practice of translation from French into Thai : various types of articles and business data from newspapers, texts, magazines and internet articles, etc.

FR 4573 **Aspect of French-Speaking Countries** **3 (3-0-6)**

Prerequisite : *FR 2502 French III*

French speaking countries' life style and culture, thought patterns, mentality, civilization and interdisciplinary studies.

FR 4574 **French for Academic and Professional Purposes** **3 (3-0-6)**

Prerequisite : *FR3501 Business French I*

Development of students' French language skills for a particular work or study specialty such as French for academic and professional purposes with emphasis on terminology and vocabulary.

FR 4590 **Seminar** **3 (3-0-6)**

Prerequisite : *Consent of Instructor*

Various problems in using Business French. Workshop and panel discussions.

FR 4591 **Selected Topics in French Studies** **3 (3-0-6)**
Prerequisite : *FR 2502 French III*

Critical analysis of French language or culture on assigned topics.

FT 3100 **Introduction to Food Technology** **2 (2-0-4)**
Prerequisite : *BS 2006 Basic Biochemistry*

Roles of food industry in relation to modern societies, scientific principles and operations involved in the preservation and manufacture of foods, food composition, nutrition labeling and marketing of a representative range of commercial foods, current consumer issues such as the safety of food additives, food irradiation, consumer protection, new product development, food regulations and future trends in food supplies.

FT 3103 **Food Microbiology** **3 (2-3-5)**
Prerequisite : *BS 2011 Introduction to Microbiology*

Microorganisms in food safety and spoilage, their growth parameters, main characteristics of common food-borne pathogens e.g. bacteria, viruses, parasites and fungi, contamination routes and surviving in foods, subsequent diseases and possible means for controlling, a background to practically identify and examine the organisms, and corresponding laboratory sessions.

FT 3105 **Human Nutrition** **3 (3-0-6)**
Prerequisite : *BS 2006 Basic Biochemistry*

Importance of nutrition in daily life, dietary nutrients, chemical composition, food sources, roles and functions in human body, the digestion, absorption, and metabolism of nutrients, diseases associated with nutrient deficiency, and appropriate nutrition for people through the life cycle for example pregnancy and lactation, infancy, childhood, and adolescence, adulthood and the later years.

FT 3106 **Industrial Food Processing I** **3 (2-3-5)**
Prerequisite : *FT 3100 Introduction to Food Technology*

Fundamental knowledge of commercial food processing, thermal processing, low temperature processing, freezing, dehydration, irradiation and chemical preservation, food variables, food quality and raw material preparation, minimal process and waste treatment in food factory, and corresponding laboratory sessions.

FT 3108 **Food Chemistry I** **3 (2-3-5)**
Prerequisite : *BS 2004 Analytical Chemistry and*
BS 2006 Basic Biochemistry

Basic food components, water, carbohydrate, protein and lipid, their chemistry governing properties and functions in different foods, changes of food components during processing and storing, chemical spoilages and prevention, and corresponding laboratory sessions.

FT 3109 **Food Chemistry II** **3 (2-3-5)**
Prerequisite : *FT 3108 Food Chemistry I*

Chemistry of pigments, odor and food additives, factors affecting properties, functions, sources and mechanism in different foods, chemical reaction of enzymes, changes and contamination of toxic substances in foods, theory, selection, analysis techniques of food with scientific instrument, and corresponding laboratory sessions.

FT 3110 **Food Law and Regulation** **1 (1-0-2)**

A general overview of the laws, regulations, history and policies that govern food regulation in Thailand, practical applications of the food laws and regulations including regulatory compliance, administrative procedure, food and color additive approval, an introductory knowledge of international food regulation, food standards, codex, risk analysis, and nutritional labeling. Halal and Kosher regulation

FT 3111 **Food Engineering I** **3 (2-3-5)**

Mass and energy balance. Basic knowledge in fluid mechanics, heat and mass transfer, and rate kinetics. Design and engineering principles of various unit operations used in food industries. Topics including pumps, flow measurement devices, heat exchangers, evaporators, dryers, refrigerators, freezers, particulate solids and mixers, size reduction units, homogenizers, and corresponding laboratory sessions.

FT 3112 **Food Engineering II** **3 (3-0-6)**
Prerequisite : *FT3111 Food Engineering I*

Engineering principle, design and applications in food industry includes mass and energy balance under chemical and biological reaction, heat and mass transfer under unsteady state conditions. Concepts of engineering in modern heat exchanging systems, boilers, freeze drying, colligative properties of foods, food rheology, extrusion, food frying, separation process and non-thermal processing of foods.

FT 4108 **Industrial Food Processing II** **3 (2-3-5)**
Prerequisite : *FT 3106 Industrial Food Processing I*

Processing technologies of food products, fruit and vegetable, cereal, meat and poultry, fishery, bakery, confectionery, dairy, appropriated packaging, and factors affecting product qualities during storage and transportation, basic plant layout, advanced food processing, and corresponding laboratory sessions.

FT 4110 **Food Marketing and Management** **3 (3-0-6)**
Prerequisite : *BG 2403 Introduction to Economics*

Basic principles of marketing and management of food products, environmental factors in food industry, consumer's buying behavior, food marketing research, product development, pricing strategy, distribution channel, and promotion strategy with examples and case studies of food products. Understand food entrepreneurship

FT 4112 **Food Quality Control** **3 (2-3-5)**
Prerequisite : *BG 1201 Statistics I and*
FT 3106 Industrial Food Processing I

Food production as a systematic and controlling process, acceptance sampling plans for analysis and control of quality, chemical, physical and microbiological qualities of food and food products and how to measure them, quality management, quality control, quality assurance and quality improvement, quality assurance systems in food factory; and corresponding laboratory sessions.

FT 4113 **Food Product Development** **3 (2-3-5)**
Prerequisite : *FT 4108 Industrial Food Processing II*

New products and new product development process for food industry, how to generate and convert product idea concept into actual product ready for commercialization which include idea screening, product concept development, product formulation and process development, product quality testing, shelf life evaluation, product launching and evaluation, food entrepreneur cases, and corresponding laboratory sessions.

FT 4114 **Bakery Technology** **3 (2-3-5)**

Science and technology in the production of safe and nutritious bakery products, properties and quality of ingredients, production methods of different bakery products, equipment, quality control, causes of product spoilage, storage methods to maintain good quality of bakery products, plant sanitation, packaging of bakery products, and corresponding laboratory sessions.

FT 4115 **Fruit and Vegetable Technology** **3 (2-3-5)**
Prerequisite : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Products II

Chemical and physical structure of fruits and vegetables, postharvest changes and handling methods of fresh fruits and vegetables, and commercial processing methods for preservation of fruits and vegetables, advanced technologies in fruit and vegetable processing, and corresponding laboratory sessions.

FT 4116 **Food Toxicology** **3 (2-3-5)**
Prerequisites : *FT 3103 Food Microbiology*
FT 3105 Human Nutrition and
FT 3109 Food Chemistry II

Chemistry and biochemistry of toxins naturally occurring in food from plants and animals, toxins from microorganism, food additives, and chemical contaminants, routes of entry, metabolism, manifestation of the toxin in body, and corresponding laboratory sessions.

FT 4117 **Dairy Technology**
Prerequisite : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Products II

Milk production and quality in terms of composition, structure, properties and microbiology of milk, principles of commercial practices in processing of milk and dairy products, advanced technology used in dairy industries, and corresponding laboratory sessions.

FT 4120 **Food Additives** **3 (2-3-5)**
Prerequisite : *FT 3109 Food Chemistry II*

Types of food additives from nature and synthesis, amino acids, antioxidants, antimicrobial agents, enzymes, polysaccharides, food colors, and food flavor, functional food ingredients, phytochemicals, flavonoids, phenolic compounds, laws and regulations, their significant in commercial food processing, and corresponding laboratory session.

FT 4121 **Meat Poultry and Fishery Technology** **3 (2-3-5)**
Prerequisites : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Product II

Chemical and physical structure of animal muscles used for human consumption, postmortem changes in muscles and factors affecting the quality of muscle products, pigment development and changes in animal tissues, deterioration and spoilage of animal tissues during processing and storage, and production of different meat, poultry and fishery products, and corresponding laboratory sessions.

FT 4122 **Confectionery Technology** **3 (2-3-5)**
Prerequisite : *FT 4108 Industrial Food Processing II*

Classification, quality and property of raw materials, characteristics, manufacturing process, and market trend of various sugar and chocolate confectioneries and corresponding laboratory sessions.

FT 4123 **Food Sanitation** **3 (2-3-5)**
Prerequisite: *FT 3103 Food Microbiology*

Principles of cGMPs of food processing, plant layout, receiving raw material, food handling, warehouse controlling, cleaning, pest controlling, water treatment and personnel hygiene, theory and practices on principles of Hazard Analysis of Critical Control Points (HACCP) to produce safe food product; and corresponding laboratory sessions.

FT 4124 **Lipid Technology** **3 (2-3-5)**
Prerequisites : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Product II

Chemistry and biochemistry of triglycerides and related lipid substances, biosynthesis and degradation of lipids, industrial production of fats and oils including extraction, degumming, and refining, deordorization, crystallization, and hydrogenation, microbial and enzymatic modification of lipids, corresponding laboratory sessions involving with analytical methods and quality control of the edible fats and oils and their products and corresponding laboratory sessions.

FT 4125 **Beverage Technology** **3 (2-3-5)**
Prerequisite : *FT 4108 Industrial Food Processing II*

Technology for the production of carbonated and non-carbonated, alcoholic and non-alcoholic beverages, the roles of beverages in human life, the manufacturing processes, quality control for production of safe beverages, packaging and beverage packages, and corresponding laboratory sessions.

FT 4126 **Food Packaging** **3 (3-0-6)**
Prerequisite : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Products II

Chemical, physical and biological properties of packaging materials, production techniques and quality control of food packages, paper, glass, tin plate, plastic films, aluminum foil, laminates and composite materials, criteria in selecting proper package to extend shelf life of different types of food and current trends in development of food package.

FT 4127 **Cereal Technology** **3 (2-3-5)**
Prerequisite : *FT 4108 Industrial Food Processing II or*
AI 4208 Processing of Agricultural Products II

Composition, structure and significance of various kinds of cereals, manufacturing technologies, quality control, storage of cereal and cereal products, and development of new products from cereal, and corresponding laboratory sessions.

FT 4128 **Food Safety and Sanitation** **3 (2-3-5)**
Prerequisite: *FT 3103 Food Microbiology*

Principles of food safety and sanitation in food processing and food service. A study of the physical, chemical and microbiological hazard in food that result from improper processing, packaging, handling and storage, cleaning of food plant equipment and facilities. GMP, HACCP, and other related system.

FT 4131 **Selected Topic** **3 (2-3-5)**

Discussion and advanced study of a selected topic in the field of food technology including corresponding laboratory sessions.

FT 4132 **Color and Flavor Technology** **3 (2-3-5)**
Prerequisites : *BS 2004 Analytical Chemistry and*
BS 2005 Analytical Chemistry Laboratory

Chemistry of various colorants, their properties, physiological changes, measurement methods, and affecting factors, flavor chemistry, properties of flavor, development and extraction process of flavor from plants, animals, and via food processing, and application of colors and flavors in various products and corresponding laboratory sessions

FT 4133 **Introduction to Wine Appreciation** **3 (3-0-6)**

Introduction to the major wine-producing regions of the world and traditions involved in wine making, history of wine, different components of wine sensory properties (appearance, aroma, and flavor), wine evaluation techniques, factors influence sensory properties of wine, terms on wine label, food and wine pairing, wine etiquette and responsible consumption, and hands on experience in wine tasting and pairing.

FT 4134 **Food Health and Beauty** **3 (3-0-6)**

Clear and correct information concerning food and its effect on human body. The content includes basic information about human nutrition, food science principles, processing of different food groups, latest trend in food products and services, effect of nutrients on health and beauty, fact about the nutrition, health, and beauty claim in food products, different pattern of eat healthfully.

FT 4135 **Sensory Analysis** **3 (2-3-5)**
Prerequisites : *BT 3017 Principles of Research*

Definition and basic of sensory analysis, anatomy and physiology of the sensory systems (sight, taste, smell, touch, and hearing), physiological and psychological factors on sensory analysis, sensory analysis methods (discrimination/difference tests, affective test, and descriptive test), consumer behavior and principle of consumer test, scale used in sensory analysis, data analysis and the interpretation of the analysis and corresponding laboratory sessions

FT 4136 **Advance Product Development** **3 (2-3-5)**
Prerequisites : *FT 4113 Food Product Development*

Definition and the importance of product development and managing of new product development. Nutritional product development, selection of raw material to meet with nutritional specification, fortification, nutritional labelling, up-scaling of the production, cost calculation and pricing strategy, product strategy and management, supply chain management, intellectual property, and business plan for new product. Entrepreneurship in food business.

FT 4137 **Technology of Confectionery and Thai Sweet** **3 (2-3-5)**
Prerequisites : *FT 4108 Industrial Food Processing II*

Definition and category of sugar confectionery, chocolate, and Thai sweets, importance, selection, and preparation of raw materials, characteristics of products, shelf life, including current and novel technology used in manufacturing process and corresponding laboratory session.

FT 4138 **Phytochemicals and Functional Foods** **3 (2-3-5)**
Prerequisite : *FT 3109 Food Chemistry II*

Chemical, beneficial and active properties of specific fatty acids, dietary fibers and phytochemicals as well as specific antioxidants and probiotic cultures, marketing positioning of functional foods, food product development and controlling regulations with corresponding laboratory sessions.

FT 4190 **Special Project** **3 (0-9-4)**
Prerequisite : *BT 3017 Principles of Research*

A project involving an aspect of food technology, design of study, collection and analysis of experimental data will be done under the faculty member's supervision. A written report and presentation of the research work in a seminar is compulsory.

FT 4191 **Field Trip** **1 (0-3-1)**

Visit to food and agro-industrial production facilities to view specific aspects of processing and management. A written report of the tour is required.

FT 4192 **Seminar** **1 (1-0-2)**

Method in preparing and performing a scientific presentation, demonstration of scientific research paper presentation from veteran speakers in the field of biotechnology, food technology and agro-industry, and student presentation of a selected paper of interest from scientific journals.

FT 4194 **Internship** **Non-credit**

Practical experience from training in food technology or biotechnology related industry, government sector and/or academic institute of no less than 300 hours to develop skills and confidence after graduation.

GE 1101 **Thai Civilization** **3 (3-0-6)**

Foundation and evolution of the Thai race from prehistoric, and historical periods in the Sukhothai, Ayudhaya, Thonburi, and Rattanakosin periods. Thai culture and society during the present period under King Rama IX. The implementation of the Self-sufficiency Economy and other royal projects.

GE 1102 **Introduction to Philosophy** **3 (3-0-6)**

History of Western, Greek, modern, and contemporary philosophy, focusing on metaphysics, epistemology, life value and application.

GE 1201 **Information and Literacy Skills** **1 (1-0-3)**

Definition and importance of information literacy skills, values of information, determination of information need, selection of effective techniques in gathering information, evaluation, syntheses information utilization, media literacy.

GE 1202 **Fundamental Psychology** **3 (3-0-6)**

Theories of psychology; sensations, perception, memorizing and forgetting processes; language and thought; motivation, stress and its effect on human behaviors; responding to difficult life situation.

GE 1203 **Society, Politics and Economics** **3 (3-0-6)**

Culture and relationship between culture and individual, factors in social and cultural changes, social changes, contemporary social problems and social control, political and economic functions, the causes and consequences of World War I, II and the Cold War, political and economic changes, globalization and related problems.

GE 1204 **Physical Education** **1 (1-0-2)**

Improving physical fitness and psychomotor skills, creating unity among students, and developing the sportive mind.

GE 1205 **ASEAN Ways** **3 (3-0-6)**

Understanding ASEAN, valuing concepts of identity and diversity, connecting global and local issues, relationship among ASEAN member states, importance of working with other nations to overcome challenges, economic and resource policies, and practices to promote the well-being of nations and individuals.

GE 1206 **Philosophy of Sufficiency Economy** **3 (3-0-6)**

Philosophy of the Sufficiency Economy concept and its pillars, ways of life in urban society in accordance with the philosophy, Sufficiency Economy process-driven society and daily life, applying Sufficiency Economy Philosophy to everyday life, Sufficiency Economy for sustainable development, Royal projects in accordance with the philosophy.

GE 1207 **Fundamental Psychology** **3 (3-0-6)**

Theories of psychology; sensations, perception, memorizing and forgetting processes; language and thought; motivation, stress and its effect on human behaviors; responding to difficult life situation.

GE 1301 **Environmental Science** **3 (3-0-6)**

General science, scientific approaches, understanding the interrelationships of the nature, identification and analysis of environmental problems, application and alternative solutions for preventing and solving the environmental problems.

GE 1401 **Language and Communication Skills** **3 (3-0-6)**

Theoretical introduction to the nature of language, communication skills in different situations such as interviews, conferences, presentation, large group, small group, and interpersonal communication, communicative preparation, delivery skills.

GE 1403 **Communication in Thai** **3 (3-0-6)**
(Required course for Thai students)

Communication skills to enhance understanding by effective listening, reading, writing and public speaking; information search for academic writing.

GE 1405 **Thai Language and Culture** **3 (3-0-6)**
(Required course for non-Thai Students)

Thai language for basic communication, basic knowledge in listening, speaking, reading, and writing. Thai cultural and traditional patterns, ways of life, festivals and local culture in different parts of Thailand.

GE 1406 **Burmese Language** **3 (3-0-6)**

Basic Burmese language skills in listening, speaking, reading, and writing. Burmese language uses in daily life.

GE 1407 **Russian Language** **3 (3-0-6)**

Basic Russian language in alphabet, vocabulary, and grammar for communication; basic skills in listening, speaking, reading and writing.

GE 1408 **Thai Usage** **3 (3-0-6)**
(Required course for international students)

Enhance listening and speaking skills in daily life, write and read Thai consonants, vowels, tones, and grammar and create accurate basic sentences.

GE 2101 **World Civilization** **3 (3-0-6)**

Development of human society, rise and fall of civilizations, achievements and heritages of Western and Eastern civilizations since ancient times in order to understand their roots; globalization impacts on modern societies; cross-cultural society.

GE 2103 **Art of Reasoning** **3 (3-0-6)**

Fundamental analysis of logical elements and rational applications for daily life emphasizing on deductive and inductive methods of validity and fallacy.

GE 2104 **Thai Buddhism** **3 (3-0-6)**

General concepts of Buddhism, history of Buddhism in Thailand and influences of Buddhism towards Thai Buddhists' way of life.

GE 2105 **Introduction to World Religion** **3 (3-0-6)**

World religions, both Western and Eastern : Judaism, Christianity, Islam, Hinduism, Sikhism, and Buddhism, theories of religions, ethical theories, understanding of cultural varieties and religious ways of life.

GE 2106 **Logical Thinking and Application** **3 (3-0-6)**

Analytical study of complicate logic through symbolization, justification of argumentative validity via contingency of statements, and consistency of premises in Logical Formulae.

GE 2107 **Applied Philosophy in Social Sciences and Humanities** **3 (3-0-6)**

Applied philosophy, value of life and real-life applications in social sciences and humanities; including political philosophy, social philosophy, philosophy of language, philosophy of education, philosophy of religion, philosophy of mind, feminist philosophy, and moral philosophy.

GE 2202 **Ethics** **3(3-0-6)**

Teachings of major world religions, the role of conscience, self-development in the moral arena, building self-esteem, self-knowledge, and good habits, distinguishing the right from the wrong, doing the right and refraining from the wrong, attaining a more fulfilling life.

GE 2203 **Art of Living** **3 (3-0-6)**

Self-exploration, understanding ways to improve self-esteem, analyzing real-life problems, conflict and stress, breaking bad habits, power of positive thinking, designing plans to live a happy life.

GE 2205 **Communication and Multicultural society** **3 (3-0-6)**

Communication skills, effective interaction with other people, human relationships in a multicultural society, interpersonal intelligence, skills in learning and living with others.

GE 2206 **Personality Development** **3 (3-0-6)**

Improvement of one's self-confidence and self-esteem, think positively towards themselves, how to make friends, international table manners, dressing up oneself to match one's personality, keeping healthy, applying makeup, public speaking, interpersonal relationship skills.

GE 2207 **Sport, Health and Wellness Development** **3 (3-0-6)**

Knowledge and understanding of sports, exercise, health promotion and fitness, principle of sport spectating, selection of sport activities, self-care for good health and wellness development.

GE 2208 **Thai Politics and Government** **3 (3-0-6)**

Thai politics from monarchy to democracy, political reforms, development of democracy, involvement of civil and private sectors, election, political ethics.

GE 2301 **Lifestyles in Dynamic World** **3 (3-0-6)**

Relationship between lifestyle choices and impacts of these choices on individual's health and the global environment, scientific approaches to nutrition, supplements, sleep, rest, exercise, and sexuality. Evaluation of individual healthy and eco- friendly lifestyles.

GE 2302 **Climate Change and Human Life** **3 (3-0-6)**

Scientific foundations of global climate change, linkages between global climate change and impacts to human health and their way of life, application of mitigation and adaptation strategies to minimize the impacts of climate change on health and life.

GE 2303 **Building Brilliant Brain** **3 (3-0-6)**

Scientific knowledge about daily living factors promoting brilliant brain function, applying neuroscience research findings to brain healthy nutrition, fitness, attention adjustment and memory to improve individual's brain performance, creativity and success in everyday learning.

GE 3401 **Public Speaking in Thai** **3 (3-0-6)**

Basic knowledge and skills in communication in Thai, principles and techniques of effective speaking, practical experience, and development of speakers' personality.

GL 1101 **Elements of Spoken Language** **3 (3-0-6)**
Prerequisite : *BG 1001 English I*

Essential elements of spoken language, concepts and principles of phonetics, use of International Phonetic Association (IPA) system of phonetic transcription and practice in speech sound production and identification, analysis of problems of pronunciations.

GL 3102 **Introduction to Linguistics** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*
or GL 1101 Elements of Spoken Language

Characteristics, functions, concepts and principles of the human language, four major structural components of language and the relationship to one another; language change, language acquisition and the relationship of language and society.

GL 3103 **Language, Culture and Behavior** **3 (3-0-6)**
Prerequisite : *GL 3102 Introduction to Linguistics*

Relationships between language, culture and behavior in an international environment; issues related to language, society, culture and behavior; language variations in different contexts, World English, cross-cultural communication, and non-verbal communication.

GL 3104 **Language, Culture and Society** **3 (3-0-6)**
Prerequisite : *GL 3102 Introduction to Linguistics*

Relationships between language, Culture, and Society in an international environment; issues related to language, society, and culture, language variations in different contexts, World Englishes, cross-cultural communication.

GL 3105 **Integrated English Skills** **3 (3-0-6)**
Prerequisite : *BG 2000 English III*

Four English language skills (listening, speaking, reading, and writing) for communicative competency enhancement and English test taking skills development.

GS 1004 **Arts of Delineation** **3 (2-2-5)**

Elementary concepts and techniques of freehand perspective sketch and rendering, training in perception of materials, form and spaces, various media and techniques of creation of artistic forms in light, shade and shadow, emphasizing upon conceptual development of personal skills.

GS 1005 **Graphic Presentation** **3 (2-2-5)**

Essential methods of presentation, emphasizing upon concepts, theories and skills of using various media and techniques, ranging from two- dimensional presentation to three-dimensional modeling for communicating ideas.

GS 1008 **Applied Mathematics** **3 (3-0-6)**

Theory and application of algebra, geometry, trigonometry, exponential, logarithms, analysis and calculus.

HTM 3101 **Introduction to Hospitality Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*

Fundamentals of hotel management, hotel structure and staff, receptions, public relations, other hotel services encompassing foods and beverage, housekeeping and engineering.

HTM 3102 **Introduction to Tourism Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*

Aspects of tourism demand and supply-element of tourism, model of consumer behavior and decision-making process, impacts of tourism together with role and importance of tourism planning in minimizing those impacts of tourism and developing strategies to ensure sustainable evolution, and ticketing process.

HTM 3103 **Consumer Behavior in Hospitality and Tourism Industry** **3 (3-0-6)**
Prerequisite : *MKT 2280 Principles of Marketing*

Diversity of tourists and their consumer behavior, traditional, social and cultural backgrounds, sociological and psychological factors, social groups, demographic variables, social strata and culture that form tourist attitudes, consideration, purchasing behavior and consumption, tourist behavior with qualitative and quantitative approaches to assure better understanding of diversity of tourist behavior.

HTM 3204 **Human Resource Management in Hospitality and Tourism** **3 (3-0-6)**
Prerequisite : *HTM 3101 Introduction to Hospitality Management*
HTM 3102 Introduction to Tourism Management

A broad view on personnel administration and human resources management with its process (i.e. recruitment, selection, staffing, labor/staff relations, remuneration, compensation, motivation, evaluation, etc.); and training and development (human resources development or HRD) with its process (i.e. identify training needs, design & deliver of training, training evaluation & analysis) in hospitalities and tourism industries while introducing the current theories, current HRM & HRD concepts, skills, practices and hands-on HR applications within the field.

HTM 3205 **Marketing for Hospitality and Tourism** **3 (3-0-6)**
Prerequisites : *MKT 2280 Principle of Marketing*
HTM 3101 Introduction to Hotel Management
HTM 3102 Introduction to Tourism Management

Application of knowledge and skills acquired in principles of marketing and consumer behavior to the hospitality and tourism industry, evaluation of the industry, analyzing and developing marketing plans, application of various promotional strategies and tools to achieve organization's marketing objectives, department's structure, functions, and responsibilities of key personnel.

HTM 3206 **Personality and Communication Management in Hospitality and Tourism** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*
Completion of at least 90 credits

The theoretical aspects of personality and the different ways in which these theories are implemented in the hospitality and tourism industry, some of the more commonly used personality assessment measures, cultural influences on personality, as well as emphasizing on interpersonal communication in both dyadic and group settings. The communication process includes perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication.

HTM 3211 **Food and Beverage Management** **3 (3-0-6)**
Prerequisite : *HTM 3101 Introduction to Hospitality Management*

This course covers the role and contribution of the Food & Beverage department, its structure, and functions and responsibilities of the key personnel. It includes an overview of the department's functions : purchasing, receiving, storing, food preparation, stewarding, planning the menu, food service and sales. Additional topics such as food sanitation, food quality and kitchen equipment will be discussed.

HTM 4111 **Food and Beverage Service** **3 (3-0-6)**
Prerequisite : *HTM 3211 Food and Beverage Management (For HTM students)*
HTM 3101 Introduction to Hospitality Management (for non-HTM students)

Food and beverage operations, service principles and practices, types of table service of beverage, identification of service and restaurant equipment and supplies, effective employee recruitment and selection as well as strategies for orientation, training and evaluations, principles and application of menu planning, operations of in-house and outside catering, as well as sales and cash control.

HTM 4112 **Kitchen Operation** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*
Completion of at least 90 credits

Principles and techniques involved in food production, kitchen organization, food and personal hygiene, kitchen equipment and utilities, basic food preparation methods, kitchen stewarding, sanitation food production control and standards, and kitchen terms.

HTM 4117 **Information Technology in Hospitality and Tourism** **3 (3-0-6)**
Prerequisite : *MIS 2111 Introduction to Management Information Systems*
HTM 3101 Introduction to Hospitality Management
HTM 3102 Introduction to Tourism Management

Latest information technologies in the hospitality and tourism industries, property management systems and central reservation systems, practice of current global distribution system software packages.

HTM 4118 **Business Operation and Leadership in Hospitality and Tourism** **3 (3-0-6)**
Prerequisites : *HTM 3205 Marketing in Hospitality and Tourism*

Leadership, various theories and styles of leadership in the field of hospitality and tourism industries, operation as a major functional area of business and operation decision making to improve by utilizing all the underlying disciplines.

HTM 4210 **Strategic Management in Hospitality and Tourism** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Analytical discussion of key areas of contemporary hospitality and tourism management : evaluation of the most important global trends in tourism, analysis of the impact of crucial environmental issues and their implications and the major factors affecting international tourism.

HTM 4301 **Rooms Division Management** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Rooms division, front office operations which covers reception, reservation, room sales, registration, cashier responsibilities and night-auditing, functions and roles of the hotel housekeeping department and coordination with the front office department.

HTM 4302 **Event Management** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Principles of event management, formulate event tourism strategies such as implementation of festivals, entertainment, corporate, cultural and sports events.

HTM 4303 **Service Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*
Completion of at least 110 credits

The holistic and interdisciplinary approach which will be used to explore the principles of service management. This course will make students more aware of the nature and characteristics of services, more knowledgeable about the way services need to be marketed due to their intangible core and more conscious of service quality, and the foundation of services industries. The course will enhance students' understanding of what actually constitutes quality, the nature of service, strategies for improving it; and taking a broad view on service management with its process.

HTM 4401 **Tourism Policy and Development** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Tourism planning in both public and private sectors at local, regional and national levels including the components of planning process, the role and the importance of the involvement of communities, different impacts of tourism development, tourism policies and strategies for successful development.

HTM 4402 **Tourism Destination Management** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Comprehensive coverage of various tourism destinations, basic principles underlying the development of tourism supply and demand, up-to-date trends and implementation of different management approaches.

HTM 4403 **Tour Guiding and Operation in Practice** **3 (3-0-6)**
Prerequisite : *HTM 3205 Marketing in Hospitality and Tourism*

Roles and ethics of a professional tour guide including tour guide practices, tourist safety measures,custom and immigration procedures and Thai tourism law, aspects of tourism distribution channels and characteristics of tour operation.

HTM 4406 **Introduction to MICE Business Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*
Completion of at least 90 credits

An overview of the MICE business (Meetings, Incentives, Conventions and Exhibitions) with emphasis on the roles and economic and social impact of MICE business within the context of hospitality and tourism industry, including key stakeholders and their decision making criteria in their MICE management.

HTM 4407 **Introduction to Airline Business Management** **3 (3-0-6)**
Prerequisite : *MGT 1101 Introduction to Business*
Completion of at least 80 credits

A broad view on aviation and airline business and understanding about working environment, interaction, duties and responsibilities of the various units in the day-to-day operations, aviation law, rules and regulations, market and demand, pricing and operations costs, revenue management, planning process, flight scheduling and operations, labor relations and HR management, safety and security, airports, air traffic control and transport, IT in airline operations, distribution and passenger process, handling critical issues and prospects for airline industry.

IBM 2201 **International Business Environment** **3 (3-0-6)**
Prerequisite : *ECO 2201 Microeconomics*

Global business environment focusing on economics, social-cultural, political, regulatory and legal dimensions of international business environment, international business theories, global business environment, FDI, trade policies, institutional arrangements, government business relationships, global perspectives, challenges and opportunities in the competitive business environment.

IBM 2702 **International Business Environment** **3 (3-0-6)**

Global business environment focusing on economics, social-cultural, and political, regulatory and legal dimensions of international business environment, international business theories, global business environment, FDI, trade policies, institutional arrangements, government business relationships, global perspectives, challenges and opportunities in the competitive business environment.

IBM 3101 **Cross Cultural Human Resource Management** **3 (3-0-6)**
Prerequisite : *IBM 2201 International Business Environment*

Differences and similarities of managerial systems and management practices in different cultural settings, definitions and concepts of culture, cultural differences at the national, organizational and managerial levels, regional and country cultural characteristics, complexities and challenges of running global organizations. Human resource practices across cultures. Definitions and concepts of culture and cultural frameworks applied to various aspects of human resource management in the international context. Topics also include the expatriation cycle, factors that influence effective management in cross-cultural settings, and ethical issues in the international environment. Coursework and case studies are used to facilitate a better understanding of the challenges confronted by global organizations when working in diverse environments.

IBM 3102 **Export-Import Policy and Strategy** **3 (3-0-6)**
Prerequisite : *IBM 2201 International Business Environment*

Issues involved in developing comprehensive export/import strategies at national sector and firm levels, government institutions and their roles in balancing exports and imports among sectors, strategic use of export-import organizations to promote economic and competitive advantages, procedures and practices of export-import financing, documentation, export/import compliance, export/import channels, foreign trade zones, and transportation modes.

IBM 3111 **International Buyer Behavior** **3 (3-0-6)**
Prerequisite : *MGT 2404 Managerial Psychology*
MKT 2280 Principles of Marketing

Methods of how industrial and consumer goods are marketed to international buyers and the strategic process of segmentation, targeting and positioning, international buyer behavior models and decision making schemes, variables in addition to culture that affect international buyers' purchase behaviors, cognitive, affective and co-native responses of industrial and consumer buyers from other countries in various contexts such as in trade shows, advertising effects, promotional incentives, direct marketing and e-commerce.

IBM 3131 **Legal and Ethical Issues in International Business** **3 (3-0-6)**
Prerequisite : *IBM 2201 International Business Environment*

General legal and ethical aspects involved in international business environment focusing on legal aspects of international trade, international contracts, foreign investments and ethical issues across border.

IBM 3132 **International Relations** **3 (3-0-6)**
Prerequisite : *IBM2201 International Business Environment*

Fundamental principles, issues, conflicts and resolutions in international relations, and international organizations such as the United Nation, the World Trade Organization, and the World Bank that govern international relations and its effect on businesses.

IBM 3203 **International Management** **3 (3-0-6)**
Prerequisite : *IBM 3101 Cross Culture Human Resource Management*

Management of assets and operations beyond the borders of one's home country, managers' fundamental responsibilities for planning, organizing, leading and controlling firms' activities across cultures.

IBM 3204 **Designing and Managing Global Operations** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Examines contemporary issues related to managing operations in a global context and explore the key factors in operations such as production planning and management of globally dispersed manufacturing and services by utilizing specific mathematical and statistical tools and the application of Information Technology to enhance a firm's operations strategy through facility layout, product design, aggregated planning, inventory management and forecasting.

IBM 3212 **International Marketing Communications** **3 (3-0-6)**
Prerequisite : *MKT 2280 Principles of Marketing*

Global and domestic cultural diversity and their impact on IMC strategy development, values, behaviors, and underlying assumptions related to verbal and visual communication strategies, the debate surrounding standardization versus localization of worldwide marketing communications campaigns, case studies of IMC campaigns directed to culturally specific domestic and international audiences.

IBM 3213 **International Pricing Strategy** **3 (3-0-6)**
Prerequisite : *MKT 3620 Global Marketing*

Strategic and tactical aspects of pricing decisions in international context through both qualitative (consumer behavior) and quantitative (economics) analyses, application of pricing theory and principles in determining price, factors affecting pricing of goods and services in the global market, price structures, influences of international competition on pricing, export-pricing strategies and transfer pricing issues.

IBM 3221 **Cross Cultural Communication, Conflict and Negotiation** **3 (3-0-6)**
Prerequisite : *BM 3101 Cross Cultural Human Resource Management*

Concepts, skills and tools for improving communication among persons from different cultural backgrounds; fundamental knowledge of theories and methodologies of dealing with cross cultural communication as well as theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations; and application of these skills across cultures through international group projects.

IBM 3711 **Comparative Management** **3 (3-0-6)**
Prerequisite : *IBM 2702 International Business Environment*

Differences and similarities of managerial systems and management practices in different cultural settings, definitions and concepts of culture, cultural differences at the national, organizational and managerial levels, regional and country cultural characteristics, complexities and challenges of running global organizations.

IBM 3713 **International Management** **3 (3-0-6)**
Prerequisite : *IBM 3711 Comparative Management*

Management of assets and operations beyond the borders of one's home country, managers' fundamental responsibilities for planning, organizing, leading and controlling the firm's activities across cultures.

IBM 3714 **Export-Import Policy and Strategy** **3 (3-0-6)**
Prerequisite : *MKT 3620 Global Marketing*

Issues involved in developing comprehensive export/import strategies at national sector and firm levels, government institutions and their roles in balancing exports and imports among sectors, strategic use of export-import organizations to promote economic and competitive advantages, procedures and practices of export-import financing, documentation, export/import compliance, export/import channels, foreign trade zones, and transportation modes.

