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MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

SALAYA CAMPUS, THAILAND



GENERAL CATALOG 2007 - 2009

GENERAL INFORMATION

| MAHIDOL UNIVERSITY MISSION STATEMENT |

The mission of Mahidol University is best summarized by the words of His Royal Highness Prince Mahidol of Songkla who stated that

“ True success is not in learning but in its application for the benefit of mankind.”

This philosophy is the underlying theme present in all of the activities of the university as it endeavors to imbue graduates with the conviction that, apart from academic matters, they have a responsibility for improving the quality of life of their fellow human beings and making this world a better place in which to live.

| PHILOSOPHY |

To produce graduates who are not only knowledgeable in their chosen subject area, but who have the intelligence to apply their knowledge and the humanity to use it for the benefit of humankind.

| MUIC MISSION STATEMENT |

Since its inception in 1985 the defining mission of Mahidol University International College has been to offer a science and liberal arts program, taught in English embodying the finest standards possible, to a diverse population of full-time students from Thailand and around the world. The College seeks not only to prepare students for professional careers in a wide range of fields but also to encourage them to develop a higher sense of moral purpose and social responsibility as well as personal creativity and lifetime learning, all of which are requisite for their lives as good citizens and leaders. In all these ways, Mahidol University International College aims to produce graduates who are not only intellectually trained and informed for careers, but who are also prepared to meet the many wider challenges that human societies will confront in the 21st century.

In order to realize this mission, the College has tried to develop the kind of learning environment that not only imparts knowledge to our students but also challenges and encourages them to widen their expectations and to seek both intellectual and personal excellence. Accordingly, the College has developed an educational program that balances both theoretical and practical learning. Programs in the social sciences, business, and tourist management stand alongside offerings in medicine and natural sciences. In addition to these, the College offers general educational courses in foreign languages, humanities, and specialized courses designed to improve the students' skills with the English language. The classroom environment is interactive, encouraging discussion and critical explorations of ideas. Outside the classroom are a number of offerings in practical internship and field experiences of broad scope.

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The College has as its core values care, service, unity, honesty, and integrity. The College faculty, staff, and directors bring to their tasks as educators a wide range of international experience and learning that informs both their research and classroom activities alike. A strong sense of teamwork combined with a desire to advance human learning distinguishes them and provides our students with the kind of examples they need as they seek to define their own lives and personal goals.

Beyond the classroom, the College also affirms its role as a community resource center for learning and culture, both in Thailand and beyond. The College plays an active role in extending its boundaries as an educational institution, not only to its own graduates and alumni, but also to the greater human community in Asia and the world.

| A MODERN COLLEGE IN A HISTORIC UNIVERSITY |

Founded in 1889 by His Majesty King Chulalongkorn the Great (Rama V), Mahidol University is one of the oldest educational institutions in Thailand.

Over the last one hundred and twelve years, Mahidol has undergone many changes and advances. Including MUIC (established in 1985), there are now 16 faculties, 8 institutes, 3 hospitals and 6 colleges. Altogether, the university supports a student body of over 19,000, and over 400 academic programs. With over 2,600 faculty, the teacher- student ratio is 1:8, the best ratio in any Thai institution of higher education.

Mahidol University International College (MUIC) was founded in 1985 to provide high standards of international education and to develop a teaching culture that encourages independent and analytical thought and serves students who want an international-style university education in English in a four-year program leading to a Bachelor's Degree in Science or Arts.

A modern and forwarding thinking international college, MUIC continues to stress the key elements in university education: learning in math and science; literacy in the English language, literature, philosophy, and the arts; and practice in communication skills.

Graduates are known for their problem-solving ability and communication skills. Following graduation the majority of students enter management positions or pursue higher level postgraduate studies both in Thailand and overseas.

As part of its international role, MUIC has been involved in many collaborative activities with foreign universities. Visiting professors from overseas have taught many of the courses, and close links exist with a number of foreign universities and colleges.

| COLLEGE ADMINISTRATORS |**President of Mahidol University**

Pornchai Matangkasombut, M.D., Ph.D.