IBM 4105 **Global Business Feasibility Analysis** **3 (3-0-6)**
Prerequisite : *ECO2202 Macroeconomics*
Completion of 106 Credits

Conceptual and analytical framework for assessing dynamic international business environment in terms of economic, social, political, cultural, environmental, legal, regulatory and ethical aspects to evaluate different international business conditions associated with business start-ups and continued operations; analysis of financial costs and benefits of international business projects; assessment of risks, feasibility of establishing business operations and the effects on business performance.

IBM 4106 **International Business Research** **3 (3-0-6)**
Prerequisite : *MGT 3940 Business Research Methodology*
IBM 3203 International Management

Methodologies used in international business research, emphasis on the concept of cross-cultural equivalence in conducting comparative and international business research. Topics covered include scale development and assessment, establishment of data equivalence across cultures, measurement invariance, comparability of data collection techniques, various statistical techniques applied in international research, and the application of information technology in preparing a professional research paper and analyzing data.

IBM 4114 **Global Supply Chain Management** **3 (3-0-6)**
Prerequisite : *IBM3102 Export-Import Policy and Strategy*

Activities involved in the flow of goods from point of origin to point of consumption on a global scale, differences about supply chain management in the international setting, nature of international problems associated with the procurement, operations management, inventory control, logistics and transportation, distribution, customer service. Topics also include internet-enabled supply chains.

IBM 4115 **Global Product and Brand Planning** **3 (3-0-6)**
Prerequisite : *MKT 2280 Principles of Marketing*
IBM 3203 International Management

Process of developing and introducing new products and brands for different culture markets, international product line and brand management such as international brand extension and dilutions, multiple product life cycle, international product and brand strategies, global brand portfolio, cross cultural brand positioning, brand valuation and impacts on building brand image and equity, issues in crafting a solid international marketing plan, market selection techniques and global segmentation-targeting-positioning strategies.

IBM 4122 **Small Business Internationalization and Growth** **3 (3-0-6)**
Prerequisite : *IBM 3203 International Management*

Practical and strategic elements associated with the establishment of cross-border international business ventures in the form of exports, e-commence and foreign investments, understanding and assessing business models of different countries, methods of financing new business ventures, identifying the challenges and opportunities of small business internationalization, identifying and evaluating business opportunities in ASEAN and Emerging Markets.

IBM 4123 **Global Context of Business** **3 (3-0-6)**
Prerequisite : *Approval from the chairperson and academic advisor prior to registering for the course.*

Process of acquiring new skills and knowledge through international exposure. International field trip according to the language courses taken by students, 15-30 hours of course work seminars and industry visits in the host institution. 10-15 hours of preparation and presentation of project report based on the criteria established by the Department.

IBM 4134 **International Services Marketing** **3 (3-0-6)**
Prerequisite: *MKT 3620 Global Marketing and 106 credits*
Completion of 106 credits

Services marketing in an international context, market orientation, long-term relationship, quality and satisfaction, cases in the marketing of services to help students gain more insight on the issues and problems arising from services marketing and to practice their problem-solving skills.

IBM 4207 **Special Topics in International Business** **3 (3-0-6)**
Prerequisite : *IBM 3203 International Management*
Completion of 118 Credits.

Discussion on contemporary issues and trends in international business at the regional, country specific, industry and firm level, topics covered include international economics, trade and investments, international management and marketing, global supply chain, informational technology, legal and ethical issues, relevant to professional development of students.

IBM 4208 **International Strategic Management** **3 (3-0-6)**
Prerequisite : *IBM 3203 International Management*
Completion of 118 credits

Strategic management amidst the phenomena of globalization, contemporary strategy concepts and theories, important and consistent principles that a firm can use in making decisions that will affect its long term performance in an increasingly globalized business environment, strategic management process : environmental scanning, strategy formulation, strategy implementation and evaluation and control, creation of competitive advantages and the system of value creation, challenges posed in the strategic management process through a discussion of various business cases as well as the use of up-to-date information technology (IT) tools.

IBM 4235 **Seminar in International Business Management** **3 (3-0-6)**
Prerequisite : *Completion of 118 credits*

Regional business environments, management practices and activities of multinational corporations in selected regions, incorporated analytical skills and strategic thinking in managing operations in these regions.

IBM 4236 **Individual Research** **3 (3-0-6)**
Prerequisite : *MGT 3940 Business Research Methodology*
Completion of 118 credits and chairperson's approval

Developing students' ability to apply a theoretical approach to the real world problems of any organization in a selected industry in Thailand, a specific area of concentration will be chosen by students upon approval of advisor from the department of IBM.

IBM 4237 **International Business Management Internship** **3 (3-0-6)**
Prerequisite : *Approval from the chairperson and/academic advisor prior to registering for the course.*

Designed to provide students with an opportunity to apply the knowledge and skills to gain practical business experience in domestic and multinational setting as well as international organizations. Formal presentation at the end of the internship period is a requirement.

IBM 4811 **International Strategic Management** **3 (3-0-6)**
Prerequisite : *IBM 3713 International Management*
Senior standing (IBM Major)

Strategic management amidst the phenomena of globalization to encourage students to integrate and apply knowledge and skills learned in earlier courses, critical business skills of understanding and managing strategic issues in international settings, environmental analysis, challenges and benefits of globalization, design of global corporate strategies, system of value creation, and evaluation of corporate strategies.

IBM 4840 **Global Supply Chain Management** **3 (3-0-6)**
Prerequisite : *IBM 3714 Export-Import Policy and Strategy*

Activities involved in the flow of goods from point of origin to point of consumption on a global scale, differences about supply chain management in the international setting, nature of international problems associated with the procurement, operation management, inventory control, logistics and transportation, distribution, customer service, and Internet-enabled supply chains.

IDM 3203 **Logistics and Supply Chain Management** **3 (3-0-6)**
Prerequisites : *MGT 3905 Operations Management*
MKT 2280 Principles of Marketing

Logistics system, logistics collaboration, tools and techniques for logistical analysis, trade-off between cost and service level, logistic functions, customer accommodation strategies, procurement strategies, manufacturing strategies, logistical strategies and operations, order processing, inventory, transportation, warehousing, network design, and logistical performance measurement.

IDM 3204 **Industrial Safety and Risk Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*

Principles of risk management and its process, methods of handling risks especially loss prevention, how to manage safety procedures and how safety cultures can be built and established among organizational members, how safety can lead to cost reduction, productivity and efficiency improvement for the company as a whole.

IDM 4201 **Manufacturing Planning and Control** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Production systems, materials planning and control, production aspects, market demand management, functional linkages, determination of production schedule and dispatching, and production control system, implementation, and inventory management.

IDM 4203 **Quality Management** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Principles and practices of quality management during production process, application of techniques in quality improvement and quality control, modern concept of quality with emphasis on the Malcolm Baldrige criteria for performance excellence and six-sigma which increase efficiency and effectiveness in industrial business.

IDM 4206 **Industrial Environmental Management** **3 (3-0-6)**
Prerequisite : *GE 1301 Environmental Science*

Concepts of environmental studies, water system, water supply, wastewater treatment, air quality, meteorology and natural purification process, engineering system for air pollution control, solid waste control and management, and ISO 14000.

IE 1110 **Engineering Materials** **3 (3-0-6)**

Study of relationship between structures, properties, production processes and applications of main groups of engineering materials i.e. metals, polymers, ceramics and composites, phase equilibrium diagrams and their interpretation, mechanical properties and materials degradation.

IE 2110 **Introduction to Manufacturing with Plastics** **3 (3-0-6)**
Prerequisite : *IE 1110 Engineering Materials*

Theory and concept of manufacturing processes and equipment used to convert thermoplastic and thermoset plastic resin (excluding elastomers) into plastic parts. Six of the major conversion processes will be studied including extrusion, injection molding, blow molding, compression molding, thermoforming, and layup molding. Safety, failure modes, and energy considerations are studied. Design and mechatronic systems of machinery used to make plastic products are discussed.

IE 3100 **Manufacturing Processes** **3 (3-0-6)**
Prerequisite : *IE 1110 Engineering Materials*

Theory and concept of manufacturing processes such as casting, forming, machining and welding; material and manufacturing processes relationships; fundamental of manufacturing cost.

IE 4101 **Manufacturing and Information Technology** **3 (3-0-6)**
Prerequisite : *Senior Standing*

Basics of CAD/CAM; CAD modeling methods; Computer Aided Manufacturing, solid modeling; materials properties and fundamentals of Automation; Automation technology; Flexible manufacturing systems, knowledge based engineering; robotics technology; machine tools technology.

IE 4201 **Engineering Management** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Modern management principles, methods of increasing productivity, human relation, industrial safety, commercial laws, basic of engineering economy, finance, marketing, project management.

IE 4203 **Engineering Economics** **3 (3-0-6)**
Prerequisite : *Completion of 90 credits with the consent of the Chairperson*

Methods of comparison, depreciation, evaluation of replacement, risk and uncertainty, estimating of income, tax consequences, processes of decision making for investment of challenging projects.

IML 3200 **Quantitative Analysis** **3 (3-0-6)**
Prerequisites : *SA 2200 Statistics II*
MGT 2900 Principles of Management

Probability concepts, forecasting, mathematical decision making techniques, normal distribution theory, decision trees, game theory, simplex method, simulation, and linear programming.

IML 3201 **Business Analytics** **3 (3-0-6)**
Prerequisites : *SA 2200 Statistics II*

Identification, evaluation, and capture business analytic opportunities that create value. Basic analytic methods, case studies, how to use data, descriptive and predictive capabilities, forecasting techniques, the use of optimization to support business decision-making, and the concept of big data.

IML 3202 **Motion and Time Study** **3 (3-0-6)**
Prerequisites : *SA 2200 Statistics II*
MGT 3905 Operations Management

Operational improvement by identifying process and selecting the appropriate tools for problem solving and decision making, the implementation of new methods which requires the installation and developing job analysis, standard time consisting of time study, predetermined time system or work sampling, measuring performance and motivating workers to work efficiently and safely.

IML 3203 **Logistics and Supply Chain Management** **3 (3-0-6)**
Prerequisites : *MGT 2900 Principles of Management*

Logistics system, logistics collaboration, tools and techniques for logistical analysis, trade-off between cost and service level, logistic functions, customer accommodation strategies, procurement strategies, manufacturing strategies, logistical strategies and operations, order processing, inventory, transportation, warehousing, network design, and logistical performance measurement.

IML 3204 **Industrial Safety and Risk Management** **3 (3-0-6)**
Prerequisite : *MGT 2900 Principles of Management*

Principles of risk management and its process, methods of handling risks, loss prevention, how to manage safety procedures and how safety cultures can be built and established, how safety can lead to cost reduction, productivity and efficiency improvement for the company as a whole.

IML 3306 **Warehousing and Material Handling** **3 (3-0-6)**
Prerequisite : *IML 3203 Logistics and Supply Chain Management*

Warehousing operations and systems, warehousing pallet, case, and small items storage and retrieving systems, operations, order profile, functional analysis, layout, resources, and warehousing development system.

IML 3307 **International Transportation and Distribution Management** **3 (3-0-6)**
Prerequisite : *IML3203 Logistics and Supply Chain Management*

International transportation modes selection and management system, transportation routing analysis and management, microanalysis of logistics and transportation services, distribution operations, transportation costing, distribution networks management, intermodal transportation, transportation mode interface, international commercial terms (incoterms), and Greater Mekong Subregion Cross-Border Transportation Agreement (GMS CBTA).

IML 3308 **Supply Chain Relationship Management** **3 (3-0-6)**
Prerequisite : *IML 3203 Logistics and Supply Chain Management*

Introduction to relationship management for both customers and suppliers aspects, customer relationship management focusing on its application in marketing and sales strategies, data management and customer data development, organization and CRM, supplier relationship management covering the scope, structure of strategic relationships, selecting and evaluating alliance potential, and incorporating supplier alliances into organization, and leading industrial practices on collaborative relationship.

IML 3309 **Procurement and Supply Management** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Roles and objectives of procurement and supply functions, procurement and supply strategies, procure to pay process, procurement policy, ethics and governance, and environmental sustainability.

IML 3402 **Facility Management** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Layout management, maintenance management, material flow design and control, total productive maintenance, space and work flow allocation and design, layout setup consideration, site selection, basic installments, and rule and regulations.

IML 3403 **Industrial Engineering Management** **3 (3-0-6)**
Prerequisite : *SA2200 Statistics II*

Management of engineering aspects of an operation, concept of re-engineering of process and product, application of time motion study, machinery utilization, development of work structure, work flow, and work calculation from engineering standpoint.

IML 4201 **Lean Manufacturing and Agile Supply Chain** **3 (3-0-6)**
Prerequisites : *IML 3203 Logistics and Supply Chain Management*
MGT 3905 Operations Management

Lean manufacturing systems, waste identification, designing lean process, materials planning and control, production aspects, functional linkages, determination of production schedule and dispatching, production control system, implementation, inventory management, market demand management, and agile supply chain.

IML 4202 **Production Costing and Budgeting** **3 (3-0-6)**
Prerequisite : *ACT 2620 Fundamentals of Managerial Accounting*

Cost accounting approaches, job order costing, process cost accounting and activity-based costing (ABC), production cost planning & controlling by budgeting and responsibility accounting, evaluation of manufacturing performance through standard costs and financial statement analysis techniques.

IML 4203 **Quality Management** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Principles and practices of quality management, how to integrate quality framework to organization, application of techniques in quality control and quality improvement , modern concept of quality with emphasis on the Total Quality Management and Six Sigma.

IML 4206 **Industrial Environmental Management** **3 (3-0-6)**
Prerequisite : *GE 1301 Environmental Science*

Concepts of environmental studies, water system, water supply, wastewater treatment, air quality, meteorology and natural purification process, engineering system for air pollution control, solid waste control and management, and ISO 14000.

IML 4207 **Internship in Industrial Management and Logistics** **3 (300 Hours)**
Prerequisite : *Consent of the Department Chairperson*

Internship program with an industrial company for not less than 300 hours of work. Weekly progress reports and approved by the student's immediate supervisor must be submitted. A report submission and final presentation must be given.

IML 4208 **Project Analysis and Management** **3 (3-0-6)**
Prerequisites : *FIN 3701 Corporate Finance*
MGT 3905 Operations Management

Foundation of project management, project life cycle : starting from project selection until project termination, concept and tools of managing project successfully, simulation program and software for project management.

IML 4301 **Information Technology in Supply Chain** **3 (3-0-6)**
Prerequisites : *MIS 2111 Introduction to Management Information Systems*
IML 3203 Logistics and Supply Chain Management
IML 4201 Lean Manufacturing and Agile Supply Chain

Conceptual and practical issues in information systems to aid in decision-making in industry, information technology for resource planning and scheduling, supply chain decision support system. Execute logistic processes and transactions in SAP.

IML 4302 **Industrial Strategic Management** **3 (3-0-6)**
Prerequisite : *Senior standing (112 credits)*

Definition and different levels of strategies, environmental analysis techniques, analysis of organizational current strategies and resources as well as capabilities, strategy selection model, strategy implementation plan and control.

IML 4401 **Technology and Innovation Management** **3 (3-0-6)**
Prerequisite : *MGT 3905 Operations Management*

Technology introduction process, research and development control and management, technological change and company's manufacturing strategy, product/process/technology life cycle, innovation process generation and implementation.

IML 4501 **Seminar in Industrial Management and Logistics** **3 (3-0-6)**
Prerequisite : *Senior Standing (112 credits)*

Current industrial and logistics conditions, problems, and solutions, class discussion, business exposure, guest speaker, research and presentation.

IN 2106 **Contemporary Issues in Design** **3 (3-0-6)**

The comparative survey of contemporary design issues in relation with culture and social context concerned by analytical discussion through interdisciplinary designed case studies or practices.

IN 2202 **Interior Architectural Design I** **6 (2-8-8)**
Prerequisite : *AR 1104 Fundamental of Architectural Design*

Integration of artistic sensibility, creativity, and the understanding of human factors through basic living spaces. The practice processes an individual concept, analysis of human relations to space, and a practical solution to our contemporary living.

IN 2204 **Interior Architectural Design II** **6 (2-8-8)**
Prerequisite : *IN 2202 Interior Architectural Design I*

Practices on small scaled, more complex, multi-users programs, student's hand-drawing and drafting skills, including the production of spatial model for conceptual and professional communication.

IN 2305 **Interior Architectural Design Methods** **3 (3-0-6)**

Design activity and its inherited methods, influential design methods to broaden students' perspective of how to design in order to achieve the qualified interior architectural design.

IN 2306 **History of Interior Architecture** **3 (3-0-6)**
Prerequisite : *AR 2106 History of Architecture I*

History and the evolution of space planning, interior architecture, decorative details, and furniture design from ancient Egypt through the 19th century in Europe, styles and characteristics of each period as a reference to future developments.

IN 3200 **Theory and Concept in Interior Architecture** **3 (3-0-6)**

Significant theories of architecture as well as interior architecture as a discipline, the development over the Western History from the 15th century to the early 20th century, reviewing the ideas, philosophies, concepts and design execution through illustrated lectures and discussion based on analysis of interior architectural space and design.

IN 3203 **Interior Architectural Design III** **6 (2-8-8)**
Prerequisite : *IN 2204 Interior Architectural Design II*

Human perception, behavior activity, scale, and the use of materials in small scale commercial space, graphic design media such as signage in relation to interior environment.

IN 3207 **Interior Architectural Design IV** **6 (2-8-8)**
Prerequisite : *IN 3203 Interior Architectural Design III*

Complex commercial, business, and hospitality spaces design, human interactions and communication in public space planning, existing building conditions, new trends and details of furniture finishing materials and lighting technology which are incorporated in design.

IN 3301 **Interior Construction Technology I** **3 (2-2-5)**

Basic consideration namely : human ecology, which includes anthropometric and ergonomic principles, basic construction methods, materials and finishes and typical details which include skeleton structure of floor, wall, ceiling and staircase wall, ceiling and staircase.

IN 3303 **Interior Construction Technology II** **3 (2-2-5)**
Prerequisite : *IN 3301 Interior Construction Technology I*

Advanced construction methods that relate to complex volumes of interior space, which include principles of skeleton structures and modern material and installation techniques, framed structure of regular and raised floors with various aspects of installation of finishing material namely wood, metal, plastic and glass, focusing on interior architecture working drawing following specifications and construction documents.

IN 3304 **Lighting Design** **3 (2-2-5)**

Factors that influence lighting design decisions, including properties of materials as they relate to light, codes and law, reading and using catalogs, documentation, and health effects of light, technical and practical aspects of lighting design, including the physics of light, lab technology, the use and design of natural and artificial light throughout history to establish a broad understanding of the culture and historical implications of light, application of photometric data and calculation.

IN 3305 **Furniture Design** **3 (2-2-5)**

Specific proponents, movements and conceptual approaches relevant to key furniture designers from the industrial revolution to contemporary period, forms development, design process, aesthetics quality, fashion and trend. Creative projects are assigned to encourage students to emerge in-class knowledge and their creativities to implement an innovative, quality, and practical design.

IN 3306 **Interior Material Application** **3 (2-2-5)**

Systematic approach to selecting essential interior design elements, color and materials : types, properties, applications, and practicality as well as awareness of ecological problems, sustainability, and suggestions for future substitution for materials.

IN 4102 **Methods of Research and Data Processing** **3 (3-0-6)**

Processes of selecting and preparing materials for research, learning to recognize, collect data and analyze case study, utilizing of fundamental design research to achieve effective design solution.

IN 4203 **Interior Architectural Design V** **6 (2-8-8)**
Prerequisite : *IN 3207 Interior Architectural Design IV*

Advanced design focusing on critical observation and experiment to create design concept for large scale commercial and institutional designs, the balance between visionary concept and practical solution, awareness of environmental system and universal design.

IN 4205 **Interior Architectural Design VI** **6 (2-8-8)**
Prerequisite : *IN 4203 Interior Architectural Design V*

Commercial and institutional designs, projects which are structured to complex programs with universal users, understanding and concern of the assigned building condition, architectural and social contexts, building codes and regulations. The course provides opportunity for collaborative team working experience.

IN 4304 **Practicum in Interior Architecture** **Non-credit (240 Hours)**

A 240 working hour professional training at an interior architecture firm in order to expose students to all kinds of hand-on experiences and knowledge in the real interior architecture business world.

IN 4305 **Seminar in Interior Architecture** **3 (3-0-6)**

Development of interior design from the past to present, academic and practical thinking, obstacles and setbacks relating to the profession and their solutions.

IN 4306 **Furniture Production Methods** **3 (2-2-5)**
Prerequisite : *IN 3305 Furniture Design*

Process of making furniture, scale, proportion, basic joinery, materials selection, and assembly techniques. Through lectures, demonstrations and field trips and making of full-scale piece of furniture, students are encouraged to explore diverse interdisciplinary approaches to creative problem solving.

IN 5200 **Pre-Thesis in Interior Architecture** **3 (0-6-3)**

Independent study on interior architectural issue and program based on student's individual interest. The student collects the analytical information on the chosen existing building and study context, case study, specific user behavior, and etc. which are beneficial to his/her topic. The student is required to work consistently under the supervision of the assigned advisor throughout the semester.

IN 5203 **Interior Architectural Design VII** **6 (2-8-8)**
Prerequisite : *IN 4205 Interior Architectural Design VI*

Student's experience of public large scale design project, managing to initiate and execute complex design program under the time constraint, the design process reinforcing critical and analytical thinking through the search for marketable concept and practical solution. The quality of construction drawings is observed and revised to form student's draftsmanship and realistic vision to professional design.

IN 5205 **Thesis in Interior Architecture** **9 (0-18-9)**
Prerequisite : *IN 5200 Pre-Thesis in Interior Architecture*
IN 5203 Interior Architectural Design VII

A student self-initiated design project under the thesis advisor supervision which investigates the specific type of interior space, collecting and analyzing project condition, case studies, user behaviors before design process.

IN 5300 **Professional Ethics and Practices** **3 (3-0-6)**

Ethical conduct of the professionals in the field, relationship between client and designer, designer and staff, an understanding fire protection material regulation in building laws, study building law which relate to interior design sections , bidding and contracts, and work supervision.

IN 5400 **Elements of Thai Architecture** **3 (2-2-5)**

Different elements of Thai architecture as in building bodies, roofs and structures, analysis of different forms and spaces of Thai traditional architecture, conducting research on Thai design, architectural characteristics, appropriate functions and apply to use in interior design.

IN 5401 **Interior Architecture Cost Estimation and Control** **3 (3-0-6)**

Budgeting and cost estimating of a finished interior by making quality survey of materials, estimating labor cost and construction period, practice of cost controlling within a given budget, payment and penalty schedules.

IN 5403 **Advanced Computer - Aided Design** **3 (2-2-5)**

Advanced study of computer aided design and the primary introduction to the creation of work with a design and technology context, narrative, computation, and interactivity. Students have to develop their investigations and interests as well as a space for exploration, experimentation, and methodologies.

IN 5404 **Individual Study in Interior Architecture** **3 (3-0-6)**

Study and research of individual's interests pertaining to interior architecture under the approval of an advisor.

IN 5411 **Advanced Lighting** **3 (2-2-5)**

Advanced theoretical lighting, color and illumination practical functions and aesthetic senses for interior architecture. Practicing lighting design in different scale and perspective which site excursion and seminar are provided.

IN 5413 **Facilities Management** **3 (3-0-6)**

Forecasting the feasibility of a project by familiarizing with financial forecasting and budgeting, architectural planning and design, maintenance and operations management, and forecasting risks.

IN 5415 **Fabric Design and Applications** **3 (2-2-5)**

Principles of fabric design and applications, technical language associated with qualities of fabric, texture, pattern together with color to apply in interior design.

IN 5416 **Introduction to Exhibition Design** **3 (2-2-5)**

Introduction to exhibition design, strategies in designing for exhibitions and trade show booths, various issues ranging from programs, space design, conceptual development of a thematic approach, and creation of a presentation system for products, artifacts, or artwork activities as business practices specific to the trade show and exhibit design industry, and the effective use of computer renderings and presentation skills.

IN 5417 **Arts Appreciation** **3 (3-0-6)**

Aesthetic appreciation, diverse branches of arts at differential periods, conceptual idea of imaginative interpretation, imitation of nature and also environment which urges inspiration to influence the artists' philosophical life and his vision, materials and process of creation, including history of arts which can be applied in the subjects of design. Student will gain experiences from out-door study as extra lecture on visiting art gallery and art exhibition.

IN 5418 **Advance visualization techniques** **3 (2-2-5)**

The course focuses on developing professional skill in the processes of advanced 3-D modeling and animation, using the digital tools. Students will gain more advanced techniques to generate a structural of spatial visualization. Digital models presentation and communication will be explored in effective.

IN 5419 **Advance Construction Document for Interior Architecture** **3 (2-2-5)**

The objectives of the course are to introduce the art, science, and practice of completely working drawing of interior architecture building service and detailing to the interior design filed in all aspects of design, installation, and maintenance associated with building services. Included air-conditioning, heating and ventilating, water services, sanitary works, energy management systems, solar collectors, electrical distribution systems, electrical equipment, materials, lighting.

IND 1101 **Visual Design** **3 (2-2-5)**

Visual language, basic design elements, and design composition used in conveying desired messages of 2 dimensional and 3 dimensional designs with emphasis on actual application through a series of corresponding projects.

IND 1102 **Introduction to Design Culture and Trend** **3 (3-0-6)**

Contemporary issues in design within the context of creative culture that aims to promote an understanding and appreciation of design works through an investigation of the development, role, and influences of designers on our society.

IND 1301 **Basic Drawing** **3 (2-2-5)**

Practices of drawing used in architecture and design profession i.e. orthographic projection, perspective projection, shade and shadow and drawing technique in pencil.

IND 1302 **Design Fundamentals** **3 (2-2-5)**
Prerequisite : *IND 1101 Visual Design*

Theory and architectural components and the basic design relationship between forms and function in order to fulfill the perfection of architectural design.

IND 1303 **Computer Applications for Interior Design** **3 (2-2-5)**

Computer as a tool in assisting design process, drafting, and presentation through practicing of computer applications such as AUTOCAD, and basic 3 dimensional modeling application

IND 2101 **Design Methods** **3 (2-2-5)**

Contemporary interior design process and its method and concept to provide a perspective of plausible design strategies.

IND 2102 **Human Factors** **3 (2-2-5)**

Physical, psychological, and social interaction aspects related to humans especially in capabilities, limitations, and relationships to their surroundings such as sensation and perception, ergonomics, and universal design essential in designing for health, safety and comfort.

IND 2201 **Interior Design I** **6 (2-8-8)**
Prerequisite : *IND 1302 Design Fundamentals*

Vital understanding of human-spatial relationship through investigations and analyses of users' need and behaviors and explorations of volumetric interior space via small scale residential projects ranging from a single user to multiple users.

IND 2202 **Interior Design II** **6 (2-8-8)**
Prerequisite : *IND 2201 Interior Design I*

Exploration of more complex programming both in functions as well as in users' requirements through projects that involve multiple users and conjoining of different functions, with emphasis on design concept communication via interior design graphic standards through more rigorous project drawing requirements.

IND 2301 **History of Interior Design** **3 (3-0-6)**

Interior design history through chronological exploration of the evolution of architectural design, space planning, interior design and furniture decoration from ancient to the 20th century with emphasis on styles and characteristics of each period as a reference to future developments.

IND 2302 **Building Construction** **3 (2-2-5)**

Basic knowledge on standard timber construction-skeleton structure with short span beams for small building, standard reinforce concrete and masonry construction for medium public building, including principles of structural system, building components such as columns, floor, staircase and basic construction materials through studio works.

IND 2303 **Furniture Production and Fabrication Technology** **3 (2-2-5)**

Basic knowledge of furniture design and furniture production including, history and their implement culture, furniture component, ergonomics, design trend, conceptual and aesthetic approaches, form development process, occupation of existing tool and technique to produce practical furniture design, fabrication technology including, system, structure, and material selections in furniture, modular furniture.

IND 3101 **Theory and Concept in Design** **3 (3-0-6)**

Significant design theories and concepts that have led to effective designs in order to provide an understanding in concept derivation as well as insights for critical analysis of current design trends and trend forecasting.
The theories include : Design Semiotics, Phenomenology, Design Hermeneutics, Functionalism, Rationalism, Environmentalism, and Critical Theory.

IND 3102 **Design Research and Development** **3 (3-0-6)**

Essential knowledge in how to conduct design-based research that yields balancing results in interior design innovation, ease of manufacturing, and profitability through understanding of the liaison between business market research and interior design research.

IND 3201 **Interior Design III** **6 (2-8-8)**
Prerequisite : *IND 2202 Interior Design II*

Exploration of commercial interior design and its intrinsic components including activities, human perception, human behavior in public realms, materials and fabrications in public spaces, environmental graphic design, as well as rules and regulations in public spaces through small-scale commercial interior design projects.

IND 3202 **Interior Design IV** **6 (2-8-8)**
Prerequisite : *IND 3201 Interior Design III*

Exploration of more complex commercial and hospitality interior design, which includes established and emerging theories and design principles, material fabrications and lighting technology, interior design codes, and constraints and conditions of involved building.

IND 3301 **Interior Construction** **3 (2-2-5)**

Basic interior construction through construction methods, typical interior finishes, details and material uses based on consideration of human ecology, anthropometric and ergonomic principles.

IND 3302 **Interior Material and Technology** **3 (2-2-5)**

Systematic approach in variety of material selections and factors including interior design elements, colors, material and applications, ecological material, and new innovative material. Experiment in the alternated creative possibility in composing variety of color schemes, material presentation board.

IND 3303 **Building System Study** **3 (2-2-5)**

Basic factors about building systems which interior designers need to understand and co-operate the project sufficiency with the other parties in the design team, information of each different type of small and medium public building which is related to interior design process such as; structure system, mechanical system, electrical system, sanitary system, air conditioning system, security control, audio visual system, communication system, fire protection system, building code, etc.

IND 3306 **Lighting Design** **3 (2-2-5)**

Lighting design, history and its implement culture, lighting components, aesthetic sense, health effects of light, properties of light, light technology, codes and law, reading and using light catalogs, practical aspects of lighting design, lighting application and concern throughout various kinds of experimental project.

IND 3307 **Practicum in Interior Design** **1 (1-2-1)**

Ethical conduct on professional interior design, duty and personality's brief for a practicum with minimum 240 working hours in professional training at interior design firm to expose students to all kinds of professional experiences in the real sector of interior design business and related field.

IND 3308 **Brand and Marketing in Interior Design** **3 (2-2-5)**

Fundamental knowledge and analysis of market demand, necessary preliminary marketing idea approach for design, branding design and effective communication and presentation skills for design based on marketing approach.

IND 4201 **Interior Design V** **6 (2-8-8)**
Prerequisite : *IND 3202 Interior Design IV*

Advanced study in interior design, which includes critical analyses of design environment, universal design, and environmental site considerations in order to initiate corresponding design programming and design execution through large scale commercial and institutional projects. This course also provides an opportunity for trans-disciplinary collaborative work focusing on increasing project feasibility.

IND 4202 **Senior Project** **6 (0-12-6)**
Prerequisite : *IND 4201 Interior Design V,*
IND 4304 Pre-Senior Project

Individual study of well-contemplated design project through analyses of design environment, which include emerging design trends, social-cultural context, and environmental concerns resulting in a viable business plan and design schematics for a complex prototype interior design project of appropriate function, aesthetic, scale.

The design and evaluation processes of IND 4202 (Senior Project) are as listed below.
1. Pre – Design (programming)
2. Conceptual Design
3. Preliminary Design
4. Design Development
5. Final Presentation

IND 4301 **Design Management** **3 (3-0-6)**

Project management skills and the process of organizing, fundamental of design business for entrepreneur and project management principles, risk awareness, design thinking process from conceptualization to implementation. Recent worldviews and movements, to develop students' creativity through design thinking and brainstorming to meet client's needs and project time frame.

IND 4303 **Professional Ethics and Practice** **3 (3-0-6)**

Ethical conduct on professional interior design, client's brief, service offered, design team, proposal for interior design project including, preparation of documents, written format, categories and contents scope of design works, scope of design services, estimated budget, work schedule forecast, determined design fees and contract types, contract documents, tender process, site inspection, license and regulations.

IND 4304 **Pre-Senior Project** **6 (2-8-8)**

Individual research analysis integration of market approach and topic of interest pertaining to interior design and propose new approaching value interior concept concerning with interior environmental, trend , social and culture context, and innovate concept idea for senior project under the supervision and approval of advisor.

IND 4401 **Seminar in Interior Design** **3 (3-0-6)**

Design environmental topics or events that are in trend including, interior design, fine arts, furniture design, lighting design, design-related business management, entrepreneurship in interior design business and other related fields. The approach will be topics analysis in class and special lectures from guest lecturers in specialized area from the faculty members from other public or private universities, representatives from design enterprises, or private sectors.

IND 4402 **Advanced Computer-Aided Design** **3 (2-2-5)**

Advanced study of computer-aided design including all necessary update software to enhance the creative thinking of interior design students, interior space for exploration, experimentation, methodologies, design and technology context, narrative, computation, and interactivity.

IND 4403 **Model Making and 3D Exploration** **3 (2-2-5)**

Elementary concepts, tools and material of sculpturing and crafting by hand skills, training in perception of material, texture, form, scale, volume, 3D and spatial visualization, various media and techniques of the alternated creative possibility, emphasizing upon aesthetic form and conceptual development of personal skills.

IND 4404 **Home Textile and Soft Furnishing** **3 (2-2-5)**

Variety of types, colors, texture, and pattern of the home textile, alternated creative possibility, aesthetic appearance, and other factors including strength, durability, performance, and maintenance, the range of textile available in market and process of choosing textile to properly fit the certain usage for all required interior design works.

IND 4405 **Thai Architecture Study** **3 (3-0-6)**

Thai architecture and ornaments that have emerged throughout the history, analysis of space, form, decorated motifs, and functions which are reflected in Thai culture and characteristics applied to the Thai contemporary interior design without losing the mainstream of Thai characteristics.

IND 4406 **Advanced Lighting** **3 (2-2-5)**

Theoretical lighting, color, and illumination for interior design, practical functions, aesthetic sense, technical detailed drawing for lighting design session which is needed to be combined into interior design works, lighting design in different interior project scale and type, professional presentation technique for the lighting design package. Site excursion and seminar are also provided.

IND 4407 **Decorative Art** **3 (2-2-5)**

Variety of decorative art related to interior design that has emerged throughout the history, perception of arts with aesthetic appreciation, conceptual idea of imaginative interpretation, critical thinking of the artist's philosophy, inspiration, material, creative technique, and cultural influence to the art.

IND 4408 **Individual study in Design** **3 (2-2-5)**

Individual study and research analysis on a topic of interest for new approach of theory, philosophy and interdisciplinary design pertaining to design and related design field concern with social and cultural context and environmental .

IND 4409 **Branding Experience in Art and Design** **3 (2-2-5)**

The study approaching on a branding experience in design from a professional with up to date topic of interest pertaining to art and design.

INS 3101 **Principles of Risk Management and Insurance** **3 (3-0-6)**

Basic concepts of risk, various terminologies used in risk management and insurance, principles of risk management process and methods of handling risk, principles that underline the field of insurance, introduction to various types of insurance contracts, such as property, liability, life, health, and government insurance as well as nature and operator of the insurance business.

INS 3102 **Insurance Law** **3 (3-0-6)**
Prerequisite : *BG 1400 Business Law I*

Insurance law and Ministerial Regulations of the Kingdom pertaining to the contract of insurance in all fields such as life, accident, fire, transportation, and liability court interpretation on applicable coverage, comparison of laws in the U.K. and U.S.

INS 3201 **Property Insurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Analysis of an insurance contract and measurement of property and net income loss exposures of family and business firm in general, major insurance policies and extension available in the Thai market, fire insurance and allied lines, risk business interruption insurance, motor insurance, ocean and inland marine insurance and any other modern property insurance for the business firm.

INS 3202 **Casualty Insurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Analysis of the source of legal liability, major sources of liability loss exposures of both family and business firm and the insurance coverage designed to meet those loss exposures, personal liability insurance, public liability insurance, fidelity guarantee insurance, workers' compensation employer's liability insurance, professional liability insurance, product liability insurance, surety bond, and a variety of miscellaneous liability insurance.

INS 3203 **Engineering Insurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Analysis and measurement of property loss exposures of the business firm, major insurance policies and extension including contractor's all risks insurance, erection all risks insurance, machinery breakdown insurance, boiler and pressure vessel insurance, consequential loss following machinery breakdown, computer all risks insurance and deterioration of stock.

INS 3301 **Principles of Life Assurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Features of life insurance industry, life insurance contract, life insurance policy, life insurance products and supplemental benefits, life Insurance policy provision and policy ownership rights, paying life insurance policy and introduction to group life insurance.

INS 4103 **Insurance Marketing** **3 (3-0-6)**
Prerequisites : *INS 3101 Principles of Risk Management and Insurance*
MKT 2280 Principles of Marketing

Marketing principles and functions of marketing as an integral aspect of major branches of insurance industry with emphasis on product developments, marketing strategies related to the developed products i.e. product/price/place/promotion strategies, implementation and customer relationship management as well as other relevant topics.

INS 4104 **Reinsurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Nature and functions of reinsurance, main types of insurers and reinsurer, legal principles and outline of the international reinsurance market, facultative, and treaty for both proportional and excess of loss reinsurance including accounts, premium and loss reserves including reinsurance audits.

INS 4105 **Seminar in Insurance** **3 (3-0-6)**
Prerequisite : *Senior Standing*
Completion of 108 credits

Comprehensive review of all aspects of risk and insurance, various cases of operations of insurance company, topics which are relevant to professional goals and interest of students and current issues in insurance industry with emphasis on research, class discussion, and presentation.

INS 4106 **Information Management in Insurance** **3 (3-0-6)**
Prerequisites : *INS 3101 Principles of Risk Management and Insurance*
MIS 2111 Introduction to Management Information Systems

Data processing techniques used in pertinent functions in all branches of insurance, specific applications related to policy control, commission, premiums, renewals, branch/broker control and costing, cost analysis and financial analysis, new information technologies such as internet and World Wide Web.

INS 4203 **Marine and Aviation Insurance** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Insurance of cargo by all modes of transportation and from aspects of loss, damage, and liability, pertinent Institute Cargo clauses A., B., C., war risk, strike, commodity trades, and other clauses, principles of insurable interest, types and characteristics of vessels and cargoes, hull Insurance and aviation insurance.

INS 4204 **Property and Casualty Insurance Accounting and Finance** **3 (3-0-6)**
Prerequisites : *INS 3101 Principles of Risk Management and Insurance*
ACT 1600 Fundamentals of Financial Accounting

Analysis of insurance accounting and financial statements of the non-life insurance company, valuation of insurance company asset, revenues, expenses, liabilities and policyholders' surplus, interpretation of basic financial statements, and Solvency Surveillance.

INS 4205 **Survey and Claim Management in Property and Casualty Insurance 3 (3-0-6)**
Prerequisites : *INS 3201 Property Insurance*
INS 3202 Casualty Insurance

Analysis of the roles and duties of the claim representative, human relations in claim, communication skill, listening skill, claim management, claim professionalism, negotiation process and styles, application of claims practice to transacting insurance business on an industry wide basis, pre-insurance survey and post -loss survey, loss-adjustment techniques using policy wording in each class of business.

INS 4206 **Essentials of Risk Management** **3 (3-0-6)**
Prerequisite : *INS 3101 Principles of Risk Management and Insurance*

Losses, loss exposures on both personal and business firm and risk management process, risk management techniques, risk financing and risk control, role of the risk manager in an organization, pre and post loss objective, current issues regarding risk management, medical expense benefit, disability benefit, theory of group insurance, master contract and certificate, various aspects and clauses under group insurance contract including marketing and distribution of group insurance and evaluation of current trends.

INS 4207 **Insurance Management** **3 (3-0-6)**
Prerequisites : *INS 3101 Principles of Risk Management and Insurance*
MGT 2900 Principle of Management

Structure and operation of insurance companies and broking companies incorporated in Thailand, managerial practices and problems in insurance companies and broking companies, all main functions and assessment of market needs for both organizations.

INS 4208 **Internship in Property and Casualty Insurance** **3 (240 Hours)**
Prerequisite : *Consent of Department Chairperson*

Students will spend 8 weeks (30 hours/week) internship with selected property and casualty insurance or related business organizations. The internship will focus mainly on insurance operations of such organizations. Upon completion of the program, the students will be evaluated by their supervisor and submit a detail report of the knowledge gained.

INS 4209 **Directed Studies in Property and Casualty Insurance** **3 (3-0-6)**
Prerequisite : *Consent of Department Chairperson*

Under the guidance of the department chairperson, a student must carry out an approved research project in Property and Casualty Insurance. The depth and innovativeness of the research will determine the credit to be given.

INS 4210 **Risk Control and Risk Financing** **3 (3-0-6)**
Prerequisites : *INS 3101 Principles of Risk Management and Insurance*
INS 4206 Essential of Risk Management

Two steps of risk management process (1) implementing the selected risk management techniques and (2) monitoring the results for effective control and coordination of the organization's total risk management effect.

INS 4302 **Accident, Group and Health Insurance** **3 (3-0-6)**
Prerequisite : *INS 3301 Principles of Life Assurance*

Analysis and measurement of personal loss exposure in respect of family and business firm in general, scope of coverage and extension of personal accident insurance, health insurance for medical expense benefit, disability benefit, theory of group insurance, master contract and certificate, aspects and clauses under group insurance contract including marketing and distribution of group insurance and evaluation of current trends.

INS 4303 **Life Assurance Underwriting** **3 (3-0-6)**
Prerequisite : *INS 3301 Principles of Life Assurance*

Elementary physiology and anatomy, proposals and medical report forms, main concept and process of life insurance underwriting, underwriting method, underwriting factors and underwriting aspects relating to impairments, diseases and physiological malfunctions.

INS 4304 **Life Assurance Mathematics** **3 (3-0-6)**
Prerequisite : *INS 3301Principles of Life Assurance*

Concepts of life table, probability of death and survival, fundamentals of premium rating, analysis of components and essential factors of premium rate calculation, reserve calculation and various types of reserve in life insurance.

INS 4305 **Claim Administration in Life Assurance** **3 (3-0-6)**
Prerequisite : *INS 3301 Principles of Life Assurance*

Concepts of claim administration, roles and duties of claim analyst, regulatory requirements for claim administration, analysis of claim decision process for death claim, supplementary benefit claim, endowment claim, disability claim, annuity payment, surrenders of the policy, loans and dividends on the policy.

INS 4306 **Life Assurance and Financial Planning** **3 (3-0-6)**
Prerequisites : *INS 3301 Principles of Life Assurance*
FIN 2201 Principles of Finance

Introduction to financial planning and personal financial planning process, uses of life insurance, life annuities, health insurance and social security in the financial planning scheme, risk analysis concept together with integration of social security benefits, employer-provided benefits, individually purchased life insurance and investments into a comprehensive financial plan including life insurance planning and purchasing decision, financial health check/personal financial fact-finding as well as the investment planning.

INS 4307 **Life Assurance Agency Administration** **3 (3-0-6)**
Prerequisites : *INS 3301 Principles of Life Assurance*
MKT 2280 Principles of Marketing

Life insurance agency office management concepts, agency organization and structure, ways to improve communication and workflow between insurer and agency offices, ways to organize agency office to maximize efficiency and to provide more effective sales support for agency force, office productivity, agency expenses and budgetary control, compliance and sales practices, supervisory skills, people management techniques and agency office automation.

INS 4309 **Internship in Life Assurance** **3 (240 Hours)**
Prerequisite : *Consent of Department Chairperson*

Students will spend 8 weeks (30 hours/week) internship with selected life assurance or related business organizations. The internship will focus mainly on insurance operations of such organizations. Upon completion of the program, the students will be evaluated by their supervisor and submit a detail report of the knowledge gained.

INS 4310 **Directed Studies in Life Assurance** **3 (3-0-6)**
Prerequisite : *Consent of Department Chairperson*

Under the guidance of the Department advisor, a student must conduct a research in an approved area of life assurance. The depth and innovativeness of the research will determine the credits given.

INS 4311 **Financial Concepts for Life Assurance** **3 (3-0-6)**
Prerequisites : *INS 3301 Principles of Life Assurance*
FIN 2201 Principles of Finance

Managing solvency, and profitability of life insurance companies, with emphasis on financial management of insurance company, how life insurance companies pursue the key financial objectives, insurance financial statement analysis, product planning, product design and pricing for insurance company product, concept of how insurance company executives approach capital management and monitor the financial performance of Life Insurance Company.

IT 1251 **Business Systems** **3 (3-0-6)**

Business systems and their interrelationships including finance, accounting, sales, marketing, human resources, law and operations, inputs and outputs of information systems, potential for integration of the systems, and information systems security.

IT 2130 **Systems Science** **3 (3-0-6)**

Basics of systems (its inputs, outputs and environment, and its behavioral characteristics), general system theory, classification of systems, hierarchy of systems, and adaptability of system, various approaches to system thinking such as cybernetic, cybernetic principles and applications, system dynamics, operation research, and systems analysis.

IT 2157 **Human Computer Interaction** **3 (3-0-6)**

Basic knowledge about human behavior, interaction between humans and computers, overview of a number of research areas in human-computer interaction, design of computer interfaces to fit with the concepts of usability, accessibility and trustworthiness.

IT 2211 **Requirement Engineering** **3 (3-0-6)**

Concepts and techniques needed in the eliciting, analyzing, documenting, validating, and managing requirements for an information systems that will fit into a broader system development process.

IT 2220 **Computer System Concepts** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

Computer system organization, internal data representation, computer operations, overview of computer system configuration (CPU, memory unit, I/O unit), fundamentals of operating systems e.g. compiling, linking, loading, and executing program instructions, instruction cycle, basic instruction set, elements of instructions, and addressing modes.

IT 2230 **Information Structures** **3 (3-0-6)**
Prerequisite: CS 1201 Computer Programming I

Various types of data structures (primitive, simple, structured, linear, and nonlinear data types), applications developed under aforementioned data structures, tradeoffs and criteria for selecting the appropriate data structure, searching and sorting techniques.

IT 2231 **Introduction to Information Technology** **3 (3-0-6)**

Various types of information technology, effect of information technology on the information systems, computer operations, communication systems, information processing, input/output devices, processors, storage and retrieval techniques, communication technology, and applications of current technology in information systems.

IT 2371 **Object Oriented Programming I** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Widely used commercial object-oriented programming language, development of basic object-oriented concepts and skills, design and coding of object-oriented application programs.

IT 3111 **User Interface Design** **3 (3-0-6)**
Prerequisite : *IT 2157 Human Computer Interaction*

Development of interactive systems, including mobile/portable devices with focus on user capabilities, interface technology, interface design methods, and usability principles.

IT 3210 **Database Management Systems** **3 (3-0-6)**
Prerequisite : *IT 2230 Information Structures*

Data structure, principles of database, database system, database management system, application of database in information systems.

IT 3211 **Information Storage and Retrieval** **3 (3-0-6)**
Prerequisite : *IT 3210 Database Management Systems*

Kinds and characteristics of information systems, data files in computer systems, inverting files, analysis of the safety and integrity of information systems.

IT 3230 **Management Information Systems** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

Role of information systems that affect decision making and organization, characteristics and structures of management information systems, management and decision-making styles, information systems and organization structures, MIS planning, MIS applications and other trends of information systems.

IT 3231 **Information Systems Analysis** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

System development life cycle, analysis of system's requirements, information requirements for management, tools and techniques used to analyze an information system and determine system's requirements, management and control of system development.

IT 3232 **Information Systems Design** **3 (3-0-6)**
Prerequisite : *IT 3231 Information Systems Analysis*

Design techniques for information systems, I/O design, processing design, control design, file and database design, system testing design, implementation phases and procedures, and system maintenance and review.

IT 3253 **Data Communication and Networking** **3 (3-0-6)**
Pre-requisite : *IT 2231 Introduction to Information Technology*

Different network types, various network media and topologies, functions of each layer of the ISO-OSI model, various alternatives in interconnecting networks such as routers, switches, bridges, and gateways, fundamental concepts of data communication, transmission media, computer and data equipment interfaced and interconnected, valid information transfer, security issue, cost effectiveness of data communication.

IT 3331 **Organizational Behavior and Development** **3 (3-0-6)**

Human behavior, attitudes, performance, individual perceptions, values, and learning styles within organizational settings, group structure and dynamics, organizational processes that occur on a daily basis within any social gathering including communications, decision-making, leadership, power and politics, conflict, stress management, and change.

IT 3351 **Web Design and Development I** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Web-based design, web-based application development, the internet, the worldwide web, HTML fundamentals, images and multimedia, page and site design issues, user interface and development environments, modern web application development technologies.

IT 3355 **Mobile Applications Development** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Development of applications for current and emerging mobile computing devices, performing tasks at all stages of the software development life-cycle from inception to implementation and testing, impact of user characteristics, device capabilities, networking infrastructure and deployment environment.

IT 3371 **Object Oriented Programming II** **3 (3-0-6)**
Prerequisite : *IT 2371 Object Oriented Programming I*

Extension of concepts and skills developed in IT2371, practical skills and ability to design and implement application programs using advanced features of the object-oriented programming language.

IT 3372 **Visual Programming** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Practical use of visual programming concepts, tools and techniques, use of visual programming for the rapid development of user-centered applications.

IT 4141 **Public Relations** **3 (3-0-6)**

Strategic communication process that builds mutually beneficial relationships between organizations and the public using the techniques of establishing and maintaining public relations as well as the activities to span a variety of media to influence public opinion and manage an organization's reputation.

IT 4291 **Senior Project I** **3 (3-0-6)**
Prerequisite : *Fourth-year students with at least 100 credits*

Specific proposed project for the real client which requires students to conduct the feasibility study, analyze the existing system, design the proposed system, and develop the project proposal and prototype. The instructors will advise students throughout the proposal development. The students will have an oral examination on their proposal.

IT 4292 **Senior Project II** **3 (3-0-6)**
Prerequisite : *IT 4291 Senior Project I*

Continuation of IT 4291 Senior Project I. The approved proposal must be developed, tested, and implemented. The project report and the instruction manual will be developed. The instructors will advise students throughout the project development. The students will have an oral examination on their projects.

IT 4311 **Introduction to Computer Graphics** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

Foundations of computer graphics, characteristics of computer graphics on graphic monitors, computer software for three dimensional graphics, techniques for creating animation, use of modern application program to enhance the computer graphic design.

IT 4314 **Software Engineering Concepts** **3 (3-0-6)**
Prerequisite : *IT 3232 Information System Design*

Software life cycle, analysis of requirements, structured software design, development, implementation, testing, and maintenance of software, reusable software, documentation and software manuals, and software project management.

IT 4315 **Object Oriented Concept in Analysis and Design** **3 (3-0-6)**
Prerequisite : *IT 3232 Information System Design*

Object-oriented software development paradigm, basic knowledge to embark on an object-oriented software development endeavor, standard modeling approach for describing object-oriented system design.

IT 4316 **Image Processing** **3 (3-0-6)**
Prerequisite : *CS 1201 Computer Programming I*

Concepts of image processing including digital image, image viewing, encoding images for memory storage, retrieving images from memory for processing, analysis of images.

IT 4331 **Software Testing** **3 (3-0-6)**
Prerequisite : *IT 4314 Software Engineering Concepts*

Detailed activities involved in testing a software, different approaches in testing various components of a software, appropriate testing methods for different problems, and utilization of testing reports effectively in order to improve quality of a software both during software development and after software implementation.

IT 4340 **Introduction to Information Resource Management** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

Management of information resources and database, design acquisition, implementation and management of computer-based system, systematic approach to information resource management.

IT 4358 **Expert Systems** **3 (3-0-6)**
Prerequisite : *Senior Students and by the consent of the instructor*

Basic knowledge of expert systems including techniques used to develop and implement expert systems with the analytical and validation method.

IT 4359 **E-Commerce** **3 (3-0-6)**
Prerequisite : *Senior Students and by the consent of the instructor*

Various components that shape e-commerce systems, components, inherent technologies, pertinent design and development issues, management strategies for business-to-business, business-to-consumer, intra-business domains, information appliances, computing networks, application and service repositories, application access infrastructure, systems security, implementation risks.

IT 4360 **Multimedia Applications** **3 (3-0-6)**
Prerequisite : *IT 2231 Introduction to Information Technology*

Basic ideas, theory, practical uses of multimedia for presenting and conveying information, windows and multimedia, sound recording, image processing, animation, electronic composing, multimedia databases, virtual reality and cyberspace, overview of multimedia products.

IT 4363 **Information System Security and Auditing** **3 (3-0-6)**

Fundamentals of computer security including hardware security, software security, database security, computer networks and telecommunication security, physical protection and microcomputer security and viruses, cryptographic technology, disaster recovery and contingency planning, intrusion detection and other applications, legal and ethical issues in computer security.

IT 4366 **Advanced Data Management Systems** **3 (3-0-6)**
Prerequisite : *IT 3210 Database Management Systems*

Relational database model, data storage and management object-relational and object-oriented databases, data mining, on-line analytic processing, data marts, data warehousing, WWW database applications and role of the database administrator.

IT 4367 **Web Design and Development II** **3 (3-0-6)**
Prerequisite : *IT 3351 Web Design and Development I*

Advanced topics on developing web application including using XML to extend web application capabilities, creating and using web service, application configuration, tuning up performance, application deployment and security issues, advanced topics on database such as using store procedure, persisting data with XML, advanced web application architectures such as e-commerce, portal site, community site.

IT 4400-99 **Selected Topic** **3 (3-0-6)**
Prerequisite : *Fourth-year students and by the consent of the instructor*

Special topics that are appropriate for detailed study and research. The topic selected depends on the student's need and the instructors' requirements and is in accordance with the current change of information technology in that period.

JA 0721 **Japanese for Beginners I** **3 (3-0-6)**

Japanese pronunciation, vocabulary and some basic sentence patterns focusing on the skills of listening and speaking in everyday Japanese language.

JA 0722 **Japanese for Beginners II** **3 (3-0-6)**
Prerequisite : *JA 0721 Japanese for Beginners I or by the consent of the instructor*

Vocabulary, more basic sentence patterns to develop the skills of listening and speaking.

JA 0723 **Reading and Writing Japanese Scripts** **3 (3-0-6)**

Japanese scripts-Hiragana and Katakana, 50 basic kanji, greetings, and basic sentence patterns used in daily Japanese conversation

JA 1700 **Introduction to Japanese** **3 (3-0-6)**

Basic of Japanese language, scripts, Japanese sound system, basic grammar, and listening and speaking practice.

JA 1701 **Japanese I** **3 (3-0-6)**
Prerequisite : JA 1700 Introduction to Japanese

Basic grammar, more vocabulary, kanji for daily use, and further development of listening and speaking.

JA 2701 **Japanese II** **3 (3-0-6)**
Prerequisite : JA 1701 Japanese I

Further practice in listening, speaking, higher level of grammatical structures and fundamental reading skills.

JA 2702 **Japanese III** **3 (3-0-6)**
Prerequisite : JA 2701 Japanese II

Further practice in listening, speaking, higher level of grammatical structures and fundamental reading and writing skills.

JA 2703 **Basic Reading and Writing I** **3 (3-0-6)**
Prerequisite : JA 1701 Japanese I

Principles of reading and writing, reading simple texts, types of sentences, and practice in writing topics of everyday life.

JA 2704 **Basic Reading and Writing II** **3 (3-0-6)**
Prerequisite : JA 2703 Basic Reading and Writing I

Reading and writing more complicated texts and topics.

JA 3701 **Intermediate Japanese Grammar** **3 (3-0-6)**
Prerequisite : JA 2702 Japanese III

Intermediate grammatical structures and vocabularies for reading and writing in more complicated contexts.

JA 3702 **Business Japanese I** **3 (3-0-6)**
Prerequisites : JA 2702 Japanese III
JA2704 Basic Reading and Writing II

Integrated skills of listening, speaking reading, and writing in business contexts.

JA 3704 **Oral Comprehension and Expression** **3 (3-0-6)**
Prerequisite : JA 2702 Japanese III

Demonstrating ideas and opinions in various social situations with appropriate styles of Japanese .

JA 3721 **Introduction to Japanese Linguistics** **3 (3-0-6)**
Prerequisite : JA 2702 Japanese III

Vocal and consonantal systems of the Japanese language, special features of the language, phonetics, phonemics, sentence patterns and a complete grammatical analysis.

JA 3722 **Japanese Reading and Oral Report** **3 (3-0-6)**
Prerequisite : JA 2702 Japanese III

Reading comprehension skills of various Japanese articles and summarizing through oral presentations.

JA 3723 **Introduction to Japanese Phonetics** **3 (3-0-6)**
Prerequisites : JA 2702 Japanese III
GL 1101 Elements of Spoken Language

Accurate Japanese pronunciation, and Japanese phonological system and intensive practice on the articulation of various Japanese sounds.

JA 3724 **Aspects of Japan** **3 (3-0-6)**
Prerequisite : JA 2701 Japanese II

Japanese lifestyle, thought patterns, civilization and interdisciplinary studies about Japan.

JA 3725 **Japanese for Secretaries** **3 (3-0-6)**
Prerequisite : *JA 2702 Japanese III or by the consent of the instructor*

Skills and accuracy in listening, speaking, reading and writing for secretarial work

JA 3726 **Japanese for Tourism** **3 (3-0-6)**
Prerequisite : *JA 2702 Japanese III or by the consent of the instructor*

Practice of Japanese language for tour management

JA 3727 **Japanese for Hotels** **3 (3-0-6)**
Prerequisite : *JA 2702 Japanese III or by the consent of the instructor*

Practice of Japanese language for hotel service and hospitality.

JA 3728 **Japanese for Airline Services** **3 (3-0-6)**
Prerequisite : *JA 2702 Japanese III or by the consent of the instructor*

Practice of Japanese language for airline service and hospitality.

JA 3729 **Survey of Japanese Literature** **3 (3-0-6)**
Prerequisite : *JA 2702 Japanese III or by the consent of the instructor*

Survey of classical and modern Japanese literary works.

JA 4701 **Reading in Business Japanese I** **3 (3-0-6)**
Prerequisite : JA 3702 Business Japanese I

Reading comprehension skills of various business-related Japanese articles.

JA 4702 **Business Writing in Japanese I** **3 (3-0-6)**
Prerequisite : *JA 3702 Business Japanese I*

Practice of writing business-related documents.

JA 4703 **Translation I : Japanese - Thai** **3 (3-0-6)**
Prerequisite : *JA 3702 Business Japanese I*

Methods and techniques of translation from Japanese into Thai

JA 4704 **Translation II : Thai - Japanese** **3 (3-0-6)**
Prerequisite : *JA 3702 Business Japanese I*

Methods and techniques of translation from Thai into Japanese.

JA 4721 **Japanese Conversation and Discussion (for international students)** **3 (3-0-6)**
Prerequisite : *JA 3704 Oral Comprehension and Expression*

Conversation skills on various topics of everyday life including some business topics.

JA 4722 **Reading in Business Japanese II** **3 (3-0-6)**
Prerequisite : *JA 4701 Reading in Business Japanese I*

Advanced reading comprehension skills of various business-related Japanese articles.

JA 4723 **Business Writing in Japanese II** **3 (3-0-6)**
Prerequisite : *JA 4702 Business Writing in Japanese I*

Further practice of writing business-related documents.

JA 4724 **Business Japanese II** **3 (3-0-6)**
Prerequisite : *JA 3702 Business Japanese I*

Advanced communication skills for various business interactions.

JA 4725 **Translation in Business Japanese** **3 (3-0-6)**
Prerequisite : *JA 3702 Business Japanese I*

Methods and techniques of translation from Japanese into English and vice-versa in business contexts.

JA 4726 **Public Speaking in Japanese** **3 (3-0-6)**
Prerequisite : *JA 3704 Oral Comprehension and Expression*

Principles and skills of presentation in public.

JA 4727 **Seminar** **3 (3-0-6)**
Prerequisite : *By the consent of the instructor*

Discussion on interested topics in depth.

JA 4728 **Internship** **6 (6-0-12)**
Prerequisite : By consent of the instructor

Practical training for Business Japanese students.

LA 4606 **Intellectual Property Law** **3 (3-0-6)**

Nature of various types of intellectual property with emphasis on copyright, patents and trademarks, domestic copyright protection, international copyrights protection, patent protection under Thai law, developing countries' policy in drafting patent laws, protection of trademarks under Thai law, protection of other types of intellectual property such as business names and trade secrets.

LL 1101 **Theories and Principles of Private Law** **3 (3-0-6)**

Definition, development, concept, role, and importance of law, legal methods, and fundamental concepts of private law, legal theories, general principles of civil and private law in the Civil and Commercial Code Book I, such as those concerning persons, juristic acts, and property.

LL 1102 **Legal History** **2 (2-0-4)**

World legal history, Thai cultural and social history which is the origins of important Thai legal institutions and the influence on Thai laws of Indian and Western philosophies, legal principles and legal system, comparative study on major legal systems of the world.

LL 1103 **Application, Interpretation of Laws and Legal Reasoning** **2 (2-0-4)**
Prerequisite : *LL 1101 Theories and Principles of Private Law and*
LL 1401Theories and Principles of Public Law

Principles of the application and interpretation of written law, analogy of law, the application of customary law and the application of "general principles of law" under section 4 of the Civil and Commercial Code, problem, application and interpretation of the criminal law, public law, Juristic act and contract law, selected practical problems as well as theoretical problems

LL 1201 **Juristic Acts and Contracts Law** **3 (3-0-6)**

The Civil and Commercial Code, Book 1, Title 4 on Juristic Acts, Title 5 on Periods of Time and Title 6 on Prescription and Book 2, Title 2 on Contracts.

LL 1202 **Property and Land Law** **3 (3-0-6)**

Principles of law relating to property according to the Civil and Commercial Code, Books 1 and 4 as well as land law according to the Land Act and other related Laws.

LL 1301 **Criminal Law I** **3 (3-0-6)**

Criminal law, theories of criminal liability, scope of criminal law, attempt, principals and accessories, concurrence of offenses, recidivism, prescription, penalties and criminological and penological theories.

LL 1401 **Theories and Principles of Public Law** **2 (2-0-4)**

Institutions of public law, the meaning, elements and forms of the state as well as legal personality and institutions of the State. History and evolution of public law system, scope and specific nature of public law. Origin of public law, concepts and legal methods of public law. Public law theories Interest Theory, Subordinate Theory, and Subject of Law Theory.

LL 1402 **Constitution Law and Political Institutions** **3 (3-0-6)**
Prerequisite : *have taken or currently studing LL 1401 Theories, and Principles of Public Law*

History and development of the Constitution, rights and liberties of people under Constitutionalism, various governmental organizations, important constitutional theories, Separation of Powers Principle, Judicial Review including various philosophies of the constitutional system.

LL 2001 **Legal English I** **0 (2-0-4)**

English legal terminology and expressions of particular importance as well as concepts underlying terms and expressions in varying legal systems, practice reading legal documents and write essays on law subjects of their choice in English.

LL 2104 **Legal Profession Ethics** **2 (2-0-4)**

Moral and ethics of legal professionals in work and practice as being expected from good lawyers. Keeping and Pursuance of integrity in society as a good lawyer. Current issues relating to lawyers' ethics through case studies.

LL 2203 **Law on Consequences and Extinction of Obligations** **3 (3-0-6)**

Significance of law on Obligation, types, subjects, performance and effects of obligations according to the Civil and Commercial Code Book 2, Title 1, Chapters 1 and 2, Part 1 and preferential rights arising from debt, plurality of creditors and debtors, transfer of claims and extinction of obligations according to the Civil and Commercial Code Book 2, Title 1, Chapter 2, Part 2-6 and Titles 3, 4 and 5.

LL 2204 **Law of Delict, Mangement of Affairs without Mandate, Undue Enrichment** **3 (3-0-6)**

Torts, Management of Affairs without Mandate, Undue Enrichment according to the Civil and Commercial Code, Book 2.

LL 2205 **Specific Contracts I** **3 (3-0-6)**

Principles of law relating to sale, exchange, gifts, hire of property, and hire-purchase according to the Civil and Commercial Code Book 3.

LL 2206 **Insurance Law** **2 (2-0-4)**

Principles of law relating to insurance according to the Civil and Commercial Code, Book 3, and the legislation concerning loss and life insurances.

LL 2207 **Specific Contracts II** **3 (3-0-6)**

Law on, hire of work, , loan, deposit, warehousing, agency, brokerage, compromise and gambling and betting, carriage according to the Civil and Commercial Code, Book 3

LL 2208 **Negotiable Instruments and Current Account Law** **2 (2-0-4)**

Negotiable instruments and current accounts according to the Civil and Commercial Code, Book 3 Titles 21 and 19 and liability for misuse of cheques

LL 2302 **Criminal Law II** **2 (2-0-4)**
Prerequisite : *LL 1301 Criminal Law I*

Offenses relating to the security of the kingdom, terrorism, public administration, public justice, religion, public order, public dangers, counterfeit and alteration, trade, and sexuality.

LL 2303 **Criminal Law III** **3 (3-0-6)**
Prerequisite : *LL 1301 Criminal Law I*

Specific offenses including life and body, freedom and, reputation, and property as well as petty offenses.

LL 3002 **Legal English II** **0 (2-**
Prerequisite : *LL 2001 Legal English I*

Enhancing students' English listening and speaking skills in legal context through simulations of moot court, moot arbitration and legal debating.

LL 3209 **Secured Transactions Law** **2 (2-0-4)**

Principles of law relating to suretyship, mortgage, and pledge according to the Civil and Commercial Code Book 3.

LL 3210 **Laws on Business Organizations** **3 (3-0-6)**

Principles of law relating to the organization, operation and liquidation of ordinary partnerships, registered partnerships, limited partnerships, limited companies, and public companies. Other forms of business organizations. Laws and regulations on securities and shares. Civil and criminal liability of representatives of juristic persons.

LL 3211 **Family Law** **3 (3-0-6)**

The Civil and Commercial Code Book 5.

LL 3212 **Succession Law** **3 (3-0-6)**

The Civil and Commercial Code Book 6.

LL 3403 **Administrative Law and Procedures** **3 (3-0-6)**
Prerequisite : *have taken or currently studying LL1401 Theories and Principles of public law*

The general nature of Administrative Law, sources of administrative law in various legal systems, fundamental concepts, application and interpretation of administrative law, the organization of Thai public administration system, the relationship among political governmental organizations, rights between public and private sectors and vice versa; public service management, concession. Formation and legal status of juridical personality in public law, theories concerning administrative actions, rules with regard to administrative procedure, and administrative contracts. The establishment of the administrative court, administrative procedure, liabllity of the Administration.

LL 3501 **Public Finance Law and Tax Law** **3 (3-0-6)**

Law of public finance concerning financial matters, treasury, budget control, financial institutions, the economic principles relating to financial matters and treasury employed by the government in the administration of the country, Revenue Code in respect of personal income tax and corporate income tax.

LL 3503 **Bankruptcy Law and Rehabilitation** **2(2-0-4)**

Nature, objectives, history of bankruptcy Law, comparison of civil procedures with bankruptcy procedures, prosecution of bankrupty cases, rehabilitation.

LL 3601 **Civil Procedure Law I** **3 (3-0-6)**

General provisions on civil procedures and the procedures at trial court level

LL 3602 **Criminal Procedure Law** **4 (4-0-8)**

Criminal procedure according to the Criminal Procedure Code on authorities and duties of officials, scope of investigation, arrests, interrogation, detention, prosecution, trial, appeals, and execution of judgments.

LL 3603 **Court System and Constitution of Courts of Justice** **2 (2-0-4)**

Single and duals court systems, courts of Justice and others, Military Court, Administrative Court, Constitution Court, Court jurisdiction, judicial powers and quorum in trial, and adjudication for power and duty of courts.

LL 3604 **Civil Procedure Law II** **3 (3-0-6)**
Prerequisite : *LL 3601 Civil Procedural Law I*

The procedure at Appellate Court and Supreme Court, principles of law of provisional measures and execution of judgments and orders.

LL 3605 **Evidence Law** **3 (3-0-6)**

Basic and general principles of evidence and provisions appearing in the Civil Procedure Code and Criminal Procedure Code.

LL 3701 **Public International Law** **3 (3-0-6)**

History of international law, theories of international law, sources of international law, relationship between international law and domestic law, subjects of international law, jurisdiction, state responsibility, law of the sea, Interracial disputes settlement.

LL 3702 **Private International Law** **3 (3-0-6)**

Natures of private international law, private allocation, law on nationality, rights and legal status of foreigners, conflict of laws rules, international disputes settlement and court procedures in international civil matters.

LL 4105 **Philosophy of Law** **2 (2-0-4)**

Development of legal philosophies in various schools from past to present and root of problems of Law.

LL 4106 **Introduction to Common Law System** **2 (2-0-4)**

Origins, scope and development of common law system in the US and UK, roles and functions of various legal institutions and professions, relationships between federal and state law in the US, relationships between English law and European Union law, framework of American and English legal education, and structure of basic principles of Common Law.

LL 4213 **Seminar in Civil and Commercial Law** **2 (2-0-4)**

A seminar in important Civil and Commercial Code topics.

LL 4304 **Seminar in Criminal Law** **2 (2-0-4)**
Prerequisite : *LL1301 Criminal Law I*
LL 2302 Criminal Law II
LL 2303 Criminal Law III

Seminar in important Criminal Law topics.

LL 4404 **Law Drafting and Legislative Process** **2 (2-0-4)**

Organs relating to Law Drafting in Thailand, Rules and Proceduces relating to Law Drafting and Legislative Process

LL 4405 **Human Rights Law** **2 (2-0-4)**

Definition and philosophy behind human rights, protection of human rights under the League of Nations and the United Nations, protection of human rights at regional levels, and Arab States, the protection of human rights under Thai law.

LL 4406 **Environmental Law** **2 (2-0-4)**

Causes of environmental problems and their offects on lives, societes and country, governmental control of problems at state policy, environmental law on protection of air, water, and landm, litigations for damages in case of environmental problems.

LL 4407 **Natural Resources Law** **2 (2-0-4)**

Laws on petroleum, minerals, forests

LL 4408 **Consumer Protection Law** **2 (2-0-4)**

Various laws with the objectives to protect consumer's rights, consumer protection law, advantages and drawbacks of Thailand's consumer protection law, importance of legal measures in consumer protection.

LL 4409 **Broadcasting and Telecommunication Laws** **2 (2-0-4)**

Background, significance of laws and regulations on broadcasting and telecommunication, transfer of technology, accessibility of consumers to services, control on telecommunication and broadcasting business entrepreneurs, consumer protection, issues on fair competition among broadcasting and telecommunication business arena, authority and function of regulatory organizations.

LL 4410 **Energy and Petroleum Law** **2 (2-0-4)**

Theories, principles, concepts, polies and regulations concerning development and promotion of energy, preserve and control of energy, production, transportation and distribution standard in energy business dimension including renewable energy and petroleum.

LL 4411 **Medical and Public Health Laws** **2 (2-0-4)**

General nature of medical and public health laws, medical ethics, law relating to health professional practice, law relating to Sanatorium, law relating to drugs, various problems relating to medical ethics and medical and public health laws.