Director

Chariya R. Brockelman, Ph.D.

Deputy Director for Academic Affairs

Maleeya Kruatrachue, Ph.D.

Deputy Director for Administration

Sumalee Visetratana, M.P.P.M.

Assistant Director for Planning, Research and Development

Yaowalark Sukthana, M.D., Ph.D.

Assistant Deputy Director for Administration

Somluck Lunsuchep, M.P.A.

Advisor for Student Affairs

Anchalee Pongpan, M.A.

Registrar & Academic Counselor

Udomrat Tivasub, MBA.

Chairman of Business Administration Division

Len MacKay-Cruise, B.A. Senior Fellow

Chairman of Humanities and Languages Division

Gérard Fouquet, Ph.D.

Chairman of Science Division

Maleeya Kruatrachue, Ph.D.

Chairman of Social Science Division

Peter R. Smith, Ph.D.

Chairman of Travel Industry Management Division

Chariya R. Brockelman, Ph.D.

| COLLEGE BOARD OF DIRECTORS |

| | |
|--------------------------------------|-----------|
| Pornchai Matangkasombut, M.D., Ph.D. | Chairman |
| Amaret Bhumiratana, Ph.D. | Member |
| M.R. Jisnuson Svasti, Ph.D. | Member |
| Vichai Assarat | Member |
| Chaiyawat Wibulswasdi, Ph.D. | Member |
| Sompol Pongthai, Ph.D. | Member |
| Sriprasit Boonvisut, Ph.D. | Member |
| Supachai Tangwongsan, Ph.D. | Member |
| Chariya Brockelman, Ph.D. | Secretary |

The College is administered by the Board of Directors. The Board provides policy guidance for long-term planning and formulates control procedures.

The Director of the College is responsible for overseeing the undergraduate curricula and for applying and enforcing regulations creating new programs and advancing them into postgraduate level.

| LOCATION |

MUIC is located at MU's Salaya campus. A fine suburban campus with 500 acres of managed land, including parklands and sports facilities, the Salaya Campus is the largest of the four Mahidol University campuses.

Salaya is located 20 km from the center of Bangkok and is linked to the cosmopolitan life of Thailand's capital city by a modern expressway, which makes it an idyllic location for students who want to commute on a daily basis and for those who want to live among the scenic beauty and calm of Salaya. MUIC is also close to the magnificent Buddhist Park at Buddhamonthon which secures a safe and peaceful neighborhood.

The campus and surrounding areas provide a wealth of attractions, from Bangkok's famous shopping districts to countryside favorites such as Kanchanaburi and nearby coastal resorts such as Hua Hin. For students from outside the area, this makes Salaya both an ideal learning environment and the perfect base from which to explore the culture of Thailand.

Transport to Salaya from Bangkok is well served with regular public and air-conditioned buses plus microbus services from the PATA department store in Pinklao and the Faculty of Science on Rama

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VI Road. There is also a regular train service from Bangkok's Hua Lampong and/or Samsen stations to Salaya.

If you are driving from Bangkok, take the Boromrajchonnee Elevated Expressway toward Buddhamonthon and Nakorn Chaisri and follow the exit signs for Salaya. Follow the fly-over and Mahidol University, Salaya Campus, is situated on your left.

ADMISSION INFORMATION

Mahidol University International College generally admits students through entrance examinations which are administered four times a year in January, May, July, and October. Interested candidates may apply during the following periods: April - May and June - July for first trimester enrollment in September; October for second trimester enrollment in January; January for third trimester enrollment in April.

| APPLICATION SCHEDULE FOR ACADEMIC YEAR 2007-2009 |

| TRIMESTER | MONTH OF ENROLLMENT | APPLICATION PERIOD |
|---------------|---------------------|----------------------------|
| 1st Trimester | September | April – May or June - July |
| 2nd Trimester | January | October |
| 3rd Trimester | April | January |

| REQUIREMENT FOR ADMISSION |

Applicants must possess a secondary school (M. 6) certificate or its equivalent* as issued by the Ministry of Education, Thailand.