LL 4412 **Laws on Food and Drug** **2 (2-0-4)**

Legal principles regulating the standard of food and drug, process of licensing, controlling and regulating, problems arising from law enforcement,

LL 4502 **Labor and Social Security Law** **3 (3-0-6)**

Principles of labor law, history, current labor laws of Thailand relating to labor protection, labor relations, labor management, alien workers and guidelines for consideration and interpretation of various problems relating to labor and social security law.

LL 4504 **Law on Taxation in International Trade and Investment** **2 (2-0-4)**
Prerequisite : *LL3501 Public Finance Law and Tax Law*

History, theoretical development, important principles, laws and practices relating to taxes and duties in connection with international trade and investment under Thai and international law, problems surrounding international tax-evasion and countervailing measures.

LL 4505 **Intellectual Property Law** **3 (3-0-6)**

Nature of various types of intellectual property, Intellectual Property rights protection under Thai and international Law, developing countries' policy in drafting patent law.

LL 4506 **International Business Transactions Law** **2 (2-0-4)**

Legal Principles relating to international business operations, especially International Sale of Goods contracts, Incoterms, International paymerts, International carriage of goods by sea maritime insurance.

LL 4507 **Principles of Economics for Lawyers** **2 (2-0-4)**

General concepts of micro-economic and macro-economic,Fundamental economic problems, elements used to prescribe supply and demand of goods, consumer's behavior, qualifications of perfect and imperfect competitive market, calculation of Gross Domestic Products(GDP), banking and finance, international trade, the connection between law and economic system

LL 4508 **Principles of Accounting and Financial Reports for Lawyers** **2 (2-0-4)**

Fundamental accounting principles, evaluation of assets, concepts regarding net value, understanding and analyzing financial statements to benefit the practice of business laws and to cooperate with other professionals concerned.

LL 4509 **Securities and Securities Exchange Law** **2 (2-0-4)**
Prerequisite : *LL 3210 Laws on Business Organizations*

Development of securities exchange market in Thailand and its management, various institutions involved, issuance and exchange of securities, control, the operation of securities business, tax law and accounting relating to securities exchange, legal measures of various problems of securities exchange.

LL 4510 **Banking and Financial Institutions Law** **2 (2-0-4)**

Roles of commercial banks and other financial institutions control and promote policies as well as banking and financial institutions laws.

LL 4511 **Investment Law** **2 (2-0-4)**

Importance of investment, Thai economic structure, investment policies and laws of developing countries, laws on direct investment, portfolio investment, Laws relating to financial institutions and other laws which have impact on investment.

LL 4512 **International Economic Law** **2 (2-0-4)**
Prerequisite : *ECO 2200 Introduction to Economics*

Rules and economic relationship among developed countries and developing countries in 1) General Agreement on Tariffs and Trade (GATT) to analyze agreements in multilateral trade negotiations, the negotiations within the GATT framework and foreign economic laws which effect Thai exports, 2) the International Monetary Fund to analyze the rules of lending in the case of deficit, indebtedness and development and 3) roles of regulation on transnational companies.

LL 4513 **Arbitration Law** **2 (2-0-4)**

Thai Arbitration law, rules and regulations concerning arbitration of the Thai Chamber of Commerce, the International Chamber of Commerce and other important organizations, arbitration treaties and the execution of arbitral awards.

LL 4514 **Carriage of Goods by Sea Law** **2 (2-0-4)**

Laws on water transport, ships, agreements on carriage of goods by sea; collision at sea, salvage at sea, general average, laws of towage, and laws concerning navigable water zone.

LL 4515 **Customs Law** **2 (2-0-4)**

Nature and objectives of custom duties and excise, development and origins of law, liability to pay customs, customs procedure, offenses under customs law, authorities and duties of customs officials, litigation of customs cases, rules on tariffs, exemption of customs, interpretation of tariffs, customs exemption as well as customs law and investment promotion and customs law and industrial estates.

LL 4516 **Industrial Law** **2 (2-0-4)**

Principles of law relating to industrial operations and rules, regulations and legal problems arising from industrial operations.

LL 4517 **Law on Real Estate Business** **2 (2-0-4)**

Nature of use and business exploitation of land by private sector, law controlling such business, law on residence, commercial building, condominium, shopping center and resort management and practice and contracts concerning real estate business.

LL 4518 **Competition Law** **2 (2-0-4)**
Prerequisite : *ECO 2200 Introduction to Economics*

Concept and core principles of competition law, importance of competition law on both domestic and international economy. Concept of anti-competitive practices such as anti-competitive agreements, block exemptions, abuse of a dominant position, market concentration, merger and acquisition.

LL 4519 **Seminar in Tax Law** **2 (2-0-4)**
Prerequisite : *LL3501 Public Finance Law and Tax Law*

A seminar in important tax law topics.

LL 4520 **Seminar in Business Law** **2 (2-0-4)**

Seminar in important business law topics.

LL 4521 **Laws on Merger and Acquisition** **2 (2-0-4)**
Prerequisite : *LL 3210 Laws on Business Organizations*
LL 4509 Securities and Securities Exchange Law

Issues arisen from merger and acquisition in different forms including taxation laws, business judgment. Laws concerning the establishment of business organizations, securities laws and taxation law. Legal consultant's roles in practice with regard to the design of the construction of merger and acquisition, due diligence, evaluation of asset value, financing, negotiation to make an agreement, problems and measures used to prevent hostile takeovers and undue acquisitions.

LL 4522 **Law on Sport and Entertainment** **2 (2-0-4)**

Law for professional and amateur sports associations and athletes, entertain ment and sport management, development and registration of the Association of professional sport, sports investments, a penalty from "set up game" and coutrol riat during competition.

LL 4523 **Seminar in Securities and Securities Exchange Law** **2 (2-0-4)**
Prerequisite : *LL4509 Securities and Securities Exchange Law*

Seminar on Securities Law major topics, laws relating to securities business including, acquisition and disposition of securities, securities tender offers and investments in property mutual funds and REITs.

LL 4524 **Seminar in Intellectual Property Law** **2 (2-0-4)**
Prerequisite : *LL4505 Intellectual Property Law*

Current issues related to intellectual property rights (IPRs)

LL 4525 **Law on Fashion Business** **2 (2-0-4)**

To provide an arena for Legal issues relating to tthe fashion business, intellectual property laws relating to fashion business, laws on production, setting up and management of, fashion business and current issues related to the fashion occupation.

LL 4526 **International Financial Law** **2 (2-0-4)**

Financial market transactions in commercial banking, insurance, derivatives, and capital markets, the big picture of the legal underpinnings of financial transactions and how risk in the financial market is entered , managed, dispersed and shifted, analyze and compare the legal basis of financial transactions in the region.

LL 4606 **Principles of Contract Drafting** **2 (2-0-4)**
Prerequisite : *LL 1201 Juristic Acts and Contracts Law*
LL 2205 Specific Contracts I
LL 2207 Specific Contracts II

Methods and problems in drafting various types of contract, contract forms, laws involved, and critiques of contract samples.

LL 4607 **Counselling and Advocacy** **2 (2-0-4)**
Prerequisite : *LL3601 Civil Procedural Law I*
LL 3602 Criminal Procedural Law
LL3604Civil Procedural Law II
LL 3605 Evidence Law

Practice of legal counselling, establishment and management of law firms and legal consulting firms, all procedures involved in litigation, case preparation, drafting of complaints, replies, motions and petitions, litigation technics, enforcement of judgment or order of courts.

LL 4608 **Seminar in Civil Procedure Law** **2 (2-0-4)**
Prerequisite : *LL 3601 Civil Procedure Law I*
LL 3604 Civil Procedure Law II

Seminar in important Civil Procedure Law topics

LL 4609 **Seminar in Criminal Procedure Law** **2 (2-0-4)**
Prerequisite : *LL 3602 Criminal Procedure*

Seminar in important criminal procedure law topics.

LL 4610 **Criminology and Penology** **2 (2-0-4)**

Relationship between criminological theories and criminal law, criminal procedure, criminal procedure according to guidelines of criminologists and sociologists in order to study criminological theories from past to present, classification of crimes and criminals to prevent crimes, scope of enforcement of criminal law and social philosophies in respect of punishment and treatment of offenders.

LL 4611 **Science, Technology and Criminal Investigation** **2 (2-0-4)**

An account of Science, technology and medical science that relates to the application of law, evidential proof for criminal and civil proceedings, criminal investigation with emphasizing on law enforcement, scientific forensic methods, evidence finding, interrogation, proof and examination of evidence and witnesses.

LL 4612 **Law on Juvenile and Family Court and Procedure** **2 (2-0-4)**

Juvenile offenses and judicial system as well court procedures in such cases and family cases.

LL 4613 **Human Rights in Judicial Procedure** **2 (2-0-4)**
Prerequisite : *LL3602 Criminal Procedural Law*

Argument issues and problems of human rights in criminal procedures under thai judicial procedure.

LL 4703 **Law of the Sea** **2 (2-0-4)**

Economic and political importance of the sea to humanity, philosophies on use and possession of the sea, definition and development of international law of the sea, present problems in respect of international law concerning the sea and sea bed which in beyond state boundaries, sea territories, exclusive economic zones, international waters, specific problems of archipelagic state, environmental control, scientific research, technological development , solutions for disputes arisen amongst states, importance of sea to Thailand and Thailand's roles and view toward problems concern.

LL 4704 **International Organization Law** **2 (2-0-4)**

Development of international organizations, structures, powers and duties of the League of Nations and various organs of the United Nations, such as the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the Secretariat and the International Court of Justice, the powers and duties of specialized agencies and region organizations.

LL 4705 **European Union Law** **2 (2-0-4)**
Prerequisite : *LL3701 Public International Law*

History and evolution of the European Union (EU), objectives and sources of EU law, the structural characteristics of the European Union, legal systems of the European Union, the structure, powers, duties and operations of the European Union, the European Commission, the European Council and the European Court of Justice. Relations between the European Union and Member States and between the European Union and other States or other international organizations.

LL 4706 **Introduction to Air Law and Space Law** **2 (2-0-4)**
Prerequisite : *LL3701 Public International Law*

Fundamental concepts of air laws and space laws, sovereignty over airspace, the role of international organizations which control aviation. The space law, including the rules which apply and control the state activities in outer space.

LL 4707 **ASEAN Law** **2 (2-0-4)**

Evolution of Regionalism in Southeast Asia and ASEAN prior to the adoption of ASEAN Charter; ASEAN Free Trade Agreement (AFTA), ASEAN Trade in Goods Agreement (ATIGA); ASEAN Framework Agreement on Services (AFAS); Framework Agreement on the ASEAN Investment Area (AIA); ASEAN Comprehensive Investment Agreement (ACIA); Asian Economic Community (AEC), ASEAN Charter and its legal issues and implications; legal criteria of regional groupings according to General Agreement on Tariffs and Trade (GATT) and The Marrakesh Agreement Establishing The World Trade Organization (WTO Agreement); legal criteria of international organizations in light of international law, and ASEAN's relationships with outside powers.

LL 4708 **Human Rights in ASEAN** **2 (2-0-4)**

Issues on human rights in ASEAN, diversity of ASEAN due to the principle of "ASEAN Way" from legal perspective.

LL 4709 **Seminar in ASEAN Law** **2 (2-0-4)**
Prerequisite : *LL4707 ASEAN law*

Related social issues to ASEAN law under a perspective of ASEAN to globalization.

LL 4801 **Legal Research and Legal Research Methodology** **2 (2-0-4)**

Importance of research, meaning of research, ethics of researchers, problems of research, procedures, principles and legal research methodology, quantitative and qualitative researches, conducting a legal research using law database, using computer as tools to produce an academic essay and present academic works using appropriate and up-to-date technology.

LL 4802 **Introduction to Digital Technology Laws** **2 (2-0-4)**

Fundamental concepts of Digital technology and its impacts on law.

LL 4803 **Business and Human Rights** **2 (2-0-4)**

Concepts of roles and impacts that business organizations have on society and business issues affecting human rights, Modern Slavery and complication and challenges of business practices and the impact of the UN Guiding Principles of Business and Human Rights.

LL 4804 **Business Law and ASEAN** **2 (2-0-4)**

Laws related to doing business in ASEAN.

LL 4805 **Law on Digital Economy and Startup Business** **2 (2-0-4)**

Definitian, characteristics of Digital Economy and Startup Business and relavant legal issues.

LL 4806 **Law on Agriculture** **2 (2-0-4)**

General land holding systems, grant of credits for agricultural purposes, agricultural institutions, problems encountered in land holding organization for agricultural purposes in Thailand, problems faced by agriculturalists and solutions to those problems through legal measures under existing legislation including the law controlling leases of land for agricultural purposes, the law on land reform for agricultural purposes, the law on land development for agricultural purposes, and problems of particular interest e.g. those surrounding land sale on redemption, labour protection in the agricultural sector and agricultural zoning and contract farming.

LL 4807 **Introduction for Logistics and Supply Chain** **2 (2-0-4)**

Definition, role, importance, elements and principles of logistics and supply chain management affecting organization, international and domestic economy, and ASEAN procurement, forecasting demand, inventory management metrics, producing, packaging, transporting and distributing of goods, customer services, logistic communication, including application of IT and internet in logistics and supply chain management.

LL 4808 **Legal Aspects of Transportation and Logistics** **2 (2-0-4)**

Concepts, theories and practice of transportation management and distribution of goods and domestic, international and ASEAN multimodal transportation, the trade rules, regulations and agreements on transportation management and logistics, procurement for goods and services, international sale of goods, international payment, international carriage of goods, multimodal transportation, importation and exportation and warehousing and terminal.

LL 4809 **Business, Corporate Governance and Corporate Social Responsibility 2 (2-0-4)**

Knowle of Corporate Governance, Principles and concept of Corporate Social Responsibility (CSR) and related laws.

LV 2101 **Script Analysis and Creation for Live Events** **3 (2-2-5)**
Prerequisite : *CA 1023 Introduction to Live Event Creation and Management*

Critical analysis of script structure, genre, theme, style, sub-text meaning, dramatic event, semiotics and point of view of the story-teller. Principles of storytelling for live events and performance, elements of script and story-telling, creating theme, plot and story as well as creating characters, use of dramatic and character's actions to tell the story.

LV 2102 **Design for Live Event Creation and Management** **3 (2-2-5)**

Basic elements of arts and design in live events and performance, basic designing such as point, line, form, shape, space utilization, color, pattern, texture, balance, proportion, rhythm, emphasis, unity including the basic sketch design, conveying ideas, process of designer working in costume, scenic, lighting design as well as unity of visualization in live events.

LV 2103 **Acting for Live Events** **3 (1-4-4)**

Basic acting, understanding the relation between vocal and physical expression for performance purpose including communication, physical and vocal preparation, relaxation, concentration, body movement, space usage for performance, imagination, emotion, creating character, character interpretation, creative movement, awareness, objective of character for play, improvisation skill, scene interpretation, and integration of vocal and physical skill for performance.

LV 2104 **Art and Literature Appreciation** **3 (3-0-6)**
Prerequisite : *CA 1001 Introduction to Communication*

Aesthetic perspective, artistic styles, visual elements, performing arts, entertainment multimedia, literature, fine arts, music and film.

LV 3101 **Sound Creation and Production for Live Events** **3 (2-2-5)**

Basic sound utilization and sound creation for performance/ live event. Principles of sound classification, sound acoustic, influence conditions of sound quality. Sound selection, sound creation, dubbing, sound effects for live event and performance, basic recording, processes, and responsibility of sound function in live event and performance production

LV 3102 **Art Direction for Live Events** **3 (2-2-5)**
Prerequisite : *LIVE 2102 Design for Live Event Creation and Management*

Art Direction for live events and performance. Function, consistency of performance art directing and visual elements, design concept of scenery, property, costume and lighting, and Multimedia in live events and performance. Understanding in principles of corporate design, interpretation and conceptualization for live events and performance.

LV 3103 **Show Directing** **3 (1-4-4)**
Prerequisite : *LIVE 2102 Design for Live Event Creation and Management*
LIVE 2103 Acting for Live Events.

Show directing process of directing in live events and performance, responsibility of directing function, script analysis, stage composition and blocking design, director's design concept, rehearsal process, conveying theme, concept and idea with directing, and character analysis.

LV 3104 **Marketing Communication for Live Events** **3 (2-2-5)**
Prerequisite : *MKT 2280 Principles of Marketing*

Marketing for live events and performance, principles of financial and budgeting management, writing a proposal, setting up marketing/ PR plan and developing communication plan for marketing and evaluation.

LV 3105 **Stage Management for Live Events** **3 (1-4-4)**
Prerequisite : *CA1023 Introduction to Live Event Creation and Management*

Stage/ management for live events, process of stage management from pre-production, production to post-production, responsibility of stage management function, and the preparation for internship in function of backstage in live events production.

LV 3110 **Live Event Creation and Management Internship** **3 (1-4-4)**
Prerequisite : *LIVE 3105 Stage Management for Live Events*

Significant experiential learning opportunity with a live event or performance production company or an organization. The links between classroom learning and student interest to apply in the work setting. An understanding of the internship site's work process, mission and function through student's direct observation, reflection and evaluation.

LV 3201 **Creative Writing and Script Adaptation for Live Events** **3 (2-2-5)**
Prerequisite : *LIVE 2101 Script Analysis and Creation for Live Events*

Script writing and creation. selecting story for script adaptation, dimensions and perspectives for adaptation, script adaptation for various purpose, revising script in Thai for theatre, film TV and other forms of live events.

LV 3202 **Costume and Make up** **3 (1-4-4)**
Prerequisite : *LIVE 2102 Design for Live Event Creation and Management*
LIVE 3102 Art Direction for Live Events

Selecting costume and make up for performance, usage of costume, concept of costume and make up selection for performance, time and space for appropriate selection, history of costumes, definition of costume, types of costume, costume and fashion, process of costume design and selection, and straight make-up and fancy make-up workshop.

LV 3203 **Advanced Acting for Live Events** **3 (1-4-4)**

Advanced acting to interpret and analyze script the use of imagination, emotion, creating character, character interpretation, creative movement, awareness, objective of character for play, improvisation skill, scene interpretation, and integration of vocal and physical skill for live events and performance.

LV 3204 **Personality Development** **3 (1-4-4)**

Personality development, mental and physical preparation, self-acknowledgement, SWOT analysis, human nature, human perception, law of attraction, self –esteem, self-confidence, gesture, facial expression, vocal training, public speaking, wardrobe and make-up for different occasions.

LV 3205 **Lighting and Multimedia Design for Live Events** **3 (1-4-4)**
Prerequisite : *LIVE 2102 Design for Live Event Creation and Management*

Stage lighting and multimedia design, production process of lighting function, lighting instrument and equipment, lighting and multimedia practice, electricity for lighting, lighting and multimedia plan, lighting and multimedia cue, script analysis for lighting design, lighting research, design concept, lighting sketch, critical stage lighting, rhythm and emotion creativity with lighting.

LV 3206 **Property and Scene Design** **3 (1-4-4)**
Prerequisite : *LIVE 2102 Design form Live Event Creation and Management*
LIVE 3102 Art Direction for Live Events

Creating scenery and property in live events and performance space. Utilization of scenery and property design process including design document, concept of scenery and props, form and style of scenery, idea and design concept, fundamental stage craft, materials and tools for scene and prop creation.

LV 4101 **Live Event Creation and Management Workshop I** **3 (1-4-4)**
Prerequisite : *LIVE 3105 Stage Management for Live Events*
LIVE 3110 Live Event Creation and Management Internship

Pre-production process of performance production, production planning, budgeting /financial plan, script preparation, script interpretation, marketing and PR plan, directing preparation, audition process, and research in theatrical design in properties, scenic, costume, light and sound.

LV 4102 **Live Event Creation and Management Workshop II** **3 (1-4-4)**
Prerequisite : *LIVE 3104 Marketing Communication for Live Events*

Pre-production process of performance production, production planning, budgeting /financial plan, script preparation, script interpretation, marketing and PR plan, directing preparation, audition process, and research in theatrical design in properties, scenic, costume, light and sound.

LV 4103 **Research Methodology for Live Events** **3 (2-2-5)**

Research methodology and interdisciplinary approach to solve research problems. Topics include asking the 'right' questions, procedures in conducting research, basic principles of research, random sampling, questionaire design, experimental research design, and content and research data analysis.

LV 4104 **Project Management for Live Events** **3 (1-4-4)**

Integration of knowledge, skills, and techniques acquired throughout the course in order to conduct research project proposal, managing, handling and planning for approval live event projects, live event campaigns, and academic research projects.

LV 4201 **Art and Culture in 21st Century** **3 (3-0-6)**

Cultivating art and culture in 21st Century and Learning cross-cultural theory in terms of its physical, geographical, psychological, linguistic and ethonological frameworks to enhance ability to recreate stories in live events and performance for its audiences.

LV 4202 **Cultural Events and Festival Management** **3 (2-2-5)**

A wide range of cultural events and the management of cultural events and festivals around the globe to gain a deeper understanding of festival and cultural event cores and structures from the transformation of the media industries by political economy, culture and technological changes, and trends include international media policies, and how such transformation creates an impact on content across media platforms in live events and performance.

LV 4203 **Promotion and Strategy for Live Events** **3 (2-2-5)**

Promotion and strategies of live event and performance marketing as a theoretical framework within the entertainment industry that ranges from live performances, live events and media-related performance located as the core concern. The application of promotion and strategy of marketing concepts relevant to various kinds of entertainment industries, budgeting considerations and propositions, identifying and analysing target markets and audiences, and selling and presenting live events and entertainment products

LV 4204 **Selected Topics in Live Event Creation and Management** **3 (3-0-6)**
Prerequisite : *CA 1023 Introduction to Live Event Creation and Management*

Live Event Creation and Management development in social context, Live Event Creation and Management effect or phenomenon of Live Event Creation and Management in society, culture and people.

LV 4205 **Approaches and Concept of Criticism in Live Events** **3 (3-0-6)**

A survey of significant approaches and concepts of criticism to live events and performance to employ interdisciplinary methodology and begin with an introduction to formalism, realism, the concept of authorship in live events and performance. The structuralism, post-structuralism, and specific strains of critical thinking and criticism. Performance theories together with the important theorist figures in the field will also be examined.

MA 0610 **Music Ensemble** **1 (0-2-1)**

Ensemble in vocal, string, woodwind, brass and percussion.

MA 1101 **Applied Composition I** **2 (1-2-3)**

Exploration and development of techniques used in fine art composition. Creation of short compositions in various media.

MA 1102 **Applied Composition II** **2 (1-2-3)**
Prerequisite: *MA 1101 Applied Composition I*

Further development of techniques used in fine art composition. Creation of short compositions in various media.

MA 1200 **Mathematics for Business** **3 (3-0-6)**

Relation and various functions: linear, polynomial, exponential, logarithmic, rational and their applications in business and economics, linear programming, mathematics of finance and differential calculus: limits, derivatives, and optimization.

MA 1301 **Applied Music I** **2 (1-2-3)**

Development of performance techniques, musicianship, and interpretation of fine art music upon student's area of expertise (vocal / instrumental).

MA 1302 **Applied Music II** **2 (1-2-3)**
Prerequisite: *MA 1301 Applied Music I*

Further development of performance techniques, musicianship, and interpretation of fine art music based on improvement from the previous course (vocal / instrumental).

MA 1351 **Secondary Applied Music I** **2 (1-2-3)**

Secondary instrument of applied music at the beginning level.

MA 1352 **Secondary Applied Music II** **2 (1-2-3)**
Prerequisite: *MA 1351 Secondary Applied Music I*

Further development from the previous course.

MA 2101 **Applied Composition III** **2 (1-2-3)**
Prerequisite: *MA 1102 Applied Composition II*

Further development of techniques used in fine art composition. Creation of short compositions in various media

MA 2102 **Applied Composition IV** **2 (1-2-3)**
Prerequisite: *MC 3350 Junior Composition Recital*

Further development of techniques used in fine art composition. Creation of short compositions in various media.

MA 2301 **Applied Music III** **2 (1-2-3)**
Prerequisite: *MA 1302 Applied Music II*

Further development of performance techniques, musicianship, and interpretation of fine art music based on improvement from the previous course (vocal / instrumental).

MA 2302 **Applied Music IV** **2 (1-2-3)**
Prerequisite: *MA 2301 Applied Music III*

Further development of performance techniques, musicianship, and interpretation of fine art music based on improvement from the previous course (vocal / instrumental).

MA 2351 **Secondary Applied Music III** **2 (1-2-3)**
Prerequisite: *MA 1352 Secondary Applied Music II*

Further development from the previous course.

MA 2352 **Secondary Applied Music IV** **2 (1-2-3)**
Prerequisite: *MA 2351 Secondary Applied Music III*

Further development from the previous course.

MA 2501 **Chorus I** **1 (0-2-1)**

Development of group singing skills, basic vocal production and techniques, sight-singing skills, practice variety of choral works in unison, cannon and simple arrangement. Attending the choral concert and performing one major concert are required.

MA 2502 **Chorus II** **1 (0-2-1)**
Prerequisite: *MA 2501 Chorus I*

Development of group singing skills, early intermediate vocal production and techniques, sight-singing skills, practice variety of choral works in 2-4 parts harmony. Attending the choral concert and performing one major concert are required.

MA 2503 **Chorus III** **1 (0-2-1)**
Prerequisite: *MA 2502 Chorus II*

Development of group singing skills, intermediate vocal production and techniques, sight-singing skills, and practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 2504 **Chorus IV** **1 (0-2-1)**
Prerequisite: *MA 2503 Chorus III*

Development of group singing skills, advanced vocal production and techniques, sight-singing skills, and practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 2555 **Chorus V** **1 (0-2-1)**
Prerequisite: *MA 2504 Chorus IV*

Development of group singing skills, vocal production and techniques, sight-singing skills, practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 2556 **Chorus VI** **1 (0-2-1)**
Prerequisite: *MA 2555 Chorus V*

Development of group singing skills, vocal production and techniques, sight-singing skills, practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 2557 **Chorus VII** **1 (0-2-1)**
Prerequisite: *MA 2556 Chorus VI*

Development of group singing skills, vocal production and techniques, sight-singing skills, practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 2558 **Chorus VIII** **1 (0-2-1)**
Prerequisite: *MA 2557 Chorus VII*

Development of group singing skills, vocal production and techniques, sight-singing skills, practice variety of choral works. Attending the choral concert and performing one major concert are required.

MA 3301 **Applied Music V** **2 (1-2-3)**
Prerequisite: *MA 2302 Applied Music IV*

Further development of performance techniques, musicianship, and interpretation of fine art music, based on improvement from the previous course (instrumental / vocal).

MA 3302 **Applied Music VI** **2 (1-2-3)**
Prerequisite: *MA 3301 Applied Music V*

Further development of performance techniques, musicianship, and interpretation of fine art music, based on improvement from the previous course (instrumental / vocal).

MA 3501 **Flamenco Techniques** **2 (1-2-3)**

Practical Flamenco guitar techniques with emphasis on the elementary chord progressions and techniques used in Flamenco. Basic chording for Bulerias, Soleares, Alegrias, Sevillanas, Farruca, Tientos, Tangos, Rumba, Zambra, Guajiras, and Garrotin.

MB 1131 **Pop Songwriting** **3 (3-0-6)**

Creative story telling through melody and basic lyrics writing, fundamental music theory,selecting scales, chords, and harmony design to create standard pop songs.

MB 1231 **History and Literature of Music** **3 (3-0-6)**

Overview history and Literature of music from different periods with emphasis on stylistic traits and theoretical concepts of the eras.

MB 2131 **Basic Songwriting** **2 (2-0-4)**
Prerequisite: *MU 1152 Theory of Music II*

Fundamental songwriting techniques, development of basic skill through the awareness of form, melody, harmony, bass line pattern, rhythm, lyric and vocal considerations.

MB 2431 **Music Technology** **2 (2-0-4)**

The introduction of audio theory with the topics of sound, hearing, pitch, amplitude, decibel, frequency, cables, basic electronics, signal, flow, basic recording and basic Midi.

MB 2432 **Visual Media for Music Business** **2 (1-2-3)**

Techniques of photography and videography for producing any kind of visual works associated with music, including a music video or short film, and the use of graphic and video editing software.

MB 2433 **Computer Applications for Musician** **3 (1-4-4)**

Skills needed to use computer application such as DAW for producing music as well as how to read and understand computer specification, computer components, and technology that will involve with musician's music workflow.

MB 2531 **Music Business** **3 (3-0-6)**

Survey of the music industry, highlighting those areas where music and business intersect. Career possibilities in the music industry, the development of business-related knowledge and skills necessary for effectively maintaining a professional music career, the vocabulary and terminology of the music industry, and the distinction between music and business at the corporate level

MB 2532 **Music Industry** **3 (3-0-6)**
Prerequisite: *MB 2531 Music Business*

Overview of the music industry, careers options, how different units of the industry operate, how revenues are generated, how to protect songs, and how new digital technologies help to market, to promote and to distribute musical products.

MB 3131 **Melody Writing** **3 (2-2-5)**
Prerequisite: *MB 2131 Basic Songwriting*

Create strong melodies that hit the audience. Focus on rhythm, showing how it can support the lyric's meanings. How the use of pitch can fit a melody, making it natural to sing, and supporting the lyric's expressive goals and possibilities. Write melodies over common modes and chords, and develop these ideas into complete songs.

MB 3132 **Lyrics Writing** **3 (2-2-5)**
Prerequisite: *MB 2131 Basic Songwriting*

Create ideas, find the right words to express those ideas, and organize rhythms and rhymes into each song section. Understand the elements of structure and the process of building great lyrical ideas that go along with melodies into complete songs

MB 3133 **Commercial Songwriting** **3 (3-0-6)**
Prerequisite: *MB 2131 Basic Songwriting*

Create stunning melodic contents and lyrics that effect on consumer's decision making

MB 3134 **Jingle Writing** **3 (3-0-6)**
Prerequisite: *MB 2131 Basic Songwriting*

Various aspects related to jingle writing – composition, product image, instrumentation, and timing

MB 3135 **Jazz Songwriting** **3 (3-0-6)**
Prerequisite: *MB 2131 Basic Songwriting*

Systematic approach to the art of composing in the jazz idiom. Exploration of melodic, harmonic, and rhythmic principles. Standard jazz song form. Analysis of jazz standards. Arranging considerations applied as a means of enhancing a composition. Projects for small jazz group required.

MB 3231 **Music Genre Studies** **3 (3-0-6)**

Understand the background, concept and characteristic of different music genres.

MB 3431 **Basic Audio Recording** **2 (1-2-3)**
Prerequisite: *MB 2431 Music Technology*

Introduction to audio recording throughout the uses of microphone and speaker, signal flow, mixer and control surface, A/D & D/A converter digital audio basics skill of recording audio with DAW, microphone techniques and basic live sound reinforcement.

MB 3432 **Song Demo Production** **2 (1-2-3)**
Prerequisite: *MB 2431 Music Technology*
MB 2433 Computer Applications for Musician

Acquisition of technical, interpersonal and group skills needed in the development of professional quality song demos. Using MIDI and Software Instrument to complete a wide variety of musical projects.

MB 3433 **Critical Listening** **3 (2-3-4)**
Prerequisite: *MB 2431 Music Technology*

Listening skills of the audio engineer, development of skills and concepts of using width and depth, frequency range, dynamics, panning, distortion, reverb, delays, compression, phrasing and the different mixing techniques in various musical genres.

MB 3434 **Music Production Analysis** **3 (2-3-4)**
Prerequisite: *MB 3231 Music Genre Studies*

Skills in music production to enable to analysis emotional effectiveness of the music and identify music elements in records included music genre, melody, lyrics, drumbeat arrangement and concept behind the song.

MB 3435 **Electronic Music Production** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Applications for Musician*

Tools and techniques to create contemporary electronic music in a variety of styles, including drum 'n bass, trance, dub, and house

MB 3436 **Digital DJ** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Applications for Musician*

DJ techniques with laptops and controllers, to create live sets and performances with software such as Ableton.

MB 3437 **Virtual Band in Globalization Era** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Applications for Musician*

Music production through internet, using software to create and synchronize among distance members around the globe.

MB 3512 **Legal Aspects of Music Business** **3 (3-0-6)**

Legal issues that associated with artists, musicians, engineers, producers; legal changes and challenges alert, real approach to legal matters between individuals' working procedure and stakeholders in the music business world today, including national and international copyright law.

MB 3531 **Music Research Writing and Methodology** **3 (3-0-6)**

Fundamentals of the research writing and proposal, literature review, and qualitative and quantitative research methods in the area of music.

MB 3532 **Internship in Music Industry** **Non-Credit (240 hr)**
Prerequisite: *Completion of at least 100 credits*

Internship with a company in the music industry for at least 240 hours.

MB 3533 **Online Music Marketing and Distribution** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MKT 2280 Principles of Marketing

Digital music marketing with an integrated and optimised marketing plan to build up digital touch points, generate interest in music, and distribute music online.

MB 3534 **Music Management and Entrepreneurship** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MGT 2900 Principles of Management

The role and importance of a music entrepreneur, and how they impact the career of the artist and their brand image.

MB 3535 **Music Licensing** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MB 3512 Legal Aspects of Music Business

A conceptual understanding of basic licensing terms, opportunities, and strategies and apply that knowledge to monetizing your own creative intellectual property

MB 3536 **Viral Music Marketing** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MKT 2280 Principles of Marketing

How to make ideas stick, and increase the influence of the content, how to generate more word of mouth, and use the power of social networks to spread information and influence to music fans

MB 3537 **Music Career Exposure** **3 (3-0-6)**

Special session for students to explore music during the semester break.

MB 3538 **History of Music Industry in Thailand** **3 (3-0-6)**

History of music industries in Thailand from 1851-1950. The three important parts, live music performance, publishing and recording have important role on music industries in Thailand in this period. In this period of forming Thai music industry, an increase in western culture influenced Thai culture, the new technology and invention was imported to Thailand by foreign educated, foreigners, and traders. These are significant factors that make music industries in Thailand further progress.

MB 4131 **Theory of Jazz and Popular Music** **3 (3-0-6)**
Prerequisite: *MU 1152 Theory of Music II*

Complex chords and their progressions, melodic construction, form, and melody-harmony relationship in various genres of jazz, pop, blues, rock, etc.

MB 4132 **Harmony Writing** **3 (2-2-5)**
Prerequisite: *MB 2131 Basic Songwriting*
MB 3131 Melody Writing

Harmony techniques such as chord progressions, modulation and cadences to craft the essential dramatic impact of the songs.

MB 4133 **Arranging for Songwriter** **3 (2-2-5)**
Prerequisite: *MB 4131 Theory of Jazz and Popular Music*

How to write the rhythm section for instrumentals and create rhythm pattern, adaptation of the melody and chords, intros and endings, articulations and dynamics

MB 4134 **Songwriting for Film, TV, and Games** **3 (2-2-5)**
Prerequisite: *MB 4131 Theory of Jazz and Popular Music*

Create original music to accompany a visual medium i.e. film, television, or games and develop a dramatic mood for your score to synchronize it to visual events.

MB 4135 **Advanced Songwriting** **3 (3-0-6)**
Prerequisite: *MB 2131 Basic Songwriting*

Integrations of Lyrics and melody. Continued exploration of songwriting techniques including modulation, modality, and formal devices. Extensive score analysis.

MB 4431 **Sound Design** **3 (1-4-4)**
Prerequisite: *MU 2433 Computer Applications for Musician*
MB 3431 Basic Audio Recording

The use of sound design in many entertainment sectors such as music, film, and video. Development of skills and concept necessary for effective use of various techniques of using Foley, creating ambiance and sound modification.

MB 4432 **Microphone Techniques** **3 (2-3-4)**
Prerequisite: *MB 2431 Music Technology*

Learn characteristics of different microphone types, selecting appropriate microphone models based upon an instrument's sound and the desired outcome, proper handling and setup, close and distant microphone placements for a wide variety of musical instruments, strategies for utilizing the recording environment, and managing the demands of complex recording sessions with multiple participants.

MB 4433 **Mixing and Mastering** **3 (2-3-4)**
Prerequisite: *MB 2431 Music Technology*
MB 3431 Basic Audio Recording

Skills of audio engineering and understanding mixing and mastering using software application. The use of EQ, effect, signal processor, panning, and more advanced techniques including parallel compression.

MB 4434 **Music Production for Visual Media** **3 (1-4-4)**
Prerequisite: *MB 2432 Visual Media for Music Business*
MB 3432 Song Demo Production

Advanced skills needed to use two types of computer application; DAW and video editing software to complete high level of audio-visual projects such as music video and film music.

MB 4435 **Pro Tools** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Application for Musicians*

Learn functions of Pro Tools from setup, multi-track recordings of live instruments, MIDI sequencing, edit, mix-down and master.

MB 4436 **Logic** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Application for Musicians*

Learn functions of Logic from setup, multi-track recordings of live instruments, MIDI sequencing, edit, mix-down and master.

MB 4437 **Cubase** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Application for Musicians*

Learn functions of Cubase from setup, multi-track recordings of live instruments, MIDI sequencing, edit, mix-down and master.

MB 4438 **Drum Beat Programming** **2 (1-2-3)**
Prerequisite: *MB 2433 Computer Application for Musician*

Create a drum beat by imitating a traditional drum kit performance to an electronic drum session, writing and producing drum beats for any style of popular music by DAW software programs

MB 4439 **Computer Graphic for Musician** **3 (1-4-4)**
Prerequisite: *MB 2433 Computer Application for Musician*

Skills in computer graphic needed in music artworks such as poster, single cover, graphic used in social media via graphic software such as Adobe Photoshop and Adobe Illustrator.

MB 4512 **Music in Film Industry** **3 (3-0-6)**

History of cinema, film scoring, sound effects, history and development of incorporating sound into films, specific roles of the music industry in relation to film and broadcast media.

MB 4531 **Senior Project I** **3 (0-9-0)**
Prerequisite: *Completion of at least 100 credits*

Individual project on a topic or area related to the selected concentration (or) minor courses.

MB 4532 **Senior Project II** **3 (0-9-0)**
Prerequisite: *MB 4531 Senior Project I*

Implementation of the continuous project and preparation for the presentation.

MB 4533 **Digital Music Publishing** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MB 3512 Legal Aspects of Music Business

The role of performance rights organizations, and how market and promote music compositions and turning music into revenues.

MB 4534 **Music Industry Simulation** **3 (2-2-5)**
Prerequisite: *MB 2532 Music Industry*

The simulation of a music label to allow students to work in different jobs together such as songwriter, producer, creative, marketer, PR, sound engineer, and videographer.

MB 4535 **Digital Creativity in Music Promotion** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*
MKT 2280 Principles of Marketing

Technological and innovation creativity of new media and convergance impact the production and consumption of media content, including music, mobile, games, and online content that help promote music in a digital age.

MB 4536 **Career Options in Music Business** **2 (2-0-4)**

Preparation for students for internship, career path in the music industry and in-depth study of potential careers in the music industry.

MB 4537 **Music Business Seminar** **3 (3-0-6)**
Prerequisite: *MB 2532 Music Industry*

Selected issues in music business based on individual interest, research in the field of music business with content to be developed through primary research, visits to various businesses and personal interview

MB 4538 **Concert Management** **3 (3-0-6)**
Prerequisite: MB 2532 Music Industry
MGT 2900 Principles of Management

Launch and run a successful live music venue and the essential components of a successful concert: from assembling a management team to alternative streams of income with effective merchandising, promotion techniques and sponsorships.

MB 4539 **Music Cognition** **3 (3-0-6)**

Understand the relationship between music and mind, how music professionals and songwriters can create music that influences emotion, cognitive, personality, and behavior of the listener's perception.

MC 2351 **Piano Accompaniment I** **1 (0-2-1)**

Discussion and implementation of techniques for accompanying a vocalist or instrumentalist. Use of stylistically appropriate rhythm and voicing techniques in a supportive role. Introductions, endings, modulations, and transposition.

MC 2352 **Piano Accompaniment II** **1 (0-2-1)**
Prerequisite: *MC 2351 Piano Accompaniment I*

A continuation from Piano Accompaniment I. Discussion and implementation of techniques for accompanying a vocalist or instrumentalist. Use of stylistically appropriate rhythm and voicing techniques in a supportive role: introductions, endings, modulations, and transposition

MC 2353 **Piano Accompaniment III** **1 (0-2-1)**
Prerequisite: *MC 2352 Piano Accompaniment II*

A continuation from Piano Accompaniment II. Discussion and implementation of techniques for accompanying a vocalist or instrumentalist. Use of stylistically appropriate rhythm and voicing techniques in a supportive role: introductions, endings, modulations, and transposition.

MC 2511 **Vocal Diction I** **1 (1-0-2)**

Principles of accurate pronunciation in Italian.

MC 2512 **Vocal Diction II** **1 (1-0-2)**
Prerequisite: *MC 2511 Vocal Diction I*

Principles of accurate pronunciation in Latin and English.

MC 3150 **20th Century Music** **3 (3-0-6)**
Prerequisite: *MU 2154 Theory of Music IV*

Study of techniques, theories, and forms used in the composition of 20th century music. Emphasis placed on non-tonal topics: gestalt analysis, formal process, new concepts of meter, and duration, indeterminacy, notation, pitch-class sets, serial operations, atonal harmony, polyphony, orchestration, stylistic factors, and free atonality.

MC 3151 **Counterpoint I** **3 (3-0-6)**
Prerequisite: *MU 1152 Theory of Music II*

Introduction to two-part counterpoint within a diatonic context

MC 3152 **Counterpoint II** **3 (3-0-6)**
Prerequisite: *MC 3151 Counterpoint I*

Writing and analysis of two, three and four part counterpoint – canon, invention, fugue, and chorale prelude.

MC 3241 **Vocal Literature** **3 (3-0-6)**
Prerequisite: *MA 2302 Applied Music IV (Vocal)*

Survey of standard vocal repertoire from the High Baroque to the present with emphasis on stylistic and interpretive traits, pedagogical issues and repertoire selection, major composers and representative works.

MC 3242 **Opera Literature** **3 (3-0-6)**
Prerequisite: *Sophomore Standing*

Development of opera from its beginning to the present with emphasis on stylistic and interpretive traits, pedagogical issues and repertoire selection, major composers and representative works

MC 3251 **Music Literature I** **3 (3-0-6)**
Prerequisite: *Sophomore Standing*

Historical survey of the contributive elements, stylistic characteristics, instruments and techniques from the 16th century to the 20th century. History of the development of the instruments and its literature.

MC 3252 **Music Literature II** **3 (3-0-6)**
Prerequisite: *MC 3251 Music Literature I*

A continuation of Literature I. Examination of style and structure and their impact on performance. Chamber music, solo literature with emphasis on the 19th and the 20th century repertory.

MC 3350 **Junior Composition Recital** **4 (1-6-5)**
Prerequisite: *MA 2101 Applied Composition III*

Scheduling, promoting, rehearsing and executing a recital of original compositions. Works may be acoustic, electronic or multimedia. Recital duration should be at least 20-30 minutes

MC 3351 **Conducting** **2 (1-2-3)**
Prerequisite: *MU1151 Theory of Music I*

Physical skills involved with conducting using the baton and hands. Methods of choral and instrumental conducting will be explored and practiced using members of the class as performers as well as existing musical ensembles.

MC 3355 **Junior Recital** **4 (1-6-5)**
Prerequisite: *MA 3301 Applied Music V (or CIS 3505 Instrumental Instruction V)*

Providing opportunity for students majoring in applied music to demonstrate their ability and perform in a variety of musical style and period. Students must give at least a 30-45 minute recital.

MC 3513 **Vocal Diction III** **1 (1-0-2)**
Prerequisite: *MC 2512 Vocal Diction II*

Principles of accurate pronunciation in German Language.

MC 3514 **Vocal Diction IV** **1 (1-0-2)**
Prerequisite: *MC 3513 Vocal Diction III*

Principles of accurate pronunciation in French Language

MC 4212 **Lute Tablature** **2 (2-0-4)**

Detailed analysis of the lute tablature systems: Italian, French, German and Spanish tablature. Different tunings of Renaissance lute, archlute, theorbo and Baroque lute, how to transcribe tablatures in modern notation, and how to adapt it for the guitar with emphasis on the 16th and the 17th century repertory.

MC 4311 **Senior Recital** **4 (1-6-5)**
Prerequisite: *MA 3302 Applied Music VI (or CIS 3506 Instrumental Instruction VI)*

Presentation of a 60-minute recital demonstrating the ability to perform in a variety of musical styles and periods.

MC 4351 **Senior Composition Recital** **4 (1-6-5)**
Prerequisite: *MA 2102 Applied Composition IV*

Scheduling, promoting, rehearsing and executing a recital of original compositions. Works may be acoustic, electronic or multimedia. Recital duration should be at least 45 minutes.

MC 4750 **Music Pedagogy** **2 (2-0-4)**
Prerequisite: *Sophomore Standing*

Basic information concerning appropriate teaching method, teaching strategy, technique development, pyschology, performance practice, repertoire and instructional materials for instrument or vocal.

MCE 2101 **Fundamentals of Mechatronics Engineering** **3 (3-0-6)**
Prerequisites : *BG 1213 Physics II*

Introduction to Mechatronics and the interaction between mechanical actuation and electronic control, early design evolution, evolution of engineering design, using of sensors in the system, case studies: simple subsystem integration; modern technologies, control, sensors, power supplies and controlled drives, Programmable Logic Control (PLC) as a controller for Mechatronics system, The need for a systems approach to Engineering Design, Control and Embedded Intelligence or PLC.

MCE 2102 **Mechatronics Engineering Laboratory I** **1 (0-3-2)**
Prerequisite or Co-requisite: MCE 2101 Fundamentals of Mechatronics Engineering

Experiments covering basic sensors such as inductive, capacitive, magnetic, photoelectric and ultra sonic. Programmable Logic Controllers is introduced and experimental covering Ladder (LD), Structure Text (ST), Function Block Diagram (FBD) and Sequential Flow Chart (SFC) languages.

MCE 4101 **Introduction to Robotics** **3 (3-0-6)**
Prerequisite: *ME 3120 Mechanics of Machinery*

Introduction to Robotic systems, spatial descriptions, Kinematics, Jacobians, Robot dynamics, Trajectory generation, Position and force control, Image processing and analysis.

MCE 4102 **Introduction to Industrial Automation** **3 (3-0-6)**
Prerequisite: *CE 2704 Digital Logic Design*

PLC, instrumentation, sensors and actuators in manufacturing automation, signal conditioning, computer-based control systems, PLC networking systems.

MCE 4103 **Mechatronics Engineering Laboratory II** **1 (0-3-2)**
Prerequisite or Co-requisite: MCE 4102 Introduction to Industrial Automation

Experiments covering modular Mechatronics system (mMs). In these stations, PLC is used to control the sequential operation including sensors and actuators. Control methods: On-Off, Three-modes, P, PI, PID are studies along with temperature process control experiment.

MCE 4801 **Instrument for Aviation** **6 (6-0-12)**
Prerequisite: *With the consent of the Instructor*

Principles of instruments, applications of instruments in aviation, IFR flight considerations, IFR flight environment, flight rules and regulations, human factors.

MCE 4901 **Mechatronics Engineering Project I** **1 (0-3-2)**
Prerequisite: *Senior Standing*

Study and development in mechatronics engineering. Students must submit reports at the end of the semester.

MCE 4902 **Mechatronics Engineering Project II** **2 (0-6-3)**
Prerequisite: *MCE 4901 Mechatronics Engineering Project I*

Continuation of work done in mechatronics Engineering Project I. Report is also required at the end of the semester.

MCE 4903 **Advanced topics in Mechatronics Engineering** **3 (3-0-6)**

Advanced topics in the field of Mechatronics Engineering.

MCE 4904 **Special Problems in Mechatronics Engineering** **3 (3-0-6)**

Topics of current interest in the field of Mechatronics Engineering.

MCE 4907 **Engineering Internship** **3 (0-9-6)**
Prerequisite: *With the consent of the Chairperson*

Engineering internship in private enterprises, government agencies, or academic institutes under supervision of experienced engineers in order to gain real-world working experience from the assignment, Students are required to submit an internship report at the end of the internship.

ME 1112 **Engineering Laboratory** **2 (0-4-2)**

To get acquainted with simple machine tools, electrical wiring and transformer winding, practice of basic electrical measuring instruments and basic electrical devices assembly with circuit diagrams. A full report of each job is required.

ME 1113 **Engineering Drawing** **3 (2-3-6)**

Descriptive geometry, orthographic, isometric and oblique drawings, drawing of mechanical parts, detailed drawing and assembly drawings, allowable tolerance, and surface details, applied geometry, dimensions and notes, orthographic projections, working drawing, auxiliary views, true length, grade and bearings of a line, true shape of a plane surface, perspective, sectional and developed drawings.

ME 1114 **Engineering Workshop** **2 (0-4-2)**

Workshop on the use of the machine tools such as a lathe or milling machine, cutting tools, and drilling tools, for milling, cutting, drilling, and shaping metal materials. filing, grinding, and welding of metals. Carpentry is included. Students are required to make workpieces of metal and wood. A full report for each work is required.

ME 2211 **Engineering Mechanics I** **3 (3-0-6)**
Prerequisite: *BG 1211 Physics I*

Force systems, resultant, equilibrium, fluid statics, kinematics and kinetics of particles and rigid bodies, Newton's second law of motion, work and energy, impulse and momentum.

ME 2220 **Engineering Mechanics II** **3 (3-0-6)**
Prerequisite: *ME 2211 Engineering Mechanics I*

Structure analysis; principle of virtual work; stability; kinematics of rigid body; plane motion of rigid bodies (forces and accelerations, energy and momentum method); mechanical vibrations

ME 3110 **Mechanics of Materials** **3 (3-0-6)**
Prerequisites: *ME 2220 Engineering Mechanics II*

Forces and stresses; stresses and strains relationship; stresses in beams, shear force and bending moment diagrams; deflection of beams, torsion; buckling of columns; Mohr's circle and combined stresses; failure criterion.

ME 3120 **Mechanics of Machinery** **3 (3-0-6)**
Prerequisite: *ME 2220 Engineering Mechanics II*

Velocity and acceleration analysis; kinematics and dynamics force analysis of mechanical devices, linkages, gear trains and mechanical systems; balancing of rotating and reciprocating mass.

ME 3204 **Marine Electrical Powering and Systems** **3 (3-0-6)**
Prerequisite: *EE 2201 Electric Circuits*

Shipboard power system architectures, electrical load analysis, power system configuration, shipboard power equipment, AC Generators, AC and DC motors, power cables, electrical cable model, marine and special cable, power distribution scheme, switchboard and switch gear, fault current analysis, system protections, lighting system, and emergency system.

ME 3310 **Thermofluids** **3 (3-0-6)**
Prerequisite: *BG 1205 Calculus II*
BG 1213 Physics II

Workdone, energy, power, unit, system, state, and field processes, compressible flows, mass conservation systems, properties of fluids, state equation, first law of thermodynamics, non-flow systems, energy equation, Bernoulli equation, linear and polar momentum equation, ideal flow.

ME 3311 **Pneumatic and Hydraulic Systems** **3 (3-0-6)**
Prerequisites: *ME 2220 Engineering Mechanics II*

Fundamentals of Fluid Mechanics, fluid properties, Pascal's law, flow governing equations (continuity equation, conservation of energy or Bernoulli's equation, Torricelli's equation), basic flow in pipes, pumps, pipe design and selection, hydraulics design and analysis, pneumatic systems, compressors, receivers, valves, flow through orifices.

ME 3312 **Pneumatic and Hydraulic Systems Laboratory** **1 (0-3-2)**
Prerequisite or Co-requisite: ME 3311 Pneumatic and Hydraulic Systems

Laboratory works to be done according to ME 3311 Pneumatic and Hydraulic Systems

ME 3410 **Thermodynamics** **3 (3-0-6)**
Prerequisite: *BG 1211 Physics I*
BG 1108 General Chemistry

First Law of Thermodynamics; Second law of Thermodynamics and Carnot cycle, energy: entropy; basic heat transfer and energy conversion.

ME 3414 **Fluid Mechanics** **3 (3-0-6)**
Prerequisite: *ME 2220 Engineering Mechanics II*

Properties of fluid, fluid static, momentum and energy equations, equation of continuity and motion, similitude and dimensional analysis, steady incompressible flow.

ME 3418 **Heat Transfer** **3 (3-0-6)**
Prerequisite: *ME 3410 Thermodynamics*

Modes of heat transfer, thermal conductivity; heat conduction equation, steady- state, one-and two-dimensional wave equation, unsteady- state heat conduction, radiation, fundamentals of convection heat transfer.

ME 3501 **Naval Architecture and Ship Construction** **4 (4-0-8)**
Prerequisite: *ME 3414 Fluid Mechanics*

Types and geometry of ship, basic concepts of hydrostatics, stability and trim of ships, ship resistance components, similitude and dimensional analysis, resistance prediction from model testing and standard series, propeller geometry and design, hull-propeller interaction, propeller charts, powering prediction, structural analysis of ship hulls structures, loading, material and fabrication considerations, hull primary bending and midship section analysis, framing systems, typical examples of structure, shipyard layout.

ME 4010 **Machine Design** **3 (3-0-6)**
Prerequisite: *ME 1113 Engineering Drawing*
ME 3120 Mechanics of Machinery

Fundamentals of mechanical design; properties of materials, theories of failure; design of simple machine elements, rivets, screw fasteners, keys and pins, shafts, springs, power screws, coupling etc.; design project.

ME 4310 **Mechanical Vibration** **3 (3-0-6)**
Prerequisite: *ME 2220 Engineering Mechanics II*

System with one degree of freedom; torsional vibration, free and forced vibration, method of equivalent system, systems having several degrees of freedom; methods and techniques to reduce and control vibration.

ME 4412 **Internal Combustion Engines** **3 (3-0-6)**
Prerequisite: *ME 3410 Thermodynamics*

Internal combustion engine fundamentals, spark-ignition and compression-ignition engines, fuels and combustion, ignition systems, ideal fuel air cycle, supercharging and scavenging, performance and testing, lubrication.

ME 4414 **Air Conditioning** **3 (3-0-6)**
Prerequisite: *ME 3410 Thermodynamics*
ME 3414 Fluid Mechanics

Psychometric properties and processes of air, cooling load estimation, air conditioning equipment, various types of air conditioning systems, air distribution and duct system design, ventilation system design, refrigerants and refrigerant piping design, basic controls in air conditioning, fire safety in a/c systems, indoor air quality, energy efficiency in a/c systems.

ME 4502 **Marine Propulsion and Machinery Systems** **3 (3-0-6)**
Prerequisite: *ME 3410 Thermodynamics*
ME 3414 Fluid Mechanics

Introduction to marine propulsion systems, marine diesel engine and auxiliary systems, marine gas turbines, propellers, propulsion power transmission and piping system design

ME 4505 **Ship Design** **3 (3-0-6)**
Prerequisite: *ME 3501 Naval Architecture and Ship Construction*
ME 4502 Marine Propulsion and Machinery Systems

Basic design parameters, estimation of power requirements, weight estimation, initial hull form, preliminary propeller selection and design, ship stability, machinery selection, configuration and arrangement, maneuvering and sea keeping, load line assignment and tonnage measurement, preliminary structural design, fundamentals of ship mechatronics.

ME 4506 **Ship Dynamics** **3 (3-0-6)**
Prerequisite: *ME 3501 Naval Architecture and Ship Construction*
ME 4502 Marine Propulsion and Machinery Systems

Introduction to ship dynamics, potential flow phenomena, real flow phenomena, regular waves and potential representation, irregular seaways and statistical properties, rigid body dynamics and equations of motions, potential coefficients and strip theory, motions in irregular waves and RAO interpretation, mooring dynamics and operability.

ME 4512 **Ship Operation and Maintenance** **3 (3-0-6)**
Prerequisite: *ME 3501 Naval Architecture and Ship Construction*
ME 4502 Marine Propulsion and Machinery Systems

Introduction to shipping operation overview, vessel operation forms, ship loading, cargo types and characteristics, bunker procurement, ship speed selection, cruising speed, routine planning, energy efficiency, maintenance concept, maintenance scheduling, routine/preventive maintenance, repair of breakdowns, maintenance work on board and yard facilities, condition monitoring system, spare part management.

ME 4602 **Maritime Robotics** **3 (3-0-6)**
Prerequisite : *EE 3406 Control Systems*

Fundamental concepts associated with the field of maritime robotics, maritime robots used for oceanography, offshore exploitation and disaster response. study of vehicle design, mapping, path planning, navigation, and collision avoidance.

MGT 1101 **Introduction to Business** **3 (3-0-6)**

General introduction to business, philosophy, objectives and responsibility of business enterprises, business vocabulary, business and its environment emphasizing fundamental principles of organization, legal forms of business ownership, business activities concerning personnel, accounting, marketing, production and finance.

MGT 2404 **Managerial Psychology** **3 (3-0-6)**

Concepts and scope of social psychology, basic psychological factors and how they relate to business organization, language symbol, perception, memory, emotion, social attitudes, persuasion, social and cultural environment, role and status, personality, leadership, group behavior, morale and application of these factors in the human relation of business, especially in creation of morale, motivation of workers, and solutions of business and social problems.

MGT 2900 **Principles of Management** **3 (3-0-6)**
Prerequisite: *MGT 1101 Introduction to Business*

Difinition and importance of management. Manegerial functions : planning, organizing, leading-motivating and controlling, theory of management in modern corporate structure, management policies, departmentalization, centralization and decentralization, line and staff functions, and human resources management.

MGT 3101 **Luxury Management** **3 (3-0-6)**

An in-depth study of the luxury world: fundamentals of luxury retail operations, management strategies, creation of luxury branding and merchandising, operational procedures, methods, and practices used in the management of luxury goods and services companies, the importance of combining traditional managerial practices and theories with concepts and methodologies needed to meet the needs of the modern luxury goods industry, the perspective and skills necessary to pursue careers in the luxury sector.

MGT 3102 **Communication and Personality for Leaders** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Fundamentals and advance techniques of effective communication for leadership, practical applications and life changing experiences that nurture great futuristic leaders, understanding of others and handling real life challenges in and across the dynamic environment and across multiple age groups and cultures, building self-confidence to lead any given situation in a cross functional environment.

MGT 3123 **Strategic Human Capital Management** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Phases of human resource management functions including selection, training, compensation, promotion and transfer, health and safety provisions, morale building, job stabilization, grievance handling and disciplinary actions, and human relations aspect of dealing with personnel.

MGT 3201 **Start-up and Business Development** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Definition and importance of start-up: guidelines for generating business idea, writing business plan and strategy, laying down the basis structure of the business and initiating operations, the early stages of business development putting ideas into reality.

MGT 3202 **Leading and Sustaining the Organization** **3 (3-0-6)**

Theories of leadership: the roles, characters, and types of leaders in various work situations. Theories and practical examples of leading organization creating business sustainability: investment strategies, market insight, operational excellence, sustainable development and sustainability principles, which are used as drivers for innovation, collaboration, and transformation.

MGT 3203 **Building and Leading Virtual Team** **3 (3-0-6)**
Prerequisites: *MGT 2900 Principles of Management*

Definition, importance and types of virtual team: how to lead virtual teams, setting clear expectation, providing effective communication, fostering teamwork and collaboration. Different technical tools, techniques, and practices will be provided for successful trainings.

MGT 3901 **Organization Theory** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Theories, practice and problems of organization and its environment, function and structure of authority and responsibility, formal and informal organization and social system, organizational behavior, organizational control, research and development, changing of corporate structure.

MGT 3903 **Leadership** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Types of leaderships and recognition of the problems faced by leaders in various work situations, role of the first-line supervisor and his subordinate, exploration of theories of worker motivation and their application, nature and character of influential leaders.

MGT 3905 **Operations Management** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Fundamentals of industrial management from the point of view of organization structure, product, product development and research, standardization, plant location and layout, materials handling, machines equipment and maintenance, and overall operation of production and control.

MGT 3907 **Business Communication** **3 (3-0-6)**
Prerequisite: *BG 2001 English IV*

Patterns of communication in business in both theories and practices of the business professional, business letters, essays and reporting, memoranda, conversation interviewing, presentation advertising and public relations, reading and listening techniques, electronic mail, videoconferencing, decision support systems, collaborative writing systems, group scheduling systems, and Internet-based communications.

MGT 3915 **Project Management** **3 (3-0-6)**
Prerequisite: *MGT 3905 Operations Management*

Project planning procedure by considering factors in determining project objectives, setting of work system, allocation of resources, project feasibility analysis, matrix model organization, management techniques and operation procedures in accomplishing goal such as implementation, communication, coordination, controlling and evaluation of project.

MGT 3917 **Innovation and Change Management** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Concepts of innovation and change management, innovation as a management process with external linkages, role of innovation and how to manage innovation within firms, new product and services development as part of innovation.

MGT 3918 **Sport Management** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Operation of professional sports, collegiate athletics, and recreational organizations and enterprises, basic organizational structures found in the sports industry, managerial concepts and processes, skills that are necessary for the successful administration of these organizations.

MGT 3922 **Introduction to New Venture** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

New venture formation, how to launch a new business venture, how to get ideas to reality, and how to develop strategy.

MGT 3923 **Strategic Human Resources Management** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Phases of human resource management functions including selection, training, compensation, promotion and transfer, health and safety provisions, morale building, job stabilization, grievance handling and disciplinary actions, and human relations aspect of dealing with personnel.

MGT 3924 **Human Resources Development** **3 (3-0-6)**
Prerequisite: *MGT 3923 Strategic Human Resources Management*

Principles of training and development of personnel, types, methods, and contents of training programs, development of the programs, evaluation of training program, behavioral changes, and training for different levels of personnel and leadership training.

MGT 3940 **Business Research Methodology** **3 (3-0-6)**
Prerequisites: *SA 2200 Statistics II*
BIS 3340 Computer Tools in Research

Scientific research methods for business decision-making and problem-solving with emphasis on nature of research, choosing a problem and scope for research in business administration, planning and organizing research project, methodology and techniques in data collection, design of research project, processing, analysis and presentation of data in appropriate report format.

MGT 3942 **Organizational Behavior** **3 (3-0-6)**
Prerequisites: *MGT 2900 Principles of Management*
MGT 2404 Managerial Psychology

Elements of individuals and group behaviors in organization for improving effective communications, conflict management, motivation, coordination, dynamics of change, leadership, and stress management.

MGT 3945 **Managerial Decision Modeling** **3 (3-0-6)**
Prerequisite: *SA 2200 Statistic II*

Application of a quantitative analysis modeling to decision-making in a complex and dynamic business environment for organizational efficiency and effectiveness, managerial decision problems in management, marketing, operations, and finance.

MGT 4101 **Family Business Management** **3 (3-0-6)**

Definition and importance of family business: understanding how family businesses are run, the dynamics of the family, communication issues in a family, leadership and relationships that are inherent in family businesses, governance and management of the family business, ownership legacy, sibling rivalries management, professionalism, succession, strategic planning, next-generation talent and development, estate and tax planning, wealth management concerns, and family business financing.

MGT 4102 **Social Enterprise Management** **3 (3-0-6)**

Definition, importance, and types of social enterprise. The management theories, practical examples, case studies of not-for-profit organizations and social enterprises. Policy making, cases analysis and developing innovative solutions which have social impact. Examples and case studies from governmental organization, businesses and social venture.

MGT 4104 **Talent Management and Development** **3 (3-0-6)**
Prerequisites: *MGT 2900 Principles of Management*

Definition, importance and types of talents in the organization: individuals and group behaviors in organization, effective communications, conflict management, motivation and coordination. The training and development of personnel for building effective team: methods and contents of training programs, development of the programs, evaluation of training program, behavioral changes, and training for different levels of personnel and leadership training.

MGT 4117 **Entrepreneur and Innovation** **3 (3-0-6)**
Prerequisite: *MGT 2900 Principles of Management*

Definition, importance, and types of entrepreneur and innovation: the entrepreneurial skills and effective strategies for working in and managing innovative organizations. The innovation concepts, management process with external linkages, role of innovation and how to manage innovation within firms, new product and services development as part of innovation.

MGT 4202 **Career Management and Employability** **3 (3-0-6)**

Career development theories for personal career, building self-awareness, critically understanding the world of work and organizational culture, building and understanding career related experience and communicative strategies.

MGT 4211 **Seminar in Leadership and Entrepreneurship** **3 (3-0-6)**
Prerequisite: *Senior standing*

Application and Integration of knowledge and theories from various management levels: human resource management, entrepreneurial management and research through case studies, seminars and guest lectures.

MGT 4224 **Corporate Wealth Management** **3 (3-0-6)**

Definition and importance of wealth management in the corporations: evaluation of corporation performance, shareholders' value creation, financial planning and forecasting, capital budgeting, firm's valuation, corporate risk management, case study or an applied project.

MGT 4806 **Management Internship** **3 (240 Hours)**
Prerequisite: Management Major: Concentration Entrepreneurial Management

Student will be assigned to work in organization in the area of management related projects under the direction of a faculty supervisor. Faculty provides oversight of individual field experience with classroom debriefings and follow-up.

MGT 4909 **Communication in Management** **3 (3-0-6)**
Prerequisite: MGT 2900 Principles of Management

Application of the general communication concept to business management system by studying of hindrance, communication problems affecting the management process and effectiveness, including approaches to solution of such problems relationship between communication system and other management ingredients such as decision-making, authority, responsibility, delegation, operation of organization, cooperation, coordination and conflicts with organization, including planning and controlling of communication systems for an optimal effectiveness in the management of organization.

MGT 4910 **Productivity and Quality Management** **3 (3-0-6)**
Prerequisite: MGT 3905 Operations Management

Philosophy, principles and practices of productivity and quality management, concepts, tools, techniques and systems associated with productivity and quality including Quality Circle, TQM, ISO, Benchmarking and Six Sigma.

MGT 4912 **Individual Research** **3 (3-0-6)**
Prerequisite: Senior Standing (Management Major)

Developing in students the ability to apply a theoretical concept to the real world problems of any organization in a selected industry in Thailand. Any specific area of concentration will be chosen by the student upon agreement with an instructor the faculty members of Management Department. A typewritten report must be submitted.

MGT 4914 **Entrepreneurship** **3 (3-0-6)**
Prerequisites: FIN 3701 Corporate Finance
MGT 3940 Business Research Methodology
MGT 3905 Operations Management
Senior standing (112 credits) for Marketing students

Principles, theories and practical aspects of entrepreneurship, pre-start-up, start-up and early growth of new venture, writing business plan and making existing enterprises profitable.

MGT 4916 **Negotiation Strategy** **3 (3-0-6)**
Prerequisite: MGT 2900 Principles of Management
MGT 2404 Managerial Psychology

Principles and practice of domestic and international negotiations, for example in the fields of political, management, marketing and financial negotiations, impact of verbal and non-verbal communications upon negotiating process, development of skills in managing conflict resolutions within organization, the way to manage negotiating process and to handle the hard bargainer.

MGT 4943 **Organizational Development** **3 (3-0-6)**
Prerequisite: MGT 3923 Strategic Human Resources Management

Concepts for developing organizations, determining the direction for organization development, stages of organization development work, strategies and tactics of organization, development.

MGT 4945 **Cooperative Education** **9 (720 Hours)**
Prerequisites: Completion of 109 credits
Cumulative GPA: at least 2:00
Approval of the cooperative education director and CE advisor

Each student is required to show proof of work as a temporary employee with a private company for one-semester (approximately 4 months). The selected company must be approved by the cooperative education center. After the completion of the 4-month internship, students are required to submit a report on the cooperative education to the CE advisor and attend a seminar for report presentation and discussion.

MGT 4946 **Human Resources Management Internship** **3 (240 Hours)**
Prerequisite: *Management Major*

Student will be assigned to work in organization in the area of human resource management related projects under the supervision of a faculty supervisor. The Department provides oversight of individual field experience with classroom debriefings and follow-up.

MGT 4951 **Strategic Management** **3 (3-0-6)**
Prerequisite: *FIN 3101 Corporate Finance*
Senior standing

Integration of the student's background, experiences, and previous core business curriculum through case studies and business decision simulation exercises; development of an effective conceptual approach to integrating administrative policy, strategies, and decision-making; diagnosis, analysis, and solution of interrelated administrative problems.

MIS 1221 **Computer Literacy** **0 (0-2-0)**

Training on how to use computer and office suite products, word processing software, spreadsheet software, presentation software, file management, and cloud storage services.

MIS 2111 **Introduction to Management Information Systems** **3 (3-0-6)**

Introduction to management information systems which gives a business or organization a competitive edge by providing technologies that help managers plan, control and make decisions to pursue a firm's strategic and organizational goals. Hardware and software components of information systems, e-business concepts and implementation, and a survey of typical information systems used today.

MIS 2221 **Quantitative Analysis Tools** **0 (0-2-0)**
Prerequisite: *MIS 1221 Computer Literacy*

Training on how to use statistical analysis software on business problems, analysis of quantitative data, data collection, data preparation, data processing, data transformation, exploratory data analysis, and data presentation.

MIS 3111 **Business Process Management** **3 (3-0-6)**
Prerequisite: *MIS2111 Introduction to Management Information Systems*

Fundamental concepts of business process automation and optimization for improving business performance, effectiveness, agility, quality, and customer service and satisfaction, business process agility using both cloud and on-premises applications. Architecture and modeling, modeling work systems, major business processes and their relationships, modeling tools, business process/application integration approaches, enterprise mobility, content management and social media integration, and business process management software.

MIS 3121 **Database Systems** **3 (2-2-5)**
Prerequisite: *MIS 2111 Introduction to Management Information Systems*

Fundamentals of database management system (DBMS), relational and object-relational databases. Data modeling and implementation, structured query language (SQL), data normalization and de-normalization, data integrity, concurrency control, and NoSQL databases.

MIS 3122 **Principles of Electronic Commerce** **3 (2-2-6)**
Prerequisite: *MIS2111 Introduction to Management Information Systems*

Fundamental concepts and components of electronic commerce, the establishment of an electronic commerce business. Electronic commerce models, ecosystem, business applications, delivery platforms, order fulfillment, supply chain, payment systems, mobile commerce, digital marketing, security and fraud issues and protections, strategy and implementation, and regulatory.

MIS 3131 **Programming and Data Structures** **3 (2-2-5)**
Prerequisite: *MIS 2111 Introduction to Management Information Systems*

Fundamental concepts of computer programming using a high-level language and a modern development environment, building procedural programming skills and understanding basic data structures. Program structure, control structures, flowcharts, primitive data types, input and output, functions, arrays, pointers, stacks, queues, lists, trees, and graphs.

MIS 3141 **Information Technology Infrastructure** **3 (3-0-6)**
Prerequisite: *MIS 2111 Introduction to Management Information Systems*

Fundamental concepts of information technology infrastructure at the organizational level both on-premises and cloud infrastructure. Computer components, system software, computer network, and security.

MIS 3142 **Introduction to Enterprise Resource Planning** **3 (2-2-5)**
Prerequisite: *MIS 2111 Introduction to Management Information Systems*

Fundamental concepts of business process management and Enterprise Resource Planning (ERP) systems, business process agility and ERP skills. Accounting and financial management, warehouse and production management, purchasing and procurement, and customer relationship management.

MIS 3221 **Systems Analysis and Design** **3 (3-0-6)**
Prerequisite: *MIS 3121 Database Systems*

Fundamental concepts of systems analysis and design, the processes, methods, techniques, and tools for analysis of business requirements, project feasibility, system requirements, and conversion of these requirements into detailed system requirements and high-level design specifications. Structured software development life cycle (SDLC), object-oriented analysis and design (unified process/UML), and agile methods.