Applicants must demonstrate English competence: a TOEFL score of 550 or above, including a Test of Written English score of 4.5 or above; an IELTS (academic band) score of 6.0 or above, including a 'writing' component score of at least 6.0.

Applicants are required to sit for a written examination including English, Mathematics, General Science and Current Affairs. If they are successful with the written exam, they will be invited for an interview.

All applicants must possess a clear record of good conduct and must be in good health. Disabled applicants are encouraged to apply and are ensured equal opportunities.

Note: Applicants whose English language skills are not sufficient for immediate acceptance may be advised to study in the Pre-college Program.

Applicants who successfully complete the Pre-college Program will be eligible for acceptance to the regular MUIC study program in the following trimester. MUIC also offers an "Intensive English Program" course for students preparing to take the college's English Entrance Examination.

* GCSE, IGCSE, or GCE "O" level of not less than C in five subjects (we do not accept "O" levels or their equivalents in the candidate's native language other than English) or a high school certificate/diploma from an accredited institution.

| INTERNATIONAL STUDENT APPLICATIONS |

The Office of Admissions should receive applications from overseas students well in advance of the desired enrollment date in order to allow adequate time for processing.

Applicants from countries other than Thailand should take the following steps in seeking admission to the college:

- Applicants must meet all the admission requirements for new students.
- All the required credentials must be submitted in English.
- Submit proof of financial resources in the form of a bank statement/sponsors letter etc.

Prior to entering Thailand, international candidates who are accepted to MUIC must obtain a letter from MUIC to be presented to the proper Thai authorities to obtain a proper non-immigrant visa. Tourist visas, which usually allow visitors to stay in Thailand for 30 to 90 days, are not appropriate. Entering Thailand without the proper visa may require you to leave country within 30 days.

| TRANSFER STUDENT APPLICATIONS |

Students transferring from another institution must be in good standing with the institution last attended. The following steps should be taken in seeking admission to the College:

- Applicants must meet all the admission requirements for new students.
- Request that the registrar of each institution previously attended forward to the MUIC an official transcript of all work completed or in progress. Failure to declare previous attendance at another institution may result in denial of admission – or dismissal.
- Obtain course descriptions (usually found in the institution's educational bulletin) or course syllabi for all the courses taken from previous institution(s) to expedite the process of transferring credits.

| VISITING STUDENT APPLICATIONS |

Visiting students are individuals who are pursuing a degree from another institution, but who plan to enroll at MUIC for one or more trimesters. Visiting students must submit a letter to the Director requesting approval to take a course or courses at MUIC. The letter should specify the name and location of the home institution, credits earned, cumulative GPA, and the approved courses visiting students wish to take at MUIC. A photocopy of a student identification card is required. Visiting students will have to pay the non-resident registration and tuition fees.

| CREDIT TRANSFER |

Students admitted to the College from another fully accredited institution will usually be allowed to transfer credits for academic courses which can be applied toward graduation. The transfer of credits will be approved only under the following conditions:

- The course was completed at an institution accredited by the Civil Service Commission of Thailand.
- The course must have been taken within three years of the time of application.
- The course content is equivalent to that specified in the College's curriculum.
- Only the course with an earned grade of at least C in a general education course or an earned grade of at least B in a professional core course will be accepted as transfer credit. In some instances, examinations covering the course being transferred may be required.
- Current policy allows for a maximum of 100 credits from overseas institutions and approximately 20 credits from local institutions which offer English programs to be transferred.

| TUITION AND FEES |

Approximate fees are as follows:

| | | <u>Resident</u> | <u>Non-Resident</u> |
|---|------|-----------------|---------------------|
| Admission fee (for 4 years) | Baht | 10,000 | 10,000 |
| Trimester Academic Fee (Per trimester) | | 8,400 | 8,400 |
| Major Fee for Non-science (Per trimester) | | 10,000 | 10,000 |
| Major Fee for Science (Per trimester) | | 12,000 | 12,000 |
| Professional Fee for EMP (Per trimester) | | 65,000 | 65,000 |
| Professional Fee for Non-EMP students who take EMP subject (Per subject) | | 16,250 | 16,250 |
| Bank Fee | | 20 | 20 |
| Bachelor of Arts Programs: (Per annum) | | | |
| - Social Science | Baht | 146,000 | 191,000 |
| - Travel Industry Management | Baht | 150,000 | 190,000 |
| - Entertainment Media Production (Animation, Film, and Television) | Baht | 570,000 | 750,000 |

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Bachelor of Business Administration Programs:**(Per annum)**

| | | | |
|--------------------------|------|---------|---------|
| - Finance | Baht | 160,000 | 210,000 |
| - Information Systems | Baht | 160,000 | 210,000 |
| - International Business | Baht | 160,000 | 210,000 |
| - Marketing | Baht | 160,000 | 210,000 |
| - Business Economics | Baht | 160,000 | 210,000 |

Bachelor of Science Programs: (Per annum)

| | | | |
|-------------------------------|------|---------|---------|
| - Applied Mathematics | Baht | 160,000 | 206,000 |
| - Biological Science | Baht | 160,000 | 200,000 |
| - Chemistry | Baht | 160,000 | 210,000 |
| - Computer Science | Baht | 160,000 | 210,000 |
| - Environment | Baht | 150,000 | 200,000 |
| - Food Science and Technology | Baht | 165,000 | 210,000 |
| - Physics | Baht | 156,000 | 203,000 |

Bachelor of Nursing Science Program: (Per annum)

| | | | |
|-------------------|------|---------|---------|
| - Nursing Science | Baht | 200,000 | 270,000 |
|-------------------|------|---------|---------|

STUDENT AFFAIRS

The Student Affairs Department has three units: General Services, Counseling Services, and Office of the Provost. Student Services takes care of students' welfare. Counseling Services provide academic counseling, as well as dealing with other issues in the students' lives. Counseling Services also help students who want to work in the community alongside with others. Lastly, the Office of the Provost takes care of non-academic disciplinary affairs and monitors students who break MUIC rules and policies.

| GENERAL SERVICES |

The General Services Unit takes care of the basic day-to-day needs of a typical student.

| RESERVE OFFICE TRAINING COURSE |

All male students of Thai nationality are required to register with the Thai military when they reach the age of 20. A citizen can register for training at an earlier age, and training already received while in high school or at another college counts toward meeting national requirements.

Students should register for military service during May. The Student Affairs Department has the necessary documents and will take care of mailing them to the proper office. Students who are in their first to third year of training must participate in training every Wednesday afternoon. Students who have this military obligation should make sure not to register for classes at this time.

Any student who wants to request a deferment of military service must prepare and submit the appropriate documents to the Student Affairs Department by February so they can register for classes at MUIC.

Students who are in their third year of training with the Thai military are required to participate in military training for one week. These students are excused from classes, and at the student's request, the Student Affairs Department will issue a letter to be given to lecturers. It is the responsibility of the students to notify lecturers in a timely fashion about military obligations. Failure to do so may affect a student's academic standing.

| FINANCIAL AID |

| Emergency Scholarship |

Students can apply for the Emergency Scholarship on a trimester basis. The scholarship is awarded on a financial-needs basis. Interested students need to fill out the application form and justify the reason why they should be awarded this scholarship. The limit is 5,000 baht per trimester.

| MUIC Scholarship |

The MUIC Scholarship is awarded every trimester but not during the summer session. Students should have a minimum 2.5 GPA and have taken at least 12 credit hours at MUIC. The scholarship is awarded on a financial-needs basis. Interested students need to fill out the application form and provide supporting documents and evidence. The MUIC Scholarship Committee decides on whom to award the scholarship. The limit for one person per year is 50,000 baht. There are 10 scholarships available for the school year. Four scholarships are awarded in the first trimester, and three scholarships are awarded in the second and third trimesters.