MIS 3231 **Object-Oriented Programming** **3 (2-2-5)**
Prerequisite: *MIS 3131 Programming and Data Structures*

Fundamental concepts of object-oriented programming using a high-level language and a modern development environment, building object-oriented programming skills. Object-oriented programming paradigm, object-oriented design, encapsulation, information hiding, separation of behavior and implementation, classes, subclasses, inheritance, polymorphism, and class hierarchies.

MIS 3241 **Enterprise Resource Planning** **3 (2-2-5)**
Prerequisite: *MIS 3111 Business Process Management*

Fundamental concepts of Enterprise Resource Planning (ERP) systems, the integration and customization of information systems for management of information among organizations, suppliers, and customers. Accounting and financial management, warehouse and production management, purchasing and procurement, and customer relationship management.

MIS 3281 **eSports** **3 (2-2-5)**

Introduction to the ecosystem of eSports that includes the history and current state of eSports, extracting game meta-details to optimize gameplay, understanding competitive/cooperative games, teamwork and management of eSports team, eSports casting, and the organization and management of eSports events.

MIS 3381 **Information Systems Internship** **3 (0-30-0)**
Prerequisite: *MIS 3241 Enterprise Resource Planning*

Exploration of the career interests and application of the knowledge and skills learned in the classroom in a work setting. The course also supports these work experiences by fostering personal reflection as well as professional growth and development.

MIS 4111 **Information Systems Project Management** **3 (3-0-6)**
Prerequisite: *MIS2111 Introduction to Management Information Systems*

Fundamental concepts of information systems project management, the systematic methodology for initiating, planning, executing, monitoring and controlling, and closing projects. Processes, methods, techniques, and tools that organizations use to manage their information systems projects, and project management and collaboration software.

MIS 4112 **Digital Marketing Technology** **3 (2-2-5)**

Fundamental concepts of digital marketing technology and building digital marketing skills. The Internet and mobile application marketing strategies, user-generated content, search engine optimization, website design and management, inbound marketing, email marketing, social media campaigns, content strategy, and paid search advertising.

MIS 4113 **Digital Banking and Payment Systems** **3 (3-0-6)**

Introduction to the key components in the digital banking, financial technology, and payment systems both technology and innovation. Mobile banking, omnichannel banking, P2P banking, credit card, debit card, smart card, electronic money, digital wallets, mobile payment, the blockchain, payment gateway, electronic funds transfer, electronic authentication, and secure electronic transaction.

MIS 4114 **Electronic Customer Relationship Management** **3 (3-0-6)**

Fundamental concepts of customer relationship management (CRM) and its application in sales, marketing, commerce, and service both conceptual knowledge and practical learning using a leading CRM software to understand, anticipate and manage the needs of an organization's current and potential customers.

MIS 4115 **Health Information Systems** **3 (3-0-6)**

Fundamental concepts of the healthcare information systems. The background, history, assistive and performance support systems, issues and barriers to medical informatics, and health information technology such as patient health record (PHR) and electronic medical record (EMR).

MIS 4116 **Human Resource Information Systems** **3 (3-0-6)**

Fundamental concepts of the information systems in the administration of human resources. How new technologies can improve the efficiencies in the management of a company's human capital. Planning, designing, and implementing the human resource information systems in an organization.

MIS 4117 **Knowledge Management Systems** **3 (3-0-6)**

Fundamental concepts of knowledge and knowledge management (KM). Infrastructure, processes, systems, tools, and technologies. The underlying technologies that enable KM systems associated with KM processes, the mechanisms and technologies to support these KM systems, case studies related to KM implementation, management practices, and the future of knowledge management.

MIS 4121 **Information Security Management and Risk Management** **3 (3-0-6)**
Prerequisite: *MIS 3141 Information Technology Infrastructure*

Introduction to information security management and risk management for planning, developing and performing information security tasks at the organizational level. The foundations of information security, issues in information security, security planning, risk management, security technology, cryptography, physical security, personnel security, information security implementation and maintenance, and information security assessment tools.

MIS 4122 **Business Intelligence** **3 (2-2-5)**
Prerequisite: *MIS 2111 Introduction to Management Information Systems*

Fundamental concepts and skills of business intelligence and tools. Data collection and data analysis to support a wide variety of management tasks, from performance evaluation to trend spotting and policy making. Measuring and monitoring key performance indicators, benchmarking and forecasting for trend and sentiment analysis, performing data mining and analysis to discover new business opportunities, building advanced spreadsheet skills, and building enterprise dashboards to integrate and visualize information from various business areas.

MIS 4123 **Spreadsheet for Business** **3 (2-2-5)**
Prerequisite: *MIS 1221 Computer Literacy*

Training on how to use advanced features in a spreadsheet program, data manipulation, analysis, and presentation. Advanced formula and functions, advanced filter, pivot table and chart, data analyzing, collaboration, auditing worksheets, data consolidation, security, and macro.

MIS 4124 **Data Mining** **3 (2-2-5)**
Prerequisite: *MIS 3121 Database Systems*

Fundamental concepts of data mining technology that assist managers to make intelligent use of electronic data both classification and prediction. Data mining techniques and tools, and case studies such as credit rating, fraud detection, database marketing, customer relationship management, and stock market investments.

MIS 4125 **Data Visualization** **3 (2-2-5)**

Fundamental concepts of data visualization technology. Data visualization for business professionals. The value of visualization, techniques in information visualization, and how to best leverage visualization methods.

MIS 4126 **Machine Learning** **3 (2-2-5)**

Fundamental concepts of machine learning technology, machine learning methods and techniques and application to business problems. Supervised learning and unsupervised learning.

MIS 4131 **Web Design and Programming** **3 (2-2-5)**
Prerequisite: *MIS 3131 Programming and Data Structures*

Fundamental concepts of web design and programming. Building the skills for developing web-oriented applications. HyperText Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, and other web technologies in the context of web development practices.

MIS 4132 **Mobile Applications Development** **3 (2-2-5)**
Prerequisite: *MIS 3231 Object-Oriented Programming*

Fundamental concepts of mobile applications development technology. Developing mobile applications that produce dynamic content. Mobile application frameworks, user interface design, SDKs, inter-activity communication, integration with back-end systems, user authentication and authorization, data services, geo-location, multimedia, security, verification and validation, and business development plan for mobile applications.

MIS 4133 **Software Engineering** **3 (3-0-6)**
Prerequisite: *MIS 3221 Systems Analysis and Design*

Fundamentals of the establishment and use of engineering principles to economically obtain software that is reliable and works efficiently on real machines. Software testing and agile software development. Software development life cycle (SDLC), requirements analysis, software design, coding practices, verification and validation, test automation, software maintenance, team software process, software documentation, and software project management.

MIS 4134 **UI/UX Design** **3 (3-0-6)**

Fundamental concepts of a user interface (UI) and user experience (UX) design. UI design focuses on how the product is laid out, the layout of each screen, developing a style guide and ensuring that consistent design language is used to maximize usability and the user experience. UX design focuses on how the product feels, ways to solve specific user problems and ensuring the application flows logically from one step to the next across the application.

MIS 4141 **Cloud Computing** **3 (2-2-5)**

Fundamental concepts of cloud computing technology. Building cloud computing skills. Cloud computing concepts, delivery models, deployment models, operating systems, data center, capacity planning, security and privacy issues, disaster recovery, service level agreements, and platforms.

MIS 4142 **Big Data** **3 (2-2-5)**

Fundamental concepts of big data technology, data tools, organization, storage, retrieval, analysis and knowledge discovery at scale. Cloud computing, data storage systems, large-scale data analysis, self-descriptive data representations, and semi-structured data models.

MIS 4143 **Internet of Things** **3 (2-2-5)**

Fundamental concepts of Internet of Things (IoT) technology, IoT ecosystem. Frameworks, standards, applications, trends, regulation, privacy and security, business functions, market drivers and barriers, and business environments.

MIS 4211 **Information Systems Strategy, Management, and Acquisition** **3 (3-0-6)**
Prerequisite: *MIS 4111 Information Systems Project Management*

Overview of the issues and approaches in managing the information systems function in organizations and how the information systems function integrates, supports, and enables various types of organizational capabilities. Emphasis is on developing an intellectual framework that will allow leaders of organizations to critically assess existing IS infrastructures and emerging technologies as well as how these enabling technologies might affect organizational strategy. Acquisition, development, and implementation of plans and policies to achieve efficient and effective information systems.

MIS 4221 **Data Science** **3 (2-2-5)**

Overview of the broad area of data science in the business context, big data and tools required to store, clean, manipulate, visualize, model, and extract information from massive amounts of data from the business perspective. Data integration, data modeling, large-scale processing tools, data clustering and classification, data visualization, and specialized data management systems.

MIS 4231 **Web Applications Development** **3 (2-2-5)**
Prerequisite: *MIS 4131 Web Design and Programming*

Fundamental concepts of web applications development technology. Developing websites that produce dynamic content. Web frameworks, web development techniques, n-tiers architecture, and web development life cycle.

MIS 4241 **Enterprise Architecture** **3 (3-0-6)**
Prerequisite: *MIS 3141 Information Technology Infrastructure*

Fundamental concepts of enterprise architecture and frameworks for the analysis, design, implementation, evaluation and management of enterprise IT solutions, planning and modeling the enterprise. Functional modeling, physical architecture design, security planning and recovery issues, project management, emerging technologies, and ethical, financial and global considerations.

MIS 4281 **Selected Topic in MIS 1** **3**

MIS 4282 **Selected Topic in MIS 2** **3**

MIS 4283 **Selected Topic in MIS 3** **3**

MIS 4284 **Selected Topic in MIS 4** **3**

MIS 4285 **Selected Topic in MIS 5** **3**

MIS 4286 **Selected Topic in MIS 6** **3**

MIS 4287 **Selected Topic in MIS 7** **3**

MIS 4288 **Selected Topic in MIS 8** **3**

MIS 4289 **Selected Topic in MIS 9** **3**

MIS 4291 **MIS Senior Project** **3 (3-0-6)**
Prerequisite: *MIS 3221 Systems Analysis and Design*
MIS 3241 Enterprise Resource Planning
MIS4111 Information Systems Project Management

Research project for students to apply all the acquired knowledge to transform a traditional business into electronic business. System analysis, system design, business transformation, and information system development or ERP software customization based on a real business solution. Students must produce professional and system documentation, and defend their projects with the appointed committee.

MKT 2280 **Principles of Marketing** **3 (3-0-6)**
Prerequisite: *MGT 1101 Introduction to Business*

Principles and problems involved in transfer of goods and services from producer to consumer, consumer's buying motives, basic product, distribution, price, promotion mix strategies, and improvement of marketing efficiency

MKT 2805 **Healthcare Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Roles played by service providers (medical professionals), consumers as well as marketers who are responsible for expanding market and developing marketing strategies in healthcare industry, skills in segmenting customers and medical markets, social marketing skills to enhance communication strategy and development of marketing strategies of healthcare services in competitive market.

MKT 3102 **Integrated Marketing Communications** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Strategic use of various marketing communication elements including advertising, sales promotion, public relations, personal selling, event sponsorships and direct marketing to build and maintain brand equity, selection of alternative promotional tools, budgeting and allocation decisions, determining appropriate message strategy, developing media schedules for a given product/market, ethical principles in marketing communications, and effective integration of elements across promotional mix.

MKT 3515 **Purchasing and Supply Chain Management** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Importance of purchasing and logistics in supply chain management, sourcing and purchasing strategy, price determination and cost management, negotiation, supplier selection and evaluation, supplier relationship management, ethics and green purchasing, logistics inventory management for cost saving, risk and time management, inventory and warehouse management systems that contribute to solid formulations of marketing and competitive advantages of a company.

MKT 3525 **Sales Management** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Management of personal selling process in marketing, types of sales organizations and their relations with other departments of the business, place of sales research and planning in marketing, selection of selling methods, credit, collection and sales financing hiring, training, compensating and supervising of salesman.

MKT 3530 **Consumer Behavior** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
MGT 2404 Managerial Psychology

Nature and determinants of consumer behavior, influence of socio psychological factors such as personality, social groups, demographic variables, social class, and culture on the formation of consumers' attitudes, consumption and purchasing behavior, steps in decision-making process starting from problem identification, information and fact finding, evaluation of alternatives, buying decision, and after-purchase evaluation.

MKT 3620 **Global Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
Completion of at least 70 credits

Principles and operations of international and global marketing concepts, international marketing environment, trade promotion activities of government and private agencies, environmental aspects of international market, financial features and instruments, marketing structure of international trade, terms of trade and credit, international marketing position, foreign market survey, segmentation, targeting and positioning, global market entry strategies, strategic elements of competitive advantage, global marketing mix including product decisions, pricing, channels of distribution, and global marketing communication mixes.

MKT 3627 **Sales Promotion** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Principles and practices in guiding management in making key decisions necessary in sales promotion program, selection of proper sales appeals, sales promotion directed towards company's sales staff, middlemen and ultimate consumers, planning and evaluation of promotional activities, including merchandising functions.

MKT 3628 **Public Relations** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Public relations process and job skills of public relations professionals, role of public relations organizations and role of public relations in organizations, promotional campaigns in which public relations plays a key element, techniques and tools used in the field of public relations

MKT 3629 **Pricing Strategy and Decisions** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Strategic pricing concept, cost structure, market-based pricing for profit, pricing influence on purchase decision, role of value in pricing, price sensitivity analysis, price elasticity, competitive pricing, proactive pricing, initial launch of integration of elements in profitable pricing, pricing for new products and different pricing schemes by segments, product-line pricing, pricing as a promotional tool, pricing to leverage competitive advantages, pricing psychology, and pricing ethics.

MKT 3803 **Retail Management** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Principles and practices of small business in the area of retail operations, planning, operations and control in various retailing institutions, retailing opportunities and careers with major emphasis on the need to adopt decisions on store location, layout, building, fixtures, equipment and merchandise management, buying, handing, control and pricing, store promotion and customer services.

MKT 3804 **Fashion Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Foundation of marketing, its techniques and activities in the fashion industry, fashion marketing environment, fashion marketing mix, branding, visual merchandising, how to develop, analyze and implement brand strategies, buying and merchandising practices, how to plan and execute effective advertising and promotional strategies including public relations and event planning related to fashion products.

MKT 3806 **Marketing in Asia** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Impacts of rising challenges and opportunities on marketing strategies of business firms in Asia, development of market entry strategies and strategic marketing plans in ASEAN Economic Community (AEC) and emerging markets in Asia using case studies emphasizing on building B to B relationships as well as cultivating B to C relationships while developing and implementing marketing strategies in Asia.

MKT 3807 **Sport Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Marketing strategies of sport products/events, use of sports as a promotional tool for other products, development marketing plan for both upstream (sponsors) and downstream (sports fans/consumers) markets as well as other related topics such as sports branding, event sponsorship, sport celebrity endorsement, ambush marketing, and sport media.

MKT 3817 **Sustainability Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Theories and practices of marketing activities and strategies integrating environment, ecology, production with using less natural resources , green supply chain activities as well as related topics including sustainable innovation, social enterprise and marketing for the benefit of community.

MKT 3823 **Marketing Channel Strategy and Decision** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Distribution strategies, structure, functions, types, and operating problems of various institutions in the chain of distribution of different types of products and industries, segmentation for marketing channel design, channel strategy formulation and implementation, scope of distribution strategies including distribution intensity and vertical constraints, and strategic alliances in distribution.

MKT 3826 **Merchandising and Display Strategies** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*

Duties and problems of store buyers, merchandise managers, demand forecasting, sources of buying information, buying policies and practices, selection and evaluation of resources, inventory planning and control, promotion strategies and tools used by retailers to achieve a multitude of objectives such as building store image, generating store traffic and immediate purchases, broad array of tools from the use of local advertising in broadcast and print media to in-store display and product/ visual merchandising.

MKT 3837 **Service and Customer Relationship Management** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Service operations and all aspects of interaction a company has with its customers, including prospecting sales and service, identifying, acquiring, and retaining customers by enabling organizations to manage and coordinate customer interactions across multiple channels, departments, lines of business and geographies, how organizations use customers' database to maximize value of every customer interaction and drive superior performance.

MKT 3839 **Event Marketing and Public Relations** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Overview of events and sponsorship strategies, public relations for creating brand publicity and brand's relationship with modern-day consumers as social customers who not only respond to product attributes and traditional advertising but also increasingly prefer to interact with brands via experiential marketing in the form of company events, publicity stunts, and other forms of marketing engagement.

MKT 3867 **Social Media and Online Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Practical marketing and communication applications for digital communication channels, especially the Internet and hi-technology devices, strategies and implementation of various digital formats to enhance the marketing of goods and services such as social media marketing, digital media, mobile, website, social networks and media including Facebook, Twitter, Tumblr, Instagram, LinkedIn , Line and some other up-and-coming social networking sites, use of mobile services such as SMS/text messaging and mobile application in the promotion and selling of goods.

MKT 3868 **Content Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
MKT 3867 Social Media and Online Marketing (For Marketing students)

Development, marketing strategy and planning of content for brands which engage and entice with the use of various media such as video, text, audio, photography and posters in the digital format, hand-on exercises for students to determine the best practices, and content solutions in
using the web, wireless apps, widgets and mobile technologies.

MKT 3869 **Digital Consumer Insights** **3 (3-0-6)**
Prerequisites: *BIS 1141 Business Software Applications*
BIS 2180 Information Technology
MKT 2280 Principles of Marketing
MKT 3867 Social Media and Online Marketing (For Marketing students)

How to capture the consumer information and capitalize on it, use of big data of web analytics, social media monitoring, search activity, and online surveys which provide valuable data for decision making and creation of insights which speed up product development, strategies and find competitive edge and uncover real opportunities and management decision making.

MKT 4725 **Competitive Analysis and Strategy** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
Completion of at least 90 credits

Analytical concepts in competitive environment, efficient market functioning, industry analysis, strategic groups in industry and global competition, analysis of competitive advantage, vertical linkages, corporate diversification, competitive strategic alliances, rivalry using product positioning, competitive pricing, research and development in competitive environment.

MKT 4726 **Advertising and Creative Strategies** **3 (3-0-6)**
Prerequisite: *MKT 3102 Integrated Marketing Communications*

Role of creative strategy in advertising and other promotional mix, examination and systematic development of creative brief or copy platform as a means of designing message strategies that evoke consistent value and identity, creative content and creative process beginning with market analysis and target market selection to brand attributes and value propositions to creative execution with emphasis on execution of the "big idea".

MKT 4727 **Integrated Media Planning** **3 (3-0-6)**
Prerequisites: *MKT 3102 Integrated Marketing Communications*
MKT 4726 Advertising and Creative Strategy

Nature of media, media business and media industry, roles of and relationships among media planners, buyers and sellers, characteristics of traditional, nontraditional and interactive media, general procedures in media planning, basic and advanced measurements in media analysis, evaluation and selection of media vehicles, strategic media plan (i.e. target audience selection, objective specification, media and vehicle selection, media buying), setting and allocating media budget, and media testing.

MKT 4730 **Marketing Management** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
MGT 2900 Principles of Management
Senior standing (106)

Scope and field of marketing management, need of marketing and product planning for promotion purpose, need of planning for new products to replace existing products, planning for new marketing techniques including pricing and pricing policies, techniques of market survey, its objectives and limitations, management of personal selling, coordination of advertising with all other aspects of marketing, development of policy toward changing items comprising product lines, and control of marketing operation.

MKT 4777 **Communication and Digital Media Strategy** **3 (3-0-6)**
Prerequisite: *MKT 3867 Social Media and Online Marketing*
Senior standing over 90 credits

Digital terminology, media, targeting strategies and search engine optimization (SEO) to build an effective advertising campaign exposing target audience with various available digital media advertising options and integration of communication tools for the creation of a digital media campaign.

MKT 4805 **Business-to-Business Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Marketing problems of manufacturers and distributors of industrial goods such as machinery and equipment, raw and semi-fabricated materials, industrial supplies and component parts, industrial marketing system and concepts, demand and product characteristics, product and service definitions, market identification, evaluation and measurement of marketing performance, pricing, promotion and public relations, industrial channel strategy and logistics, performance standards and instruments of control.

MKT 4806 **Product and Brand Management** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
Completion of at least 90 credits

Management concepts concerning process of new product development including product concept, positioning, and branding used in developing product lines, pricing, distribution decisions in keeping up-to-date to both industrial and consumer goods, product line management, environment factors that have impacts on product, brand and price strategies.

MKT 4808 **Advanced Marketing Presentation** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
Senior standing over 90 credits

Skills of communication and presentation of selling, marketing planning, structuring and delivery of formal and informal presentations for productive outcomes, essential elements of good communication and presentation in marketing field, how to put these principles into practice in an interactive session and to deliver presentations in a more confident and professional manner.

MKT 4809 **Marketing for Services** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
Senior standing over 90 credits

Nature and characteristics of market and consumer behavior for various services, marketing mix for services, structure and development of institutions involved in selling services such as financial institution, banks, insurance companies, transportation firms, hotels and various travel industry agencies, comparison between marketing for goods and marketing for services.

MKT 4810 **Export-Import Management** **3 (3-0-6)**
Prerequisite: *MKT 3620 Global Marketing*

Principles and practices of international marketing management, foreign market exploration, exchange problems, practices and document preparation, customs clearances and forwarding practices, customs tariffs, duties and export-import premiums, landed cost calculation methods, commodity classification system of the Customs department, carrier selection decision making, management and organization of freight forwarding and customs clearance agencies, marketing communication for foreign products, management and organization of import and export departments of large commercial firms, relationship with financial and transportation intermediaries.

MKT 4811 **Seminar in Marketing** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
Completion of at least 90 credits

Integration of experience in all areas of marketing to play on the problems encountered by case study analysis, guest lecturers from business field, research, and others.

MKT 4812 **Individual Research** **3 (3-0-6)**
Prerequisites: *MKT 3530 Consumer Behavior*
MGT 3940 Business Research Methodology
MKT 4855 Research in Marketing
Senior standing and Chairperson's approval

Application of theoretical concepts to real world problems of any organization in a selected industry in Thailand. Any specific area of concentration will be chosen by the student upon agreement with an instructor selected from the faculty members of Marketing Department.

MKT 4826 **Contemporary Logistics** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*

Modern logistics, application of analytical tools useful in logistics, analysis of characteristics of logistics system elements, inventory and warehouse management systems, modes of transportation, fundamentals of logistics in today's dynamic global landscape, value-added applications of logistics decision-making tools that lead to solid formulations of marketing and competitive advantages in the supply chain of a company.

MKT 4829 **Marketing Decision Making** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
Senior standing (112 credits)
Graduating Only or Department Chairperson's Approval

Advanced techniques and actual practices of marketing forecasting, demand analysis and evaluation of market potential with emphasis on market projection, sales budgeting, pricing, distribution index and CLV as a part of administrative planning and decisions for profit, market campaign planning, execution and control.

MKT 4848 **Contemporary Issues in Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
Completion of at least 90 credits

Case studies covering how marketing practices and decisions lead to marketing wars, marketing mistakes and success, including the importance of outsourcing, mergers and acquisitions, employee commitments, customer relationships, CEOs' characteristics, consumer analysis in developing and implementing successful marketing strategies, as well as current marketing trends and various marketing related topics.

MKT 4849 **IMC Campaign Planning** **3 (3-0-6)**
Prerequisites: *MKT 4726 Advertising and Creative Strategy*
MKT 4727 Integrated Media Planning
Senior standing over 106 credits

Conceptual synthesis and practical application of business, research, media planning and creative principles used in the formulation of persuasive messages focusing on the development of a complete integrated marketing communications (IMC) campaign, both written and oral presentation of the campaign.

MKT 4855 **Research in Marketing** **3 (3-0-6)**
Prerequisites: *MKT 2280 Principles of Marketing*
MGT 3940 Business Research Methodology
Completion of at least 90 credits

Principles and methods of marketing research, securing respondents, making test investigation, sampling, collecting data, types and errors of collected data, tabulating and analyzing information, interpreting findings and stating conclusion, application of research techniques and procedures to the solution of marketing problems: determination of market potential and sales quota, reduction of selling costs, forecasting and appraisal of sales promotional efforts, advertising program and channels of distribution.

MKT 4856 **Brand Building Strategy** **3 (3-0-6)**
Prerequisite: *MKT 3102 Integrated Marketing Communications*
Completion of at least 90 credits

Brand building and development, concepts, theories, principles and terminology of brand building strategy, brand equity, and integrated marketing communication tools, segmentation, target market identification, positioning, message strategy, media choice, advertising evaluation, aspects of raising brand awareness, creating relevant and distinctive brand identity, building high quality reputation, and shaping desired brand imagery for a brand and brand equity.

MKT 4857 **Qualitative Research in Marketing** **3 (3-0-6)**
Prerequisite: *MKT 2280 Principles of Marketing*
MGT 3940 Business Research
Senior standing over 106 credits

Basic application of qualitative techniques in research including in-depth interviews, focus-group research and applicable psychological measurement techniques to understand the consumers' buying decision making, data collection and analysis through content analysis, discourse analysis and others.

MKT 4887 **Online Entrepreneurship** **3 (3-0-6)**
Prerequisite: *MKT 3867 Social Media and Online Marketing*
Senior standing over 106 credits

Fundamentals of online entrepreneurship, how to conduct business online, processes in which online entrepreneurs start up their business including which online platform to choose, what strategies to employ and how to optimize the use of social media in their businesses.

MKT 4897 **Marketing Internship** **3 (0-9-3)**
Prerequisite: *MKT 2280 Principles of Marketing*
Completion of at least 90 credits

Opportunity for students to experience practical marketing by carrying out work project or full-time work in marketing firms, retail business corporations, governmental entities, private or public organizations under the direct supervision of a designated executive or faculty member. Students will apply theoretical concepts to practice and gain valuable working experience. All internships must be approved in advance.

MKT 4899 **IMC Internship** **3 (0-9-3)**
Prerequisite: *MKT 3102 Integrated Marketing Communications*
Completion of at least 90 credits

An off-campus training supervised work experience in the advertising and marketing communication organization. Regular meetings with the internship coordinator, periodic reports, as well as a final paper relating the work experience to the student's course work.

MS 1300 **Introduction to Musical Skills** **1 (0-1-2)**

Private lesson given to develop an individual student's musical abilities and skills in performing instrumental or vocal from basic level.

MS 1301 **Musical Skills I** **2 (1-2-3)**

Private lesson given to develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MS 1302 **Musical Skills II** **2 (1-2-3)**
Prerequisite: *MS 1301 Musical Skills I*

Private lesson given to further develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MS 2301 **Musical Skills III** **2 (1-2-3)**
Prerequisite: *MS 1302 Musical Skills II*

Private lesson given to further develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MS 2302 **Musical Skills IV** **2 (1-2-3)**
Prerequisite: *MS 2301 Musical Skills III*

Private lesson given to further develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MS 3301 **Musical Skills V** **2 (1-2-3)**
Prerequisite: *MS 2302 Musical Skills IV*

Private lesson given to further develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MS 3302 **Musical Skills VI** **2 (1-2-3)**
Prerequisite: *MS 3301 Musical Skills V*

Private lesson given to further develop an individual student's musical abilities and skills in performing instrumental or vocal according to the area of interest and expertise.

MT 1602 **Fundamentals of Financial Accounting** **3 (3-0-6)**

Basic accounting theory and procedures for service and merchandising firms by using double-entry system, completing accounting process: journalizing, posting to the ledgers, preparation of trial balance, adjusting entries, worksheet and closing entries, as well as preparation and presentation of basic financial statements.

MT 4201 **Social Interests, Government Policies, and Technology** **3 (3-0-6)**
Prerequisite: *Required at least 80 credits*

Interrelationships among businesses, government, society, and technology and how they affect business decisions, how business leaders steer companies through a world continuously altered by environmental forces that reshape the economic, cultural, political, technological and ecological terrain in which companies operate, and how to operate a company with ethical and social responsibility.

MT 4323 **Entrepreneurship in Technology Business** **3 (3-0-6)**
Prerequisite: *Required at least 100 Credits*

Practice of business plan, business model, new venture formation, feasibility, and valuation in order to capitalize the opportunities in technology business.

MU 0020 **Fundamentals of Music Theory** **Non-Credit**

Basic concepts of music: notation, major and minor scales, key signatures, intervals and their inversions, tempo, rhythm, meter, division of the beat, simple and compound time signatures, triads, seventh chords, inversions and their symbols, and diatonic chords in major and minor keys.

MU 0111 **Ear Training I** **1 (0-2-1)**
Prerequisite: *Satisfaction score on theory entrance examination or MU 0111 Ear Training I*

Basic ear training, sight-reading, singing on simple melodic line, intervals, chords, and scales in basic rhythm patterns.

MU 0112 **Ear Training II** **1 (0-2-1)**
Prerequisites: *MU 1151 Theory of Music I*
MU 0111 Ear Training I

Advanced ear training, sight reading, singing any music in written notation form precisely, dictation studies, intervals, chords layout-inversion, harmonic progression and rhythmic study in classical and contemporary music.

MU 0151 **Keyboard Lab I** **1 (0-2-1)**
Prerequisite: *Satisfaction score on theory entrance examination*

Emphasizing application of theoretical concepts at the keyboard: intervals, scales, triads, seventh chords, extended chords, harmonic function, cadences, modes, basic sequences, and harmonization.

MU 0152 **Keyboard Lab II** **1 (0-2-1)**
Prerequisite: *MU 1151 Theory of Music I and*
MU 1251 Ear Training I and
MU 0151 Keyboard Lab I

Emphasizing the use of keyboard as an arranging tool, lead sheet interpretation, basic score reading and outlining an arrangement.

MU 0153 **Keyboard Techniques I** **1 (0-2-1)**
Prerequisite: *Satisfaction score on theory entrance examination*

Keyboard technical skills for students majoring in piano. Lessons included five-finger drills, triad and seventh chord arpeggios, major and minor scales, Hanon in 12 keys, and chord-scale relationships

MU 0154 **Keyboard Techniques II** **1 (0-2-1)**
Prerequisite: *MU 1151 Theory of Music I and*
MU 1251 Ear Training I and
MU 1151 Keyboard Techniques I

More advanced technical development with emphasis on five-finger drills, diminished arpeggios, intervals, trills, blues scales, modal scales, and chord-scale relationships.

MU 1151 **Theory of Music I** **3 (3-0-6)**
Prerequisite: *MU 0020 Fundamentals of Music Theory or Satisfaction score on theory entrance examination*

Fundamentals of music (scales, keys, intervals, chords, rhythm and meter) with an introduction to basic musical form, cadences, non-chord tones, modes, dominant and diatonic seventh chords, instrumental transposition, diatonic harmonic function, part-writing, harmonization and score analysis.

MU 1152 **Theory of Music II** **3 (3-0-6)**
Prerequisites: *MU 1151 Theory of Music I*

Chromatic harmonic function: secondary dominants, modulation, mode mixture and the Neapolitan chord. Further development of part-writing skills, harmonization and score analysis.

MU 1251 **Ear Training I** **1 (0-2-1)**
Prerequisite: *Satisfaction score on theory entrance examination*

Development of basic ear training skills through singing and dictation – songs, intervals, scales, chords, elementary harmonic motion and rhythmic patterns

MU 1252 **Ear Training II** **1 (0-2-1)**
Prerequisite: *MU 1151 Theory of Music I and MU 1251 Ear Training I*

Further development of ear training skills through increasing complex singing and dictation exercises.

MU 1651 **Ensemble I** **1 (0-2-1)**

Development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 1652 **Ensemble II** **1 (0-2-1)**
Prerequisite: *MU 1651Ensemble I*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 2151 **Orchestration I** **2 (2-0-4)**
Prerequisite: *MU1152 Theory of Music II*

Basic principles and techniques used in the arrangement and composition of music for the symphonic orchestra.

MU 2152 **Orchestration II** **2 (2-0-4)**
Prerequisite: *MU 2151 Orchestration I*

Advanced techniques used in the arrangement and composition of music for the symphonic orchestra.

MU 2153 **Theory of Music III** **3 (3-0-6)**
Prerequisite: *MU 1152 Theory of Music II and MU 1252 Ear Training II*

Classic: Sixth chords, enharmonic functions, altered dominants, common-tone diminished seventh chords, chromatic mediants, coloristic chord successions and tonal harmony of the late 19th century. Further development of part-writing skills, harmonization and score analysis.

MU 2154 **Theory of Music IV** **3 (3-0-6)**
Prerequisite: *MU 2153 Theory of Music III and MU 2253 Ear Training III*

Basic principles and techniques of 20th century art music: modes, artificial scales, free tertian and non-tertian harmony, polytonality, rhythmic methods, formal process, intervallic organization, serial procedures and an introduction to recent developments. Further development of score analysis skills and analytical skills required for non-tonal music.

MU 2211 **History of Thai Music** **3 (3-0-6)**

Development of early Thai musical genres up to the present, including historical background and political and cultural influences, growth of vocal and instrumental music, musical varieties and characteristics of human life, contributions of the Thai principal composers.

MU 2221 **Popular Music Literature** **3 (3-0-6)**

Servey of western popular music, popular music artists in different periods.

MU 2251 **Cultural History of Southeast Asian Music** **3 (3-0-6)**

Survey of musical culture in Southeast Asia. Function of music in cultural societies. Relation of music and people in terms of socio-economic and aesthetic values. Nationalist and politic movement of music as cultural phenomena. Diaspora music of Southeast Asian communities overseas.

MU 2253 **Ear Training III** **1 (0-2-1)**
Prerequisite: *MU 1152 Theory of Music II (or CMP 1151 Jazz Theory I)*
MU 1252 Ear Training II

Further development of ear training skills through increasing complex singing and dictation exercises.

MU 2254 **Ear Training IV** **1 (0-2-1)**
Prerequisite: *MU 2153 Theory of Music III (or CMP 2152 Jazz Theory II)*
MU 2253 Ear Training III

Further development of ear training skills through increasing complex singing and dictation exercises.

MU 2331 **Basic Keyboard Skill** **1 (0-2-1)**

Basics of Keyboard technique and chord voicing, the understanding of more concepts including scales and chord progressions.

MU 2651 **Ensemble III** **1 (0-2-1)**
Prerequisite: *MU 1652 Ensemble II*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 2652 **Ensemble IV** **1 (0-2-1)**
Prerequisite: *MU 2651 Ensemble III*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 3121 **Composition** **3 (3-0-6)**
Prerequisites: *MU 1152 Theory of Music II*

Creation of original music, development of compositional abilities, short composition writing, development of skills to analyze and evaluate music, diverse musical examples.

MU 3251 **History of Music I** **3 (3-0-6)**
Prerequisites: *BG 1002 English II*

Survey of Western music from Ancient Greek and Medieval through Baroque periods with an emphasis on understanding stylistic traits and theoretical concepts of the eras, Gregorian chant and secular monophony; evolution of musical notation; development of polyphonic music; vocal and instrumental genres such as mass, motet, madrigal, opera, cantata, sonata, and concerto, Baroque ornamentation in performance practice; analysis of iconography (visual arts in music research), a survey of archives or prints, discussing of paintings on musical subjects, and the use of iconography in researches.

MU 3252 **History of Music II** **3 (3-0-6)**
Prerequisite: *MU 3251 History of Music I*

Survey of Western music from the Classical period to the present with an emphasis on understanding stylistic traits and theoretical concepts of the eras, development of genres such as sonata, string quartet, concerto, symphony, symphonic poem, character piece, Lied, and opera; and 20th century trends of impressionism, expressionism, atonality, serialism, minimalism, aleatory music, and electronic music, survey of world music

MU 3651 **Ensemble V** **1 (0-2-1)**
Prerequisite: *MU 2652 Ensemble IV*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 3652 **Ensemble VI** **1 (0-2-1)**
Prerequisite: *MU 3651 Ensemble V*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 3731 **Introduction to Music Education** **3 (3-0-6)**

Basic knowledge and concept of music education, music teaching methods, music curriculum and music education system in elementary, secondary, higher education, and non-formal education in ASEAN community and other requons, issues and trends in music education, review of music education research and articles, and music instruction observation in educational institutions.