| MUIC Academic Excellence Scholarships |

MUIC awards the three top students in each program with a scholarship. The programs are grouped into the following categories: Business Administration, Travel Industry Management, Social Science, Biological Science, Applied Sciences, Basic Sciences, and Computer Science. The amount awarded is 30,000 baht, 20,000 baht, and 10,000 baht, respectively.

| The Highest Performance on the College Entrance Examination for Each Entry |

The student who scores the highest on the entrance exam will receive a scholarship that pays tuition fees for four years of study. The scholarship covers tuition expenses, but the student must pay all addition fees. The student must also maintain a 3.0 GPA each trimester. One scholarship will be awarded for each of the four entry examinations each school year.

| The Outstanding Science Performance on the College Entrance Examination |

The student who scores the highest in the mathematic and science subjects on the entrance exam will receive a scholarship that pays 50 percent of tuition fees for four years of study. The scholarship also covers major fees. The student must also maintain a 3.00 GPA each trimester. One scholarship will be awarded for each of the entry examinations.

| MUICSA Scholarships |

The College awards these scholarships to members of the Student Association in recognition of their leadership and hard work in planning, organizing, supervising and leading student activities at MUIC. The students who work for the Student Association will receive scholarships in the form of a tuition waiver, but students in their last trimester of study will receive a cash payment.

| MUICSA Office Held | Scholarship Received |
|---------------------------|-----------------------------|
| President | 24,000 baht |
| Vice-President | 18,000 baht |
| Committee Members | 12,000 baht |

| **Outstanding Sportsperson** Scholarships |

This scholarship is awarded to students who are officially recognized by Mahidol University as exceptional athletes. Winners receive 24,000 baht.

| **Sports Competition** Scholarships |

Students who compete in a major university sports event and win a medal will receive a scholarship in the form of a tuition waiver as follows :

| Medal Awarded | Tuition Waiver Received |
|----------------------|--------------------------------|
| Gold | 12 credit hours |
| Silver | 8 credit hours |
| Bronze | 4 credit hours |

| **Thai Government** Loan |

Thai students may apply for a government loan in May every year. The maximum amount that can be borrowed is 60,000 baht per year. After graduating, students have two years to pay back the loan. The minimum interest rate is at least 1 percent per year. All Thai nationals are encouraged to apply.

| **Institutional and Business** Scholarships and Awards |

There are various scholarships and awards available from a range of institutions. Each scholarship or award has its own requirements. Interested students should contact Student Affairs for more information.

| HOUSING |

Although commuting from other parts of Bangkok to the Salaya Campus is not difficult, many students decide to live closer to campus. This allows them to have more time to focus on their studies as well as participate in extra-curricular activities.

There are many housing options available near Salaya, but because several large faculties have moved to Salaya, demand for housing has increased as well. The Student Affairs Department is happy to help with providing information about on- and off- campus housing.

| Condominiums |

Three 14-storey condominiums are located near the back gate of the Salaya Campus. Each unit rents for 10,000 baht per month, not including electricity or water. A 16,000 baht deposit is required. Up to four people can live in each unit which includes a television set, beds, refrigerator, telephone, and other furnishings. Each unit of the condominium has two bedrooms, two bathrooms, a living room, and air conditioning.

Interested students should call 02-441-9205, 02-441-9881, 02-441-9841 or contact the condominium manager in Condominium A.

| Nursing Dormitory |

The nursing dormitory accepts women students from other faculties. The dormitories are located near the back gate of the Salaya Campus. One unit houses four people. The cost is 6,000 baht per person per semester. The semesters for the Thai program run from June to October and November to March.

Female students who are interested should call the Nursing Dormitory at 02-441-4234.

| University Dormitories |

The university provides low-cost dormitories for students having financial difficulties. Preference is usually given to other Mahidol University faculties, but MUIC students can apply as well.

There are four men's dormitories and four women's dormitories. They are located near the Central Facilities, i.e. the canteen of the Salaya Campus. Each room can house four people. The dormitory costs 3,000 – 8,000 baht per person per semester. Again, semesters run from June to October and November to March. The dormitories are closed during the University's summer break.