MU 4103 **Form and Analysis** **3 (3-0-6)**
Prerequisite: *MU 1152 Theory of Music II*

Analytical study of various significant forms-Binary, Rounded Binary, Ternary, Rondo, Sonata, and Fugue. Harmonic and melodic structures used in Western art music.

MU 4112 **Arranging** **3 (3-0-6)**
Prerequisite: *MU 1152 Theory of Music*

Techniques of arranging music for vocal / instruments for both small and large ensembles.

MU 4223 **Music in Human Life** **3 (3-0-6)**

Traditions, belief systems, and practices of world cultures with regards to music, comparative study and analysis of the music of contrasting ethnic groups in relation to different social contexts; thematic musical styles in recordings along with traditional, religious, and cross-cultural issues in human life.

MU 4651 **Ensemble VII** **1 (0-2-1)**
Prerequisite: *MU 3652 Ensemble VI*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 4652 **Ensemble VIII** **1 (0-2-1)**
Prerequisite: *MU 4651 Ensemble VII*

Further development of techniques as ensemble players and study of selected repertoire to performance standard.

MU 7101-8 **Concert Attendance I-VIII** **Non-Credit**

Attendance in at least two music events per semester recognized or organized by the School of Music, including master classes, concerts, recitals, workshops and guest lectures.

NB 1210 **Pathophysiology** **3 (3-0-6)**

Basic concepts of pathophysiology, the alteration in functioning of human systems caused by the diseases including conditions typically observed during a disease state and the effect of diseases on the state of physiological balance.

NB 1214 **Anatomy and Physiology** **5 (4-3-10)**

Basic human structures, the position of cells, development of embryo, organ and its interrelationship among sections of structures and systems including the functions of organs, mechanical adjustment of each system to maintain normal function and body balance, lab experiments and the clinical nursing application.

NB 1215 **Biochemistry** **2 (2-0-4)**

Basic biochemistry for health science including enzymes, bioenergetics and thermodynamics, nucleic acids, carbohydrates, lipids, amino acids, proteins and the metabolisms, vitamins and minerals, hormone, gene regulation, and the clinical nursing application.

NB 1216 **Microbiology and Parasitology** **2 (1-3-4)**

Essence of biology, classification of microorganisms that cause communicable diseases including bacteriology, mycology, virology, the mode of transmission and basic concept of immunology, the basic of parasitology, the morphology, life cycles of parasite, its related diseases and laboratory diagnosis.

NB 1217 **Multiculturalism in Health Care** **1 (1-0-2)**

The concept of culture diversity and application of culture sensitivity in nursing and health care industry including the analysis of scenarios related to the influence of different cultural beliefs and practices on health and illness.

NB 2209 **Pharmacology** **3 (3-0-6)**

The concept of pharmacokinetics, pharmacodynamics, toxicities, major pharmacologic agents used for treating common diseases and clinical toxicology or poisoning, calculation, pharmaceutical preparations, rational durg use, drug education including the National List of Drug, laws concerning controlled drugs with adverse reactions and the nursing implication.

NB 2212 **Psychology and Mental Health** **2 (2-0-4)**

Principles of psychology and mental health, related philosophies and theories, mental health promotion, prevention, and rehabilitation for individual, family and community, including evolution of mental health, psychiatric care and interventions in the 21st century.

NB 2214 **Diet Therapy** **1 (1-0-2)**
Prerequisite : *NB 1215 Biochemistry*

Concepts of therapeutic nutrition including nutritional assessments, nutritional problem, energy balance, food exchange lists, hospitalized diets and modified diets for disease management.

NB 2215 **Entrepreneurship in Health Care** **2 (2-0-4)**

Concept of entrepreneurial leadership in nursing and health care industries, health related business management and its impact handling, development and presentation of a basic business plan.

NE 3501 **Spa and Aroma Therapy** **3 (2-3-6)**

Overview of the history and principles of spa and aroma therapy, related public health laws and regulations, basic spa management, basic human anatomy and physiology for massage, aroma massage techniques, health consequences, roles and etiquettes of aroma therapist.

NE 3506 **Health Care for Civil Aviation** **3 (3-0-6)**

Principle of medical specialty concerning health and safety that combines aspects of preventive, occupational and environmental regulation, basic medical management and first aid for aircrew and passengers, the management and mitigation for outbreaks of communicable disease, health risks, and emergencies of international concerned including ethical aspects of aviation medicine.

NE 3507 **Herbal Therapy for Self-Care** **3 (3-0-6)**

Concept of herbal therapy for self-care, herbs and their healing properties, herbal selection to relive common sign and symptom, and to alleviate pain and aliment, indication and contraindication for herbal remedy.

NE 4502 **Adolescent Health** **3 (3-0-6)**

Male and female adolescent health issues, gender adaptation, life-style, behaviors, self-image, reproductive and sexual health, health problems in adolescent including alcohol and substance abuse, violence issues, and design of adolescent health promotion initiatives.

NE 4503 **Comprehensive Nursing for Excellence** **3 (3-0-6)**

Analysis of the clinical scenarios from various nursing specialties including current professional issues, problem identifications, and clinical nursing intervention on the dimensions of care and health promotion using both basic professional and professional knowledge.

NS 1310 **Professional Socialization I** **2 (2-0-4)**

Origin of nursing profession, values in nursing and professionalism, ethical principles in nursing profession, virtue ethics, human rights, patient rights in health care, Professional Nursing Acts, common law, criminal law, tort and related regulations including ethical dilemmas, legal issues and liability.

NS 1312 **Health Promotion Throughout Lifespan** **2 (2-0-4)**

Health promotion concepts, theoretical framework, and methods, healthy public policy, bio-psycho-social development and health promotion strategies including nutrition for healthy life style and health promotion innovations throughout lifespan.

NS 1314 **Scientific Nursing Approach and Holistic Health Assessment** **2 (1-3-4)**

Approach case scenarios through nursing process based on self-care conceptual framework, practice of health assessment skill using holistic approach to identify potential health needs and development of nursing care plan.

NS 2310 **Alteration in Adult Health and Nursing I** **3 (3-0-6)**

Nursing management for adults with alterations in genetics, cell growth and differentiation, sensory system, integumentary system, respiratory system, digestive system, musculoskeletal system, and peripheral system, application of self-care conceptual framework, family-centered and holistic approaches in assisting adults to reach the optimal level of wellness.

NS 2319 **Foundation of Professional Nursing** **3 (3-0-6)**
Prerequisites: *NB 1214 Anatomy and Physiology*

The selected nursing theories, family-centered and holistic approaches, applicable to assist clients to meet their needs through nursing process, the essence of nursing care in every stage of care management, clinical nursing therapeutics for clients with alteration in vital signs, personal hygiene care, medication administration, diagnostic test and other nursing procedures including nursing management for clients with special needs and nursing documentation.

NS 2324 **Bio-Behavioral Psychiatric Nursing** **2 (2-0-4)**
Prerequisite: *NB 2212 Psychology and Mental Health*

Principle of psychiatric nursing, development of acute and chronic mental disorders and alternation of behaviors in the mental health continuum, treatment modalities, psychopharmacology, care management through nursing process for mental health promotion, maintenance, and restoration of individuals, families, and communities.

NS 2325 **Community Focused Nursing I** **2 (2-0-4)**

Foundation of community health nursing, current public health situations and contemporary health problems, environmental health, health system reform, public health innovation, health economic and national health insurance, national health development plan and current public health policy.

NS 2326 **Family-Centered Care for Infant, Child, and Adolescent I** **2 (2-0-4)**

Principles of family-centered care and holistic approach for infant, child, and adolescent based on self-care conceptual framework, growth and development assessment, well-baby care, complementary food and deviation of nutritional status, nursing care for infant, child, and adolescent experiencing minor health problems and injury in the hospital, family and community, including analysis of current adolescent issues and management.

NS 2424 **Nursing Experience** **2 (0-6-0)**
Prerequisite: *NS 2319 Foundation of Professional Nursing*

Integration of basic knowledge from foundation of nursing, nursing process, holistic approach, and self-care conceptual framework to practice nursing skills and procedures in the nursing laboratory and simulation.

NS 2425 **Clinical Practicum for Professional Nursing Foundation** **3 (0-12-0)**
Prerequisites: *NS 2424 Nursing Experience*
NS 1314 Scientific Nursing Approach and Holistic Health Assessment

Clinical nursing experiences in health settings, application of basic nursing knowledge and skills in providing essential nursing care to meet the clients' needs, application of self-care conceptual framework, family-centered and holistic approaches in nursing process, communication in nursing team and nursing documentation.

NS 2426 **Clinical Practicum in Adult Health Nursing I** **3 (0-12-0)**

Clinical practice in caring of adults with alterations in genetics, cell growth and differentiation, sensory system, integumentary system, respiratory system, digestive system, musculoskeletal system, and peripheral system, application of self-care conceptual framework, family-centered and holistic approaches through nursing process and comprehensive health approach.

NS 2427 **Mental Health and Psychiatric Nursing Practicum** **3 (0-9-0)**
Prerequisite: *NS 2324 Bio-Behavioral Psychiatric Nursing*

Integration of theory, concepts of communication, therapeutic use of self, group and milieu therapies in clinical practice at health care settings, promotion of mental health through primary prevention, intervention in maladaptive behaviors, utilization of the nursing process in care management and rehabilitation of chronic disorders for individual, family, and community

NS 3326 **Nursing Inquiry I** **2 (1-3-4)**
Prerequisite: *BG 1301 Fundamentals of Statistics*

Principles of research methodology, conceptualization and exploration of nursing profession and/or health issues conducive to nursing inquiry, research process, research ethics and development of research proposals responding to the nursing and health phenomena.

NS 3327 **Alteration in Adult Health and Nursing II** **3 (3-0-6)**

Nursing management for adults with alteration in immune regulation and hematological system, endocrine system, reproductive system, urinary system, neurological system, and cardiovascular system, application of self-care conceptual framework, family-centered and holistic approaches in assisting adults to reach the optimal level of wellness.

NS 3328 **Family-Centered Care for Infant, Child, and Adolescent II** **2 (2-0-4)**
Prerequisite: *NS2326 Family-Centered Care for Infant, Child, and Adolescent I*

Health problems of infant, child, and adolescent, nursing care for individual infant, child, adolescent, and family experiencing acute and chronic diseases based on self-care conceptual framework and family-centered approach.

NS 3329 **Community Focused Nursing II** **2 (2-0-4)**
Prerequisite: *NS 2325 Community Focused Nursing I*

Concepts of family as client, family health, family nursing process and home visit, home health care, concepts of community as partner, community health study process, biostatistics, epidemiology, health education, school health, dental health, occupational health, global health and public health laws and regulations.

NS 3330 **Gerontology Nursing** **1 (1-0-2)**

Concept and theory of elderly, bio-psycho-social changes, major health problems, holistic nursing management for elderly, community health care resources, and end of life care, application of self-care conceptual framework, family-centered and holistic approaches to assist elderly people in reaching their optimal level of wellness through nursing process.

NS 3331 **Holistic Childbearing and Family Nursing I** **3 (3-0-6)**

Concepts of childbearing family nursing including contemporary issues and trends, basic concepts of reproductive health, nursing management for preconception and conception, prenatal development, physiological and psychological adaptation to pregnancy, fetal and maternal health assessment, health promotion and self-care during pregnancy, basic knowledge of labor and birth process, nursing management for the childbearing family during intrapartum and postpartum periods.

NS 3332 **Emergency nursing** **1 (1-0-2)**

Nursing management for clients with emergency health problems, emergency and disaster situations, burns, trauma management of violence against women and practice guidelines of forensic nursing.

NS 3401 **Nursing Inquiry II** **1 (0-3-2)**
Prerequisite: *NS 3326 Nursing Inquiry I*

Conducting nursing research including data management, data analysis, discussion of research findings, implication to nursing practices, presentations and dissemination of research study to public.

NS 3426 **Clinical Practicum in Adult Health Nursing II** **3 (0-12-0)**

Clinical practice in caring of adults with alterations in immune regulation and hematological system, endocrine system, reproductive system, urinary system, neurological system, and cardiovascular system, the application of self-care conceptual framework, family-centered and holistic approaches through nursing process and comprehensive health approach.

NS 3427 **Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum I** **2 (0-8-0)**
Prerequisite: *NS 2326 Family-Centered Care for Infant, Child, and Adolescent Nursing I*

Clinical nursing experiences in health care settings and child development center based on self-care conceptual framework, family-centered and holistic approaches, the knowledge integration of wellness, health promotion and illness prevention, pediatric assessment, growth and development and utilization of nursing process for caring infant, child, adolescent and family.

NS 3428 **Gerontology Nursing Practicum** **2 (0-6-0)**
Prerequisite: *NS 3330 Gerontology Nursing*

Clinical practice in caring of elderly people with bio-psycho-social changes and major health problems in healthy and ill elderly by application of self-care conceptual framework, family-centered and holistic approaches through nursing process and comprehensive health approach.

NS 3429 **Community Focused Nursing Practicum** **3 (0-12-0)**
Prerequisite: *NS 3329 Community Focused Nursing II*

Application of theoretical knowledge and concepts of community focused nursing to work with individual, family and various groups of people in community settings, application of family nursing process in home care and long term care, practicing with interdisciplinary health care team and collaborative partnership with community people, using the complete community study process to identify health needs, health promotion, prevention of illness, and promotion of quality of life including tobacco control for entire community.

NS 3430 **Holistic Childbearing and Family Nursing Practicum I** **3 (0-9-0)**
Prerequisite: *NS 3331 Holistic Childbearing and Family Nursing I*

Application of holistic childbearing approach, self-care conceptual framework and nursing process in providing care for pregnant women and families during antepartum, intrapartum, and 2-hour postpartum periods, health education to promote well-being for women, fetus and newborn, application of cognitive, affective, psychomotor skills, and critical thinking to practice in antepartum unit and labor room.

NS 3431 **Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum II** **3 (0-9-0)**

Prerequisite: *NS 3328 Family-Centered Care for Infant, Child, and Adolescent II*
NS 3427 Family-Centered Care for Infant, Child, and Adolescent Nursing Practicum I

Clinical practice in the caring of infant, child, adolescent and family experiencing health problems both acute and chronic diseases based on self-care conceptual framework, family-centered and holistic approaches, integrated knowledge of diseases and illness, utilizing nursing process for caring of infant, child, adolescent and family in healthcare settings.

NS 4322 **Professional Socialization II** **2 (2-0-4)**

Prerequisite: *NS 1310 Professional Socialization I*

Seminar on challenges, issues and trends in nursing profession, analysis of current situations in healthcare context and policies, political and social issues influencing nursing profession, nursing image, nursing education, nursing shortage and employment opportunity in dynamic global society.

NS 4323 **Therapeutic Health Assessment** **2 (2-0-4)**

Prerequisite: *NS 1314 Scientific Nursing Approach and Holistic Health Assessment*

Concept of therapeutic health assessment, problem oriented medical diagnosis and nursing management, laboratory investigations and interpretation of the results, management of minor surgery, common drug usage according to the legal requirement in nursing practice and referral system.

NS 4326 **Holistic Childbearing and Family Nursing II** **3 (3-0-6)**

Prerequisite: *NS 3331 Holistic Childbearing and Family Nursing I*

Identification of high risk pregnancy and nursing care for pregnancy at risk with special needs, nursing management for women with complications in antepartum, intrapartum and postpartum periods including obstetric procedures and emergency, newborn care including initial assessment, immediate and daily nursing care and abnormality detection, nursing management for high-risk neonate, birth injury, and neonatal resuscitation.

NS 4327 **Nursing Leadership and Management** **2 (2-0-4)**

Concepts of nursing leadership and management, organizational structure, team building, strategic management for care delivery, marketing, managing cost and budget, human resource management, magnet hospital, leadership for change, risk management, quality improvement for health care quality in the 21st century including ethical issues in organization management.

NS 4420 **Holistic Childbearing & Family Nursing Practicum II** **4 (0-16-0)**

Prerequisite: *NS 3430 Holistic Childbearing and Family Nursing Practicum I*

Application of holistic childbearing approach, self-care conceptual framework and nursing process for high risk pregnant women during antepartum and intrapartum periods including nursing management for women during postpartum period, health education to prevent complications, promote well-being for women, fetus and newborn, family planning, application of cognitive, affective, psychomotor skills, and critical thinking to practice in antenatal care unit, labor room, and postpartum units.

NS 4421 **Therapeutic Health Assessment Practicum** **2 (0-8-0)**

Prerequisite: *NS 4323 Therapeutic Health Assessment*

Clinical practice according to core competency of nurses in therapeutic through health assessment, history taking and physical assessment skills for clients in the primary care setting, differential diagnosis, primary medical treatment, prevention, health promotion and referring clients for proper clinical management.

NS 4422 **Nursing Leadership and Management Practicum** **3 (0-9-0)**

Prerequisite: *NS 4327 Nursing Leadership and Management*

Clinical practice in nursing service management, hospital quality management system, risk management, leadership, nursing team participation, problem solving and decision making in incident analysis, and development of continuous quality improvement project including the application of nursing informatics, WHO patient safety guidelines, and tobacco control policy in nursing management.

NS 4423 **Comprehensive Nursing Practicum** **3 (0-12-0)**
Prerequisite: *All nursing courses must be completed*

Comprehensive clinical experiences in healthcare settings based on the selected area of students' interests, preparations for professional employment for local and international health care services.

PD 1101 **Visual Design** **3 (2-2-5)**

Visual language, basic design elements, and design composition used in conveying desired messages of 2 dimensional designs with emphasis on actual application through a series of corresponding projects.

PD 1102 **Introduction to Design Culture and Trend** **3 (3-0-6)**

Contemporary issues in design within the context of creative culture that aims to promote an understanding and appreciation of design works through an investigation of the development, role, and influences of designers on our society.

PD 1301 **Technical Drawing** **3 (2-2-5)**

Various methods of drawing used by product designers such as orthographic projection, exploded view drawing, perspective projection, and shade and shadow application.

PD 1302 **Design Principles** **3 (2-2-5)**

Design principles that focus on basic understanding of the interrelationship between form and function which leads to attractive and functional designs. The principles include: Additive Design, Integrative Design, Integral Design, Sculptural Design, and Organic Design.

PD 1304 **Digital Design and Fabrication** **3 (2-2-5)**

Creative use of 2D and 3D computer applications in aiding design process, presentation, as well as enabling designs to be realized in digital fabrication machines.

PD 2101 **Design Thinking** **3 (3-0-6)**

Evolution of design thinking from the first generation, second generation, and new design methods through an exploration and a critical examination of influential design methods from the period of Industrial Revolution to present in order to provide a broad perspective of plausible design strategies.

PD 2102 **User Experience Design** **3 (2-2-5)**

Exploration and application of physical, psychological, and social interaction aspects related to users especially in capabilities, limitations, and relationships to objects and space such as anthropometry, sensation and perception, ergonomics, and experiential elements essential in designing for health, safety, and comfort in the new experience ethics and economy.

PD 2201 **Product Design I** **6 (2-8-8)**

Introduction to the role of designed objects in our everyday experience with emphasis on the understanding of relationship between functions, aesthetic, and human needs and behavior through basic surveys and analyses of product-related problems in corresponding object-oriented projects.

PD 2202 **Product Design II** **6 (2-8-8)**
Prerequisite: *PD 2201 Product Design I*

Concept of OBJECT to OBJECT and OBJECT to its ENVIRONMENT relationship, which include aesthetic and functional compatibility, specific environment, spatial requirement, and problem solving through corresponding object-oriented projects.

PD 2303 **History of Product Design** **3 (3-0-6)**

Chronological exploration through the development of product design of the 19th and the 20th century emphasizing on design movement that contributed to global design development, from pre-modern to modern to postmodern design, expressions of innovative ideas and philosophical concepts within given cultural and political context.

PD 2304 **Art and Design Appreciation** **3 (3-0-6)**

Chronological study of art and design throughout history from a range of places, time and culture through explorations, analyses, and experiential studies of art and design works in order for students to be imbued in the valuable development of mankind visual culture.

PD 2305 **Model Making and Digital Fabrication** **3 (0-6-3)**

Study and application of manual and digital tools, techniques, and materials used in the fabrication of both study and prototype models for foam, plaster, wood, plastics, casting/molding techniques, and digital fabrication machines complementing projects in PD 2201 Product Design I

PD 3101 **Theory and Concept in Design** **3 (3-0-6)**

Significant design theories and concepts that have led to effective designs in order to provide an understanding in concept derivation as well as insights for critical analysis of current design trends and trend forecasting. The theories include: Design Semiotics, Phenomenology, Design Hermeneutics, Functionalism, Rationalism, Environmentalism, and Critical Theory.

PD 3102 **Design Research and Development** **3 (3-0-6)**

Essential knowledge in how to conduct research that yields balancing results in product innovation, ease of manufacturing, and profitability through understanding of the liaison between business market research and product design research.

PD 3201 **Product Design III** **6 (2-8-8)**
Prerequisite: *PD 2202 Product Design II*

OBJECT to PERSON relationship through user-oriented projects with emphasis on human factors, ergonomics consideration, user-centered design, ecological issues, product semantics, team-based milieu research on user interaction and socio-economic values.

PD 3202 **Product Design IV** **6 (2-8-8)**
Prerequisite: *PD 3201 Product Design III*

Most complex level of product designing aimed at developing a sense of understanding in the OBJECT to ECOLOGY relationship based on prominent ecological theories and system design for sustainability such as Design for Sufficient Economy and Doi Tung SALD through object-oriented projects with emphasis on sustainable design.

PD 3301 **Material and Manufacturing Processes I** **3 (2-2-5)**

Material properties and manufacturing processes focusing on paper, wood, and metals covered through lectures and field trips to local manufacturing facilities to gain first hand experience of the manufacturing processes.

PD 3302 **Material and Production Processes II** **3 (2-2-5)**

Material properties and manufacturing processes, focusing primarily on plastics, fiberglass, textiles, and modern composite materials covered through lectures and field trips to local manufacturing facilities to provide first hand experience of the manufacturing processes.

PD 3306 **Marketing for Product Design** **3 (3-0-6)**
Prerequisite: *MGT 1101 Introduction to Business*

Exploration and application of marketing principles involved in product development cycle, which include product policies, distribution policies, price policies, sales promotion policies, and improvement of marketing efficiency through trans-disciplinary lectures, assignments and projects from design strategic planning to design implementation

PD 3307 **Social Engagement and Product Design** **3 (3-0-6)**
Prerequisite: *PD 3306 Marketing for Product Design*

Exploration and application of marketing communication elements related to building and maintaining of brand equity and social engagement, which include advertising, sales promotion, public relations, personal selling, event sponsorships, and direct marketing in order to provide an understanding of product designer's contribution and involvement in product development cycle.

PD 3308 **Practicum in Product Design** **0 (0-4-2)**

A 240 working hour of professional training in product design industry to expose students to all kinds of hands-on experiences and knowledge in the real business world.

PD 3401 **User Interface Design** **3 (2-2-5)**

Principles of user interface design applicable in graphical environment, command-line, as well as product application in order to provide an understanding of how to communicate effectively with users through visual attributes of products.

PD 3402 **Graphic and Packaging Design** **3 (2-2-5)**

Packaging design that integrates marketing, graphical and three-dimensional design knowledge essential in creating innovative packaging for different kinds of product ranging from food and beverage, beauty and personal care to toys and home products with emphasis on product branding.

PD 3403 **Experience Design for Exhibitions** **3 (2-2-5)**

Unique expressions of content in exhibition design such as storytelling and the use of media to create meaningful experiences through immersive experience which persuades, simulates, informs, entertains, as well as influences human behavior.

PD 3404 **Fashion and Textile Design** **3 (2-2-5)**

Fashion design with emphasis on basic skills of fashion design practice such as draping, pattern cutting, sewing, and fashion illustrating with comprehensive approach to conceptual design and interdisciplinary thinking.

PD 3405 **Jewelry Design** **3 (2-2-5)**

Traditional and contemporary jewelry design with emphasis on creativity, innovation, experimentation, and technical skills of material application.

PD 3406 **Toy and Play Design** **3 (2-2-5)**

Toy and play design with emphasis on understanding of children development and psychology, design and engineering of hard and soft toys, game design, model making, product materials, and safety considerations.

PD 3407 **Furniture Design** **3 (2-2-5)**

Specific proponents, movements, and conceptual approaches relevant to key furniture designers from the industrial revolution to contemporary period, forms development, design process, aesthetics quality, fashion and trend through creative projects to encourage knowledge immersion and implementation of innovative, quality, and practical design.

PD 4201 **Product Design V** **6 (2-8-8)**
Prerequisite: *PD 3202 Product Design IV*

Concept of PERSON-to-PERSON relationship especially among products, social interactions, and mass marketing necessary in product branding, marketing communication, and product design for manufacturing through industry-coordinated projects.

PD 4203 **Thesis in Product Design** **9 (0-18-9)**
Prerequisite: *PD 4201 Product Design V*

Implementation of research completed in PD 4304 Special Problem in Product Design with the emphasis in improvisation and innovation with appropriate complexity level that can reflect understanding of theoretical and pragmatic dimension of product design

PD 4303 **Professional Ethics** **3 (3-0-6)**

Ethical conducts of professionals in the product design industry: designing to benefit clients, users, ecosystem, culture, and profession; intellectual property rights (IPR) essentials: intellectual property law, conditions for protection, copyright ownership and incentives, permitted acts, and enforcement of copyright.

PD 4304 **Special Problem in Product Design** **6 (0-12-6)**

Exploration and systematic investigation of a topic of interest arising from accumulative knowledge and skills throughout the study in the program leading to the key-stone project in PD 4203 Thesis in Product Design under the supervision of an advisor.

PD 4305 **Seminar in Design Enterprising** **3 (3-0-6)**

Exploration of entrepreneurship in design business and how to navigate through different business environment i.e. Moral markets, Gaming markets, Emerging markets etc. through seminar and case study analysis focusing on design management.

PR 2201 **Marketing Public Relations** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Strategies and implementations of public relations to attain various marketing objectives, how marketers effectively and efficiently use public relations in marketing communication campaign to build brand, win acceptances among consumers and gain competitive advantage in the marketplace.

PR 2202 **Strategic Public Relations Campaign Planning and Evaluation** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Strategic public relations planning through the development of the public relations campaign for business, social, political, and other purposes including the evaluation strategies.

PR 2203 **Persuasive Communication** **3 (3-0-6)**
Prerequisite: *CA 1001 Introduction to Communication*

Components, tools and applications of basic psychology and social psychology for persuasive communication, in order to understand audience behavior, including the current concepts and practices.

PR 3214 **Organizational Communication** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Theories and concepts of organizational communication to deal with the organization's employees, including the various theories and practice of strategic communication in the organization as well as the management of effective internal communication programs, goals of internal communication such as sustaining morale and good employee relations, informing employees about internal changes, communication to increase employees' understanding of the organization's products and services, organization's ethics, and culture.

PR 3215 **Writing for Public Relations in English** **3 (2-2-5)**
Prerequisites: *BG 2001 English IV*
CA 1022 Introduction to Public Relations

Public relations writing for diverse audiences using a variety of formats such as news releases, photo captions, media advisories, pitch letters, brochures/posters, speeches and newsletters. Students will be assigned to write by reviewing good writing principles to create effective public relations materials. Exercises cover how to apply and produce writing materials for public relations purposes. This course will use English as medium of instruction

PR 3216 **Writing for Public Relations in Thai** **3 (2-2-5)**
Prerequisites: *GE 1403 Communication in Thai*
CA 1022 Introduction to Public Relations

Public relations writing for diverse audiences using a variety of formats such as news releases, photo captions, media advisories, pitch letters, brochures/posters, speeches and newsletters. Students will be assigned to create effective public relations materials by reviewing good writing principles. This course will use Thai as a medium of instruction.

PR 3218 **Special Events Management for Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Various methods to organize special events such as seminar, exhibition, show, contest or even get-together, from concept to planning, arranging everything from budgeting, sponsorship, formalities to all the components/ ingredients, accounting and post event activities.

PR 3224 **Applied Research for Public Relations** **3 (2-2-5)**
Prerequisites: *CA 1022 Introduction to Public Relations*
CA 2019 Communication Arts Research

Procedures and processes of qualitative and quantitative researches that are commonly used in Public Relations planning, including content analyses, public opinion surveys, focus groups, in-depth interviews, and observations. Students will be assigned to conduct a primary research using the aforementioned methodologies.

PR 3225 **Personality Development and Personal Branding** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Concepts, principles, and techniques of personality development, impression management and personal branding, appropriate authentic self-presentation, improvement of external image such as make-up, hairstyling, dressing, social communication through social events such as host or guest and preparing for media appearance. Students will be assigned to utilize them to create an image or brand for themselves as well as celebrities.

PR 3227 **Media Relations and Planning** **3 (2-2-5)**
Prerequisites: *CA 1022 Introduction to Public Relations*
PR 3215 Writing for Public Relations in English
or PR 3216 Writing for Public Relations in Thai

Strategic relationships and use of public relations tools to communicate with the media, nature of the mass media, strategic communication planning, media planning and evaluation theories including how to prepare the press kit, press conference, press tour, and how to be corporate spokesperson.

PR 3228 **Intercultural Communication** **3 (3-0-6)**
Prerequisites: *CA 1001 Introduction to Communication*
CA 1022 Introduction to Public Relations

Fundamental elements of intercultural communication, basic intercultural theories, socio-cultural influence, psycho-cultural influence, environmental influence, differences of non-verbal and verbal communication in various cultural background, building and maintaining relationship in multi-culture society, adjusting and developing the working style when cooperating in new culture as well as designing and implementing effective public relations programs to suitably achieve success in diverse market.

PR 3230 **Digital Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Technical and theoretical elements that compose digital media and social media, approaches to listening, monitoring and measuring, writing for digital media, strategic approaches to engage in digital media and social media, ethics, disclosure, applicable laws, security and privacy as well as application of digital media for public relations purposes of the various types of organizations.

PR 3236 **Content Strategy** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*
PR 2203 Persuasive Communication

Content which is well-planned and consistently executed can raise sales and profit margins, lower customer complaints, and decrease the workload and stress levels of content creators. This module aims to illustrate an insight and overview of strategic content planning from both theoretical and practitioner perspectives. This course will discuss on how to optimize own media outlets with content created for target customers while understanding the best practices and tools used to create online content in short and long form. The course will also focus on a clear, practical framework for implementing content strategy principles in organizations of any size.

PR 4201 **Corporate Communication and Stakeholder Relations** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Corporate image, identity and reputation building, including how to conduct image audits, write corporate communication plans as well as understand corporate social responsibility concept.

PR 4209 **Seminar in Public Relations (PR Senior students Only)** **3 (2-2-5)**

Analysis and discussion on contemporary topics of public relations, such as social media, crisis management, corporate image, current trends for entrepreneurship. Students will be assigned to do research in that particular topics, analyze, and discuss on various aspects. In addition, students will have opportunities to attend and listen to PR professionals based on the topics of each semester.

PR 4213 **Public Relations Internship (PR Students Only)** **3 (200 Hours)**

Internship program assigning students to be trained in a corporation, nonprofit company, educational institution, governmental/non-governmental organization, or public relations agency that provides public relations experiences. Students are required continuously to work for at least 200 working hours and present the training results to the instructors.

PR 4219 **Community Relations** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Community relations, corporate social responsibility, strategies, engagement for developing long-term relations, developing communication platform for communicating with community groups, including planning, implementation, monitoring, and evaluation. Students will be assigned to apply the concepts for building the relationship with both offline and online community.

PR 4221 **Public Relations for Issue and Crisis Management** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Nature of issues and crisis management from a strategic communication perspective, various issues, risks and crisis situations, current case studies on strategic issues, risks, and crisis communication methods, including how to develop a crisis communication plan.

PR 4226 **Selected Topics in Public Relations** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Selected topics which are not covered in regular departmental course offerings. Topics will be announced in advance.

PR 4227 **Public Relations Senior Project for Marketing Communication** **6 (4-4-10)**
Prerequisite: *BG 2000 English III*
CA 2019 Communication Arts Research
PR 2202 Strategic Public Relations Campaign Planning and Evaluation

Training in selecting, creating and applying tools, techniques along with the principles of public relations for solving various cases and problem situations. Students will be assigned to write up the communication campaign planning focusing on full-scale of public relations to serve an actual "client".

PR 4228 **Public Relations Senior Project for Social Campaign** **6 (4-4-10)**
Prerequisites: *BG 2000 English III*
PR 2202 Strategic Public Relations Campaign Planning and Evaluation
PR 3215 Writing for Public Relations in English
or PR 3216 Writing for Public Relations in Thai

Training in public relations campaign for non-profit organization based on the planned strategic direction regarding public relations program management, public relations implementation, production of public relations materials, and program evaluation. Students will be assigned to choose their own topics under the supervision of their instructor.

PR 4229 **Public Speaking** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Public speaking techniques for informative, impromptu, persuasive, and inspirational speeches. Practically coping with the fear of speaking in public and increasing confidence on the stage. Aiming to receive more favorable responses from the audience, become a more effective public speaker as well as improving listening skills and adapting basic etiquettes as listeners.

PR 4230 **Interactive Media for Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

An integrated approach is adopted to provide students with knowledge of communication concepts and the public relations campaign strategies associated with traditional and new media: from interpersonal communication to interactive technologies. Students will learn how to plan public relations, sponsorship, donor and media campaigns; manage issues and crises; and resolve ethical dilemmas. This subject will focus, in particular, on the interpersonal and organizational communication strategies and tactics required for a range of new media technologies, including blogs, wikis and social networking sites.

PR 4231 **Sponsorship Management for Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

A thorough understanding of sponsorship management from both theoretical and practical point of views. It introduces students how to plan, design sponsorship proposal, obtain potential sponsors, maximize sponsorship exposure and measure sponsorship effectiveness. With this knowledge, PR practitioners will be able to implement the whole process of sponsorships.

PR 4232 **Fundamental Design for Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Fundamental components for design in both 2 dimensions and 3 dimension, power point presentation, brochure, press kits and packaging design for PR. Composition fundamental, aesthetics in design, production process for designed PR materials.

PR 4233 **Investor Relations** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Factors influencing investment decisions, interpreting and communicating financial data, understanding relevant regulations, corporate governance best practices, effective use of investor communication tools, and working with such audiences as institutional and retail investors, sell-side analysts, and financial media.

PR 4234 **Traditional Media Production for Public Relations** **3 (2-2-5)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Production processes and impacts of the traditional media such as; newspapers, magazines, tabloids, radio programs, and television programs. Principles, theories and history of traditional media. Practice on the media production (magazines, radio and television) and the knowledge of how to effectively communicate through the traditional media.

PR 4235 **Current Trends and Digital Media Literacy** **3 (3-0-6)**
Prerequisite: *CA 1022 Introduction to Public Relations*

Elements and concepts of the macro-environment structure (political, economic, social technological, legal, and environmental structures), its relationship to media and individuals, including the concepts of digital media literacy such as skills, tools, vocabularies to understand the important role media play in shaping, reflecting, and subverting the social realities, as well as skills of experiencing, interpreting, analyzing and making media products.

PR 4236 **Computer Graphic for Public Relations** **3 (2-2-5)**
Prerequisites: *CA 1022 Introduction to Public Relations*
CA 1025 Computer Graphic Design

Application of public relations tools and techniques, especially, computer graphic and computer-generated presentations, including how to use graphic program to produce pamphlets, brochures, newsletters and other publications used by public relations practitioners.