Interested students should fill out the application form at the MUIC Student Affairs Department.

| Other Local Housing |

Other housing options are available in the Salaya area. The price ranges from 1,500 baht per month to 4,000 baht per month. Please contact the Student Affairs Department for further information.

| HEALTH SERVICES |

While attending MUIC, students can receive free health care from Mahidol University hospitals. During orientation week, new students will be asked to fill out a medical file. This file is kept at the Health Clinic on the Salaya Campus.

Students who have minor health problems should first go to the on-campus health clinic. In serious cases, the health clinic will refer students to one of the three Mahidol University hospitals: Siriraj Hospital located in Bangkok Noi, Ramathibodi Hospital located at the Payathai Campus, and the Faculty of Tropical Medicine located on Ratchawithi Road.

During emergencies, students can go to any hospital and present their ID card. To receive reimbursement, students should give the receipt and doctor's report to the Student Affairs Department. Students will only receive 100 percent reimbursement (but not more than 30,000 baht) if they are treated at one of the three Mahidol University hospitals. The amount reimbursed depends on the cost of treatment at one of the Mahidol University hospitals.

| DENTAL TREATMENT |

During orientation, students will be asked to have a dental checkup at Siriraj Hospital. If any dental work needs to be done, the student will need to pay 50 percent of the cost the first time. Any further dental work after the initial check-up is free.

| STUDENT ASSOCIATION |

The MUIC Student Association (MUICSA) is the focal point for student activities at MUIC and throughout Mahidol University. It has three primary objectives:

- Make MUIC a place where students can excel and enjoy themselves, both academically and socially.
- Encourage as many students as possible to get involved with extra-curricular activities.
- Provide a voice for students and contribute to finding creative solutions to problems.

| MUICSA STRUCTURE AND CLUBS |

MUICSA is the student government for MUIC. The MUICSA executive members plus class presidents represent the student body. They meet each week and make initial decisions on the funding of clubs, activity schedules, and other such issues. Elections are held during the third trimester for new MUICSA members.

Each class has at least four representatives elected each year as well. These groups are responsible for organizing certain social and other events. For example, the sophomore class is responsible for organizing the MUIC Welcoming – Unity Camp. The freshmen are responsible for arranging the Thank P' Party and Loy Kratong Festival. Juniors organize the Graduation Banquet.

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Currently, MUIC has 12 student clubs. MUICSA provides oversight of each one of these clubs. The Student Association approves the clubs' budgets, makes sure that each club meets regularly and is active, and provides a review structure for approval of new clubs. MUICSA requires that all clubs stay active. Each club must hold a meeting at least once a month, and they must organize at least one activity each trimester to ensure there are activities for all MUIC students to participate in each trimester.

MUICSA introduces new students to clubs during Club Rush, an event where each club provides information and puts on demonstrations regarding their activities. The present clubs are: Art Club, Cheer and Dance Club, Debate Club, Diving Club, Drama Club, Karate-Do Club, Muay Thai Club, Music Club, Peer Club, Photography and Multi-media Club, Sports Club, Taekwondo Club, Volunteer Club.

* MUIC students can also join other clubs throughout Mahidol University.

| STUDENT LIFE |

Of the more than 20,000 full time students enrolled at Mahidol University, nearly 2,200 are part of MUIC. This creates a diverse student body both within MUIC and on campus, with students from every part of Thailand as well as over 15 countries within the region and around the world.

| Sport and Recreation |

The Salaya Campus is well equipped with sports and physical recreational facilities including a large stadium for basketball, badminton and other indoor sports, outdoor playing fields, two large football fields, a running track, tennis courts, an Olympic-sized swimming pool complex, and a sports center.

The student body actively promotes sports as part of a healthy lifestyle and students can participate as members of a club or independently.

| Art and Music |

MUIC provides opportunities for students who wish to enjoy or play music. Occasional concerts and music shows are arranged on campus. Courses in drama and modern dance are also available as electives for all students.

For students interested in arts and crafts, there are regular displays at the Thai House and occasional contemporary and historical exhibitions of art at the three university campuses.

| COUNSELING SERVICES |

Students' well-being is influenced not only by books and teaching, but also by the way in which they see the world. Counseling can contribute a great deal toward making a student successful. The counseling unit helps students interact both within MUIC as well as within the larger community.

The Counseling Unit provides academic counseling as well as counseling on other issues dealing with students' lives. It also encourages students to get involved with the local community and help segments of that community. Students should feel free to contact the Counseling Unit.

| OFFICE OF THE PROVOST |

Part of the responsibilities of the Chief of the Office of the Provost is to take care of non-academic disciplinary affairs. Students who break MUIC or Mahidol University rules and policies will meet with a disciplinary affairs officer. If there are re-occurring problems or the offense that is committed is serious in nature, the Chief of the Office of the Provost will call a non-academic hearing under the guidelines given in the MUIC Student Handbook. The student will be informed of the infraction in writing and will be reminded of his or her rights, including the right to appeal the decision.

ACADEMIC AFFAIRS

| ACADEMIC SYSTEM |

The trimester system is used at Mahidol University International College. The academic calendar is made up of three trimesters and a summer session. Each trimester runs for a period of 12 weeks. The first trimester begins in September; the second and third trimesters begin in early January and April, respectively. The summer session has 4 weeks and begins in August.

| ADVISING SYSTEM |

MUIC has established an advising procedure to assist students in selecting suitable courses. All first-year students are assigned advisors who will help them select courses to meet general education requirements for their anticipated majors. Once students have completed 44 credits of general education, they are eligible to take classes in their respective majors. After being accepted by the department of their major, students will be assigned a new advisor in their field of study.

Students who want to major in Business must also have a minimum cumulative GPA of 2.00 or above and must have passes ICCM 105 Intermediate English Communication II, ICNS 104 Fundamental Statistics, with a grade of C or better before being accepted.

| REGISTRATION |

New students register for classes during orientation week. All other students register approximately one month before classes start. The registration dates have been set on the Academic Calendar, which is available at OAS office. On the registration date, student can quickly access the registration process by simply logging into <http://oasis.muic.mahidol.ac.th>

The registration will be complete with the advisor's approval and with the payment of tuition fees. If a payment is overdue, students will be charged 100 baht per day (maximum charge Of 1,000 baht).

| Minimum and Maximum Course Load Allowed |

The minimum course load for full-time students is 12 credit hours, including non-credit class hours. The standard course load per trimester is 16 credit hours. However, students on academic probation are limited to a course load of 12 credit hours per trimester, including non-credit class hours. Only seniors or students with a cumulative GPA of 3.0 or above may take more than 16 credit hours per trimester (the maximum course load is 22 credit hours). The maximum course load during the summer session is 8 credit hours.

| PRE-REGISTRATION |

Some programs or classes require pre-registration because some students may be given priority when registering. For example, Travel Industry Management students are required to take language classes so they are given priority when registering for these classes. To pre-register, students need to contact the appropriate program and put their names on a pre-registration list.

| ERRORS IN REGISTRATION |

Errors in registration should be corrected within the first two weeks of instruction during a regular trimester and within the first week of instruction for a summer session.

| LATE REGISTRATION AND ADD/DROP |

Students who do not register during the pre-registration period can register during the late registration and add/drop periods. The add/drop period consists of 2-3 working days. Students can register for classes after this period only by special permission of the Registrar and only under exceptional circumstances.

During the add/drop period, students can change their schedule once at no charge. Any subsequent changes will cost 500 baht for each request processed after the first change. Students who change their schedule due to events beyond their control, such as class being cancelled, can request an exemption for this fee from the Office of Academic Services.

Students who drop a class without adding a class of equal hours will be charged 10 percent of the cost of the tuition fee for the dropped class.

| COURSE WITHDRAWAL |

Students are personally responsible for dropping a course in which they no longer wish to be enrolled. Students may withdraw from a course during the add/drop period at the beginning of the trimester.