REM 3111 **Principles of Real Estate** **3 (3-0-6)**
Prerequisite: *MGT 1101 Introduction to Business*

Overview of real estate business and professional practices, special terms, nature and description of real estate, various types of property, basic rights and interests in real estate, land-use controls, forms of ownership, various real estate fields of property management, development, investment, real estate finance and real estate appraisal.

REM 3112 **Real Estate Law** **3 (3-0-6)**

General principles of real estate law and legal aspects relating to real estate business, property rights, subdivision regulations, ownership in real estate, transferring and registering title, regulations of land-use and city planning, housing and condominium development laws, construction laws and other contracts related to real estate transactions.

REM 3113 **Real Estate Economics** **3 (3-0-6)**
Prerequisites: *ECO 2201 Microeconomics*
ECO 2202 Macroeconomics

Demand and supply of real estate, real estate business cycle, real estate cycle, real estate markets, urban land-use, market failure and remedies in real estate.

REM 3114 **Building Design and Construction Techniques** **3 (3-0-6)**

Basic knowledge of techniques and processes used to design and construct a building, terms and symbols used in construction drawings, types of construction materials, construction technology and equipment, quantity take-off techniques and scheduling techniques, process to construct building structure, architecture, finishing and building mechanical systems.

REM 3211 **Principles of Real Estate Development** **3 (3-0-6)**
Prerequisites: *MGT 2900 Principles of Management*
REM 3111 Principles of Real Estate

Methods in real estate development for various types of real estate business, various participants in the real estate development processes both public and private, development processes, including conceptual development, feasibility study, real estate cycles, market analysis, contracting and basic concepts of project management.

REM 3212 **Real Estate Finance** **3 (3-0-6)**
Prerequisites: *FIN 2201 Principles of Finance*
REM 3111 Principles of Real Estate

Financial techniques to sell and buy real estate property, types of financial institutions and sources of funds, types of loan, underwriting, analysis of project development loan and mortgage loan, factors and principal process in real estate lending, including various financial calculations used in real estate business, and government's current policies regarding real estate finance.

REM 3213 **Real Estate Appraisal** **3 (3-0-6)**
Prerequisite: *REM 3111 Principles of Real Estate*

Introduction to real estate appraisal, definition of value, objectives of appraisal, data analysis, land (site) and building survey, appraisal report, with emphasis on the three basic approaches to calculate value: Cost Approach, Market Approach and Income Approach.

REM 3214 **Principles of Real Estate Investment Analysis** **3 (3-0-6)**
Prerequisite: *REM 3212 Real Estate Finance*

rocess of real estate investment and analysis, methods in real estate investment analysis, including traditional method and discounted cash flow method, prelim-financial feasibility study, real estate investment assumptions, real estate investment analysis of various real estate segments, real estate investment analysis report, other types of real estate investment vehicles.

REM 4112 **Computer Applications in Real Estate** **3 (3-0-6)**
Prerequisite: *REM 3112 Real Estate Finance*

Various computer applications for real estate management decision and practice, computer software programs including spreadsheet, database management system, project management software, floor plan & mapping software, applications covering various areas including real estate finance, real estate investment analysis, and project planning and control.

REM 4113 **Principles of Property Management** **3 (3-0-6)**
Prerequisites: *REM 3111 Principles of Real Estate*
REM 3114 Building Design and Construction Techniques

Basic management principles for income producing properties, process for making management plans, property marketing, lease management, roles and right of landlord and tenant, personnel management, management and maintenance and sustainable property management of different types of property especially residential and commercial.

REM 4131 **Real Estate Project Management** **3 (3-0-6)**
Prerequisites: *REM 3211 Principles of Real Estate Development*
REM 3114 Building Design and Construction Techniques

Procedure and basic technique throughout project management life cycle to fulfill a real estate development project, planning and control project schedule, cost and quality, organization methods and project team, leadership, risk management, project feasibility analysis and project contract.

REM 4132 **Advanced Real Estate Investment Analysis** **3 (3-0-6)**
Prerequisite: *REM 3214 Principles of Real Estate Investment Analysis*

Comprehensive real estate feasibility analysis for both low-rise housing and condominium investments, analysis application through computer software packages with the aspects of market, finance, legal, construction, and taxation, analysis of investment risk, tax planning for investment, inflation and investment cycle, and basic strategies for investment portfolio.

REM 4141 **Advanced Real Estate Appraisal** **3 (3-0-6)**
Prerequisite: *REM 3213 Real Estate Appraisal*

Advanced techniques in valuation, including the residual method, discounted cash flow method, and various real estate appraisal theories, standard practice for appraisers, valuation of pending properties, fee simple, lease fee estate and leasehold estates, use of statistics, accounting, computer software and financial analysis in appraising real estate.

REM 4142 **Professional Appraisal Practice and Ethics** **3 (3-0-6)**
Prerequisite: *REM 3213 Real Estate Appraisal*

Appraisal standards, category of property appraisal, qualifications of valuer, objectives and basis of valuation, assumptions, conditions and limitations, duties and responsibilities of valuer, professional code of ethics, professional negligence and liability, arbitration and dispute resolution, role of expert witness, lifecycle of professional valuation business, and problems and obstacles in appraisal profession.

REM 4151 **Corporate Real Estate Management** **3 (3-0-6)**
Prerequisite: *REM 4113 Principles of Property Management*

Corporate real estate environment analysis and organization structure, operations and management planning for property, strategic planning of efficiency improvement and cost reduction, local community relations management, market and economic timing, buy/hold or sell property decision analysis, location selection strategy, space utilization management, risk management strategy.

REM 4152 **Facilities Operations and Maintenance** **3 (3-0-6)**
Prerequisite: *REM 4113 Principles of Property Management*

Building engineering system and building components, facility and building components maintenance operation, energy utilization and management, building environmental management green building, building user's safety and health management.

REM 4191 **Seminar in Real Estate Business** **3 (3-0-6)**
Prerequisites: *REM 3211 Principles of Real Estate Development*
Senior Standing (accumulated over 100 credits)

Comprehensive review of various special aspects of real estate development experience and practices, group and individual real estate research, and case study in relevant current issues.

REM 4192 **Seminar in Property Valuation** **3 (3-0-6)**
Prerequisites: *REM 3213 Real Estate Appraisal*
Senior Standing (accumulated over 100 credits)

Various aspects of real estate appraisal experience and practices, case studies, workshops, and fieldtrips related to property valuation.

REM 4193 **Seminar in Property Management** **3 (3-0-6)**
Prerequisite: *REM 4113 Principles of Property Management*
Senior Standing (accumulated over 100 credits)

Comprehensive review of various special aspects of property management experience and practices, property management research, case study in relevant current issues and fieldtrips related to property management.

REM 4221 **Directed Study in Real Estate** **3 (3-0-6)**
Prerequisite: *Consent of the Department Chairperson*

Under the guidance of the Department Chairperson, a student will carry out an approved research project in real estate business. Depth, detail and originality of the study will determine the project evaluation.

REM 4222 **Capital Markets Related to Real Estate Business** **3 (3-0-6)**
Prerequisite: *REM 3214 Principles of Real Estate Investment Analysis*

Structures and types of capital markets as sources of fund for real estate business, related types of security and market that are applied for real estate investment including Mutual Fund, Property Fund and Secondary Mortgage Market, regulations and procedures to list and issue securities in the Stock Exchange of Thailand (SET), criteria of investment risk analysis in different types of capital market.

REM 4231 **Real Estate Marketing and Brokerage Management** **3 (3-0-6)**
Prerequisite: *REM 3211 Principles of Real Estate Development*

Techniques for marketing commercial-investment properties; planning, process, and methods of marketing including marketing program, selling and negotiation strategy, information systems supporting marketing, roles of brokerage business including services, relationship to owner, responsibilities, brokers' code of ethics, and development of a broker profession.

REM 4241 ***Valuation for Special Purposes*** ***3 (3-0-6)***
Prerequisite: *REM 3213 Real Estate Appraisal*

Methods and techniques for appraisal of assets used for special purposes such as intangible assets, valuation for statutory purposes e.g. tax, expropriation, valuation of assets for non-market assets, plant and machinery, concepts to support valuation of various intellectual properties, including patent, copyright, brand name, goodwill, and share value.

REM 4251 **Income-producing Property Management** **3 (3-0-6)**
Prerequisite: *REM 4113 Principles of Property Management*

Property manager roles and duties, commercial leasing process, lease contract management, lease negotiation in theory and practice, tenant/landlord relationship management, juristic person management.

REM 4381 **Internship in Real Estate Business** **3 (300 Hours)**
Prerequisite: *Consent of the Department Chairperson*

In the final semester, students may arrange for an Internship Program with a company related to real estate business for at least 300 working hours. Course evaluation based on daily progress record, overall training discussion report, and performance evaluation by the immediate supervisor.

REM 4382 **Internship in Real Estate Appraisal** **3 (300 Hours)**
Prerequisite: *Consent of the Department Chairperson*

In the final semester, students may participate in an Internship Program with a company related to real estate appraisal for at least 300 working hours. Course evaluation based on daily progress record, overall training discussion report, and performance evaluation by the immediate supervisor.

REM 4383 **Internship in Property Management** **3 (300 Hours)**
Prerequisite: *Consent of the Department Chairperson*

In the final semester, students may participate in an Internship Program with a company related to property management for at least 300 working hours. Course evaluation will be based on daily progress record, overall training discussion report, and performance evaluation by the immediate supervisor. In the final semester, students may participate in an Internship Program with a company related to property management for at least 300 working hours. Course evaluation will be based on daily progress record, overall training discussion report, and performance evaluation by the immediate supervisor.

SA 1201 **Statistics I** **3 (3-0-6)**

Descriptive statistics, probability theory and inferential statistics, summarizing of data in tables and graphs, computation of descriptive statistics, rules of probability, probability distributions, confidence interval estimate of population parameters, and hypothesis testing.

SA 2200 **Statistics II** **3 (3-0-6)**
Prerequisite: *SA 1201 Statistics I*

Inferential statistics, chi-square, non parametric, anova, index number, correlation and regression analysis, time series, and their applications in business and economics.

SC 2151 **Introduction to Microcomputer Application** **3 (3-0-6)**

Structure and characteristics of microcomputers, and the techniques of applying microcomputer technology, focus on software packages such as word processing, spreadsheet, database management systems, etc. The course will cover current technologies as well as future trends.

SC 3435 **Game Design and Development Workshop** **3 (3-0-6)**

Theory and practice of computer game design, computer game history, taxonomy of computer games, past and present game platforms, game play, game documentation and workflow, UI/UX design, human and psychological aspects of game design, and current trends in the game industry/market.

SC 3436 **UI/UX Design and Prototyping** **3 (3-0-6)**

Overview of design thinking process, persona and empathy development, user stories and scenarios, brainstorming, ideation, wireframes and storyboards, prototyping, mockups, visual design, information architecture design, interaction design, usability design and testing.

TE 3000 **Principles of Communications** **3 (3-0-6)**
Prerequisite: *BG 2212 Applied Statistics*
EE 2203 Signals and Systems

Communication models, wire/cable and wireless/radio; Introduction to signal and system; spectrum of signal and applications of Fourier series and transform; analog modulation, AM, DSB, SSB, FM, NB/WBFM, PM; noises in analog communication; binary baseband modulation; Nyquist's sampling theory and quantization; pulse analog modulation, PCM, DM; multiplexing techniques; introduction to transmission lines, radio wave propagation, microwave components and communication, satellite communications, optical communication.

TE 3002 **Communications Laboratory** **1 (2-3-0)**
Prerequisite: *TE 3000 Principles of Communications*
or TE 3003 Fundamental of Communication Systems

Laboratory studies to help students better understand the theory of communications, i.e. signal analysis, modulation techniques, and noise effects, etc. Students can also gain technical experiences about some useful devices and measurements in the field.

TE 3102 **Communication Networks and Transmission Lines** **3 (3-0-6)**
Prerequisite: *EE 2201 Electric Circuits*
EE 3301 Electromagnetic Fields

Wire and wireless communication; wire communication network; Y, Z, F, G, H matrix, relation; connection and basic circuits, network transformation, transmission quantities, signal transmission circuit techniques, wave filters, attenuator, impedance matching, transmission line theory, equation, solution for low, medium, high frequencies, primary and secondary constant; incident and reflected waves, standing wave ratio, line characteristics for open, short, terminated load, lossless, and lossy lines; reflections in time domain, bounce diagrams, near-end and far-end crosstalk, differential signaling, composite line, types of cable, and unshielded twisted pair, coaxial cable; current cable standards.

TE 3301 **Radio Wave Propagation** **3 (3-0-6)**
Prerequisite: *EE 3301 Electromagnetic Fields*

Ground wave propagation; sky wave propagation; space wave propagation; narrow band fast fading; wide band fast fading; cellular propagation.

TE 4105 **Microwave Engineering** **3 (3-0-6)**
Prerequisite: *EE 3301 Electromagnetic Fields*

Review of Maxwell's equations, plane waves; microwave transmission lines and waveguides; microwave network analysis; impedance and equivalent voltage and current; the s-matrix; signal flow graphs, impedance matching and tuning, microwave resonators; power dividers and directional couplers; microwave filters; point-to-point microwave link; radar system; microwave propagation; basic of microwave measurement; applications.

TE 4108 **Digital Communication** **3 (3-0-6)**
Prerequisite : *TE 3000 Principles of Communications*

Review of probability and random process; signal space; minimum Nyquist bandwidth; signal detections; AWGN, digital modulation techniques, sigma-delta, performance analysis; synchronization; equalization; introduction of information theory; source coding; channel coding; multichannel and multicarrier systems; spread spectrum techniques; multipath fading channels.

TE 4111 **Antenna Engineering** **3 (3-0-6)**
Prerequisite: *EE 3301 Electromagnetic Fields*

Basic definitions and theory; isotropic point source; power and field patterns; directivity and gain; efficiency, polarization; input impedance and bandwidth; Friis transmission equation, radiation from current elements; ground effects; radiation properties of wire antenna; array antenna; Yagi-Uda antenna and log-periodic antenna; aperture antenna; microstrip antenna; modern antenna for current applications; antenna characteristics measurement.

TE 4112 **Optical Communications** **3 (3-0-6)**
Prerequisite: *EE 3301 Electromagnetic Fields*
TE 3000 Principles of Communications
or TE 3003 Fundamental of Communication Systems

Cylindrical dielectric waveguides and propagating conditions; structure and types of optical fiber; optical fiber parameters; optical fiber production; optical cable types; optical transmitters; optical receivers; signal degradations, attenuation and dispersion in fiber link; optical repeaters and amplifiers; link budget calculation; multiplexing in optical link system; introduction to FTTX.

TE 4201 **Communication Electronics** **3 (3-0-6)**
Prerequisite: *EE 2603 Electronic Circuit Analysis*
or EE 2605 Engineering Electronics

Design of radio-frequency amplifiers, signal amplifier, power amplifier, oscillator, wide-band amplifier, impedance matching, design techniques and equipment selection, special conditions in design

TE 4202 **Communication Electronics Laboratory** **1 (0-3-2)**
Prerequisite: *TE 4201 Communication Electronics*

Laboratory work to be done according to TE 4201 Communication Electronics Laboratory

TE 4204 **Optoelectronics** **3 (3-0-6)**
Prerequisite: *EE 2603 Electronic Circuit Analysis or EE 2605 Engineering Electronics and EE 3301 Electromagnetic Fields .*

Units of light measurement, optical fiber, wave guide, light sources, and semiconductor light detector, liquid crystal, optical transmission and reception, optical integrated circuits.

TE 4301 **Principle of Telecommunications Policies** **3 (3-0-6)**

This course introduces fundamental of information and communications policies and regulations governing services such as Internet services, broadband applications, telephone, mobile, cable, and wireless and spectrum management. Students will learn key issues, principles, and practices in policy development emphasizing the intersection of technology, economics, and public policy.

TE 4901 **Telecommunication and Electronics Engineering Project I** **1 (0-3-2)**
Prerequisite: *Completion of 100 credits*

Study and development of project in electrical and electronics engineering. Students must submit a report at the end of the semester.

TE 4902 **Telecommunication and Electronics Engineering Project II** **2 (0-6-3)**
Prerequisite: *EE 4901 Electrical and Electronics Engineering Project I*

Continuation of project done in electrical and electronics engineering Project I. Report is also required at the end of the semester.

TE 4903 **Advanced Topics in Telecommunication and Electronics Engineering** **3 (3-0-6)**
Prerequisite: *Completion of 90 credits with the consent of the chairperson*

Topics of current interest and new developments on Telecommunication and Electronic Engineering

TE 4904 **Special Problems in Telecommunication and Electronics Engineering** **3 (3-0-6)**
Prerequisite: *Completion of 90 credits with the consent of the Chairperson*

Investigation of special problems assigned by the instructor with the consent of the chairperson: a written report is required.

TH 1500 **Introduction to Thai** **3 (3-0-6)**

Basic Language used in everyday life, basic listening, speaking, pronunciation skills, grammatical forms of primary importance, reading short sentences and writing words.

TH 1501 **Thai Language I** **3 (3-0-6)**
Prerequisite: *TH 1500 Introduction to Thai*

Listening and speaking skills in a variety of circumstances in everyday life to broaden basic vocabularies and grammar, reading simple texts, and writing short sentences.

TH 2501 **Thai Language II** **3 (3-0-6)**
Prerequisite: *TH 1501Thai Language I*

Complex grammatical structure, reading texts and dialogues concerned with everyday life and practice of writing essay.

TH 2502 **Thai Language III** **3 (3-0-6)**
Prerequisite: *TH 1501 Thai Language*

Advanced grammar structure, reading texts and dialogues concerning Thai life and culture and practice of writing short articles

TH 3501 **Advanced Reading** **3 (3-0-6)**
Prerequisite: *TH 2502 Thai Language III*

Development of reading skills, main ideas finding, facts and opinions analysis, author's viewpoint and intention analysis.

TH 3502 **Advanced Thai Writing** **3 (3-0-6)**
Prerequisite: *TH 2502 Thai Language III*

Development of writing skills, styles in the present-day Thai language both formal and informal, writing for presenting the viewpoint, analysis of effective writing, and practice various writings.

TH 3503 **Advance Reading & Writing** **3 (3-0-6)**
Prerequisite: *TH 2502 Thai Language III*

Main ideas findings, facts and opinions analysis, author's viewpoint and intention analysis, development of writing skills, styles in the present-day Thai language both formal and informal.

VIS 1701 **Visual Literacy** **3 (2-2-5)**

Use text and image as a visual language in graphic communication. Expect and create emotional intention as part of visual problem solving skills. Learn interdependent roles of form and content with targeted viewers' anticipation. Learn different processes in conceptual development. Understand and practice graphic translation based on audience needs.

VIS 2104 **Advance Typography** **3 (2-2-5)**
Prerequisite: *VIS 2010 Typography*

Study expressive typographic form by using different manipulating techniques of separating, layering, fracturing and distortion. Connote sophisticated meaning or perception through semantic layering as an additional level of communication. Train in handling type in different media in 2D, physical 3D, motion and/ or interactive format.

VIS 2702 **Composition** **3 (2-2-5)**

Learn to create visual structure from past masters in the field of visual communication design. Categorize and characterize historical significance in graphic design history. Define and deploy different graphic styles based on designer's intention. Experiment in various stylistic approaches by mixing, matching and/ or formulating design vernacular from personal investigation.

VIS 2703 **Mark & Symbol** **3 (2-2-5)**
Prerequisite: *VIS 1701 Visual Literacy*

Understand the effect of gestalt principle in human psychological perception for the exploitation of signs as tools for visual communication. Study semiology as graphic designers to use in personal monogram, corporate visual identity and organizational visual program.

VIS 2705 **Visual Marketing & Design** **3 (2-2-5)**
Prerequisite: *VIS 1701 Visual Literacy*

Understand psychology of persuasion used in mass consumers for graphic communication. Understand the marketing brief to use as a solution for content and conceptual development. Study different media format for print, out of home, broadcast and innovative media.

VIS 3111 **Package Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Study different materials and construction techniques used for graphic containers. Acclimate conceptual development related to marketing point of view and clients' needs. Create graphics and 3-dimensional designs for package prototypes. Focus on rules and regulations of manufacturing requirements, environmental concerns and universal design.

VIS 3112 **Typeface Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Develop skills for producing functional and/or expressive roman alphabets. Study the history, technology and contemporary practices in font design industry. Create and design letters using both traditional media and computer-generated software.

VIS 3706 **Information Graphic Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol*

Develop an understanding of data management pertaining to graphic design and contemporary media. Acquire a fundamental study in the research process of design framework from data collection to information analysis. Experiment with various data visualization in both a commercial and private venue.

VIS 3807 **Text in Space** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Study an advanced typographic grid system. Learn to apply organized text onto different spaces of media type, newspaper, book, magazine, screen type, desktop, mobile or tablet and/or application type, website, mobile apps. Train for intermediate level page layout software usage.

VIS 3808 **Image Manipulation** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Train in tools and techniques of digital image editing software. Study professional digital workflow and color management system. Develop and explore technological know-how of digital imaging enhancement and manipulation in various styles of realism and surrealism.

VIS 3809 **Graphic Design System** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Convey a comprehensive design program into a business environment and social service sector. Measure the social, economic and political climate impacting current business and social issues through systematic consideration and research. Apply a comprehensive design campaign as a means to cultivate social and global visual culture.

VIS 3810 **Art Direction** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Develop conceptual imagery and visualize its mood and tone in conjunction with brand identity. Learn to integrate influenced factors by incorporating visual style, storytelling, client's needs and designer intentions.

VIS 3813 **Visual Merchandising Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Translate and capture product and brand identity together with consumer behavior into graphical displays through various outlets. Focus on factors influencing the designer's role in display design, interior spacing and fashion style. Develop a keen sense of current trends in marketing and retail commerce.

VIS 4115 **Design Management** **3 (3-0-6)**
Prerequisite: *MGT 1101 Introduction to Business*

Develop entrepreneurship spirit and practice by focusing on the design process and strategy, as well as organizational and financial management. Discourse in issues relating to the design industry. Cultivate a professional mindset by enhancing business acumen and leadership skill.

VIS 4116 **Art Thesis I** **3 (3-0-6)**
Prerequisite: *BG 2000 English III*
Major Required Courses 36 credits

Develop and pursue a challenged and creative area of interest as a culmination of the education received in the undergraduate experience. The approved topic proposal, portfolio and requirements will be followed up by a research work and applicant's presentations scheduled throughout the semester. An initial research paper of the project must be submitted to the thesis committee in order to proceed to Art Thesis II.

VIS 4117 **Signage System and Wayfinding Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Study concepts, research methods and design strategies for environmental graphic design in architectural graphics, identity graphics, civic design, pictogram design, mapping and theme environments. Concentrate on visual aspects and user experience pertaining to information through the context of place, communicating identity and its culture.

VIS 4122 **Art Thesis II** **6 (1-10-11)**
Prerequisite: *VIS 4116 Art Thesis I*

Demonstrate a comprehensive visual understanding of the research materials obtained in Art Thesis I. Approved design work is judged by committee criteria through conceptual development and design execution. Art Thesis projects are to be presented to the faculty in a public exhibited venue with a thesis book to be submitted for course completion.

VIS 4124 **Book Binding** **3 (2-2-5)**

Learn the art of book making, its anatomy and book structure. Understand different tools, materials and techniques used to attach sheets of writing substrate together. Focus is on traditional non-adhesive binding with one and several needle works such as Coptic binding or Japanese stab binding. Learn the modern day binding operation such as perfect binding, case binding or saddle stitching.

VIS 4814 **Exhibition Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Emphasize on the role of conveying content through various display methods. Analyze audience perception and understanding to conceptualize exhibits for educational and commercial purposes. Learn and train in exhibition planning, research, spacing, construction and organizing.

VIS 4818 **Campaign Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Study basic criteria needed to plan and implement an advertising campaign. Train to use motivation and persuasion techniques with creative communication on target audience. Develop and execute a creative strategy through analysis of demographics and psychographic information. Explore current media campaign applications in mass media.

VIS 4819 **Experimental Design** **3 (2-2-5)**
Prerequisite: *VIS 2703 Mark & Symbol and VIS 2705 Visual Marketing & Design*

Explore design possibilities by investigating selective ideas, media and/or audience. Use critical thinking to form and convey design manifesto through the use of design vernacular and cultural references. Cultivate personal visual aesthetic and design philosophy as an artistic interpretation for personal growth.

VIS 4920 **Art Exposure** **3 (3-0-6)**

Explore various art forms in different venues. Develop an appreciation of visual art in fine art, performance art, and craft and design through hands-on engagement and field trips. Understand its value contributing to Thai society both in a local and global scale. Foster good taste and aesthetic sensibilities by engaging in critical thinking analysis and interpretation.

VIS 4921 **Sustainable Graphic Design** **3 (2-2-5)**

Introduce various facets of sustainability through history, philosophies and principles in the field of visual communication. Explore and practice the use of techniques, processes and materials to reduce the detrimental effect on environmental, cultural, social and economic impacts of graphic design products throughout their lifecycle. Familiarize and implement trends, theories and ideologies of sustainability by developing problem-solving alternatives in the context of environmental crisis.

VIS 4923 **Design Discourse** **3 (3-0-6)**

Build knowledge and application of the visual, verbal and written language of interdisciplinary design in today's social complex. Focus on reading, writing and discussing design related issues impacting social behavior, cultural movement, technological advancement, and environmental concerns. Learn to develop design models to rectify issues at hand through forward thinking with universality attitude and sustainability approaches.

UNDERGRADUATE
ADMISSION SCHEDULES

ACADEMIC YEAR 2018

Semester 2/2018 : January 2019	
Application Forms Available	October 8 – November 6, 2018
Examination Date	November 14, 2018
Induction Program	November 17, 2018
Intensive Courses	November 19 – December 21, 2018
Registration Period	January 3 – 4, 2019
Instruction Begins	January 7, 2019

ACADEMIC YEAR 2019

Semester 1/2019 : August 2019	
Application Forms Available	October 8, 2018 – March 12, 2019
Examination Date	March 14, 2019
Induction Program	March 16, 2019
Intensive Courses	March 25 – May 29, 2019
Registration Period	August 1 – 2, 2019
Instruction Begins	August 5, 2019

INTERNATIONAL ADMISSIONS

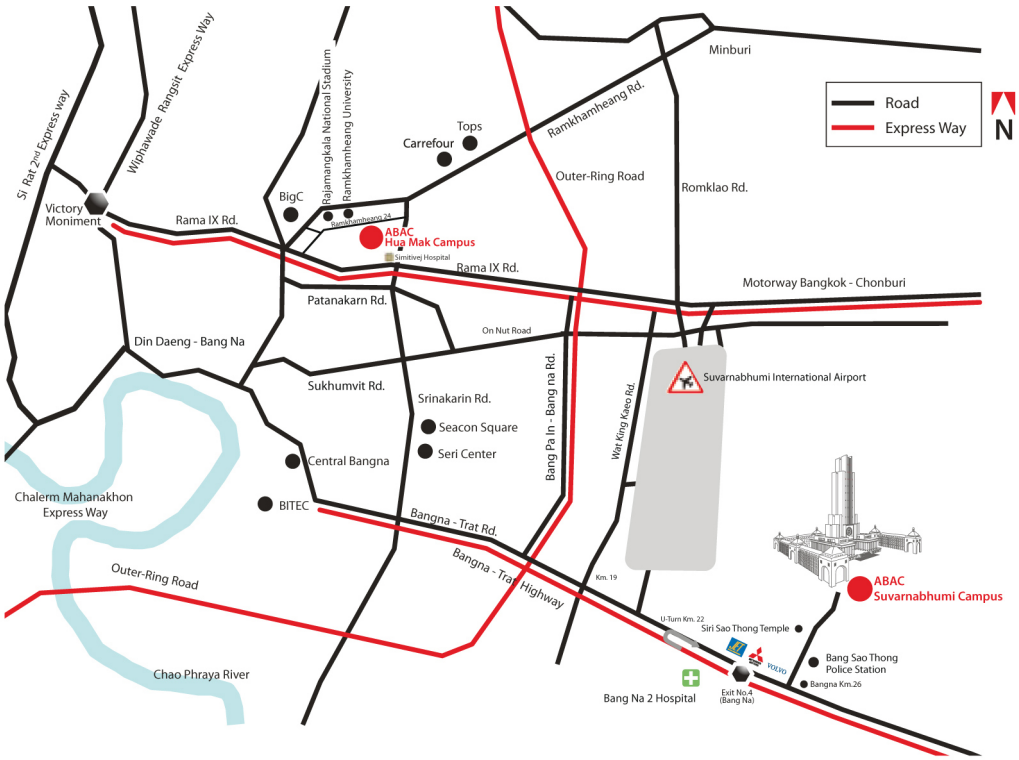
For students returning from abroad or Non-Thai High School

ACADEMIC YEAR 2019

Semester 1/2019 : October 2019	
Application Forms Available	August 15 – September 30, 2019
Placement Test	On Application Date
Placement Test Result	On Application Date
Registration Day	October 5, 2019
Instruction Begins	October 7, 2019

Semester 2/2019 : January 2020	
Application Forms Available	October 10 – November 8, 2019
Examination Date	November 13, 2019
Induction Program	November 16, 2019
Intensive Courses	November 18 – December 23, 2019
Registration Period	January 2 – 3, 2020
Instruction Begins	January 6, 2020

Remark: The Calendar may change without prior notice.



Admission Center:

Assumption University of Thailand

Hua Mak Campus

592/3 Ramkhamhaeng 24 Rd., Hua Mak, Bangkapi, Bangkok Thailand 10240

Tel. (662) 719-1919
(662) 300-4543-62 Ext.1212

Suvarnabhumi Campus

88 Moo.8, Bang Na-Trad Km.26, Bangsaothong, Samutprakarn Thailand 10570

Tel. (662) 723-2323
(662) 723-2222 Ext.2323

ABAC City Campus

ZEN Department Store
@ CentralWorld
14th fl., Rajdamri Rd., Phatumwan, Bangkok Thailand 10330

Tel. (662) 100-9115-8
(662) 300-4543 Ext.4800

ACC School of Commerce

101 Soi Sathorn 13, South Sathorn Rd., Bangkok Thailand 10120

Tel. (662) 675-5769

ACADEMIC PROGRAMS
ASSUMPTION UNIVERSITY OF THAILAND

GRADUATE PROGRAMS

Graduate School of Business
- M.B.A. Fast Track (Day / Evening)
- M.B.A. Digital Track
- M.B.A. Bilingual Track
- M.B.A. (Hospitality and Tourism Management)
- Mini M.B.A. (Professional Management Certificate)
- M.M. (Organization Development and Management)
- M.S. (Investment Analysis and Management)
- M.S. (Management)
- M.S. (Information Technology and Management)
- Ph.D. (Management and Organization Development)
- Ph.D. (Hospitality and Tourism Management)
- Ph.D. (Innovative Technology Management)

Graduate School of e-Learning (GSeL)
- M.S. (Management)
- M.S. (Information Technology and Management)
- M.Ed. (Teaching and Technology)
- Ph.D. (Teaching and Technology)
- Ph.D. (eLearning Methodology)

Vincent Mary School of Science and Technology
- M.S. (Computer Science)
- M.S. (Information Technology)
- Ph.D. (Computer Science)
- Ph.D. (Information Technology)

Graduate School of Human Sciences
Education Programs:
- M.Ed. (Educational Administration and Leadership)
- M.Ed. (Curriculum and Instruction)
- Ph.D. (Educational Administration and Leadership)

Psychology Programs:
- M.S. (Counseling Psychology)
- Ph.D. (Counseling Psychology)

Philosophy and Religion Programs:
- M.A. (Philosophy and Religion)
- Ph.D. (Philosophy and Religion)

ELT Programs:
- M.A. (English Language Teaching)
- Ph.D. (English Language Teaching)

Martin de Tours School of Management and Economics
- M.S. (Supply Chain Management)
- M.S. (Financial and Economics)
- Ph.D. (Business Administration)

ABAC School of Law
- LL.M. (Business Law),(Thai Programs)
- LL.M. (Business Law),(International Program)

JOINT PROGRAMS AND DOUBLE DEGREE WITH UNIVERSITY AT OVERSEAS

St.Mary's University, UK
- M.B.A. + MSc. (International Business Management) / Msc. (International Tourism Management)
- M.S. (Management) + MSc. (International Business Management) / Msc. (International Tourism Management)

University of Applied Sciences Mainz, Germany
- M.B.A. + MA. (International Business)
- M.S. (Management) + MA. (International Business)

Munich University of Applied Sciences (MUAS), Germany
- M.B.A. + Msc. In Business Entrepreneurship and Digital Technology Management
- M.S. Management + Msc. In Business Entrepreneurship and Digital Technology Management
- M.B.A. + M.B.A. in Green Economy and Digital Innovation
- M.S. Management + MBA in Green Economy and Digital Innovation

Toulouse University, France
- M.B.A. + M.S. (Marketing of Innovative Technologies)
- M.S. (Management) + MSc. (Marketing of Innovative Technologies)

Curtin University, Australia
- M.B.A. + M.B.A. (Global)
- M.S. (Management) + M.B.A. (Global)

New Jersey City University (NJCU), USA
- M.B.A. + M.B.A.
- M.S. (Management) + M.B.A.

UNIVERSITY ADMISSION CENTER (UNIAD)

Tel. (662) 719-1929
(662) 723-2713
gradadmission@au.edu
www.grad.au.edu

ACADEMIC PROGRAMS
ASSUMPTION UNIVERSITY OF THAILAND

UNDERGRADUATE PROGRAMS

Martin de Tours School of Management and Economics
- B.B.A. (Marketing)
- B.B.A. (Management-Leadership and Entrepreneurship)
- B.B.A. (Finance)
- B.B.A. (Accounting)
- B.B.A. (Management Information Systems)
- B.B.A. (Hospitality and Tourism Management)
- B.B.A. (International Business Management)
- B.B.A. (Insurance)
- B.B.A. (Industrial Management and Logistics)
- B.B.A. (Real Estate)
- B.Econ. (Business Economics)

Theodore Maria School of Arts
- B.A. (Business English)
- B.A. (Business French)
- B.A. (Business Chinese)
- B.A. (Business Japanese)
- School of Music
- B.A. (Music Business)
- B.M. (Music Program)

Faculty of Law
- LL.B. (Business Law)

Vincent Mary School of Science and Technology
- B.S. (Computer Science)
- B.S. (Information Technology)

Albert Laurence School of Communication Arts
- B.Com.Arts. (Advertising)
- B.Com.Arts. (Digital Media Communication)
- B.Com.Arts. (Live Event Creation and Management)
- B.Com.Arts. (Public Relations)
- B.F.A. (Computer Generated Imagery)
- B.F.A. (Visual Communication Design)

Montfort del Rosario School of Architecture and Design
- B.Arch. (Architecture) (5 years)
- B.Arch. (Interior Architecture) (5 years)
- B.F.A. (Interior Design) (4 years)
- B.F.A. (Product Design) (4 years)

Vincent Mary School of Engineering
- B.Eng. (Electrical Engineering)
- B.Eng. (Computer Engineering)
- B.Eng. (Mechatronics Engineering)
- B.Eng. (Aeronautic Engineering)
  - Commercial Pilot
  - Aircraft maintenance

Faculty of Biotechnology
- B.S. (Food Technology)
- B.S. (Agro-Industry)
- B.S. (Agro-Industry + Industrial Microbiology) (Double Degree)
  With King Mongkut's Institute of Technology Ladkrabang (KMITL)

Bernadette de Lourdes School of Nursing Science
- B.N.S. (Nursing Science)

Whereas ensuring that the information contained in this publication is accurate at the time of its publication (July 2018), Assumption University recognizes that sections may be amended without prior notice, contingent upon changing circumstances or for any other seasons. Students should check with the University at the time of enrollment or registration, whether any updated information is available.