Students officially withdrawing after the add/drop period will not receive a refund and will receive a W grade for the class. Permission to withdraw from a class must be obtained from the instructor. Failure to withdraw from a class will result in a grade of F. The grade of W will not be used in calculating grade point averages, but three grades of W in the same subject will result in dismissal from the College.

Students can access the withdrawal process by simply logging into <http://oasis.muic.mahidol.ac.th>. Students cannot allow their course load to drop below 12 credits. For example, if a student is taking four classes for the total of 16 credits, the student can withdraw from only one class. If a student is taking three classes for a total of 12 credits, the student will not be allowed to withdraw from any class.

| AUDITING COURSES |

Students may audit a class with the instructor's prior approval. Neither grades nor credits will be awarded for audit classes.

| CHANGE OF MAJOR |

Students may request to change their major during the change of major time period specified in the Academic Calendar or by announcement in the OASIS for each trimester. The Change of Major must be requested online and the rest of the procedures must be done prior to the end of the change of major period.

After requesting change of major online, students have to wait until they receive a message to contact the OAS staff. The transfer of general education and present major courses already taken will be automatically completed by the computer system. However, it is the students' responsibility to double check the computerized transfer of courses that are required by the new major. In some cases, the class required by the new major will be taught at a more advanced level, or the content will differ, so students may not be allowed to transfer the class that they already enrolled. For instance, a Travel Industry Management student may have to take ICNS 102 Principles of Mathematics when changing to a Biological Science major even though that student has already taken ICNS 101 Introduction to Mathematics. Freshmen must wait until the second trimester after entry before changing a major.

A fee will be charged if students change their major more than once.

| REPEATING A COURSES |

Students earning a grade F, D+, or D in a course may retake that course, and the new grade will replace the original grade; however, the original grade will still show on the transcript. For classes in the core area of the major, students must earn at least a C in order to pass.

If a student withdraws from a core or required class in the major field of study or from a general elective subject that is required for the major, the student needs to repeat that class.

| GRADING SYSTEM |

Evaluation of a student's achievement in a course is recorded by letter grade.

| Grade | Achievement | GPA |
|--------------|--------------------|------------|
| A | Excellent | 4.0 |
| B+ | Very Good | 3.5 |
| B | Good | 3.0 |
| C+ | Fairly Good | 2.5 |
| C | Fair | 2.0 |
| D+ | Poor | 1.5 |
| D | Very Poor | 1.0 |
| F | Fail | 0.0 |

Other letter grades, without credit points, are assigned for course work taken as follows:

| | |
|-----------|-------------------------------|
| I | Incomplete |
| X | No report from the instructor |
| P | In progress |
| S | Satisfactory |
| U | Unsatisfactory |
| AU | Audit (No credit granted) |
| W | Withdrawal |

| PROBATION |

Students whose cumulative GPA falls below 2.00, except during the first trimester of the first year, will be placed on academic probation. There are two types of probation.

- Probation Type 1 includes students with a cumulative GPA of 1.50 or higher but less than 1.80. Students have three trimesters to be removed from probation.
- Probation Type 2 includes students with a cumulative GPA of 1.80 or higher but less than 2.00. Students have six trimesters to be removed from probation.

Students will be removed from probation when the student's cumulative GPA is 2.00 or higher. Failure to achieve the minimum GPA standard during the required period will result in dismissal.

| DISMISSAL |

Students who fall into one of the following categories will be dismissed from the College:

1. Students with a cumulative GPA below 1.50 and are unable to pass two academic (4-credit-hour each) classes, including non-credit classes.
2. Students who have obtained three F grades or any combination of three W grades or F grades in one subject, including non-credit classes.
3. Students who fail three times to obtain the passing grade of C in English Communication (I-III) and major core courses.
4. Students who fail to be removed from academic probation within the allowed time.
5. Students who have committed a severe breach of the university rules and regulations that govern student conduct. This includes but is not limited to the following:
 - Plagiarism
 - Cheating during examinations
 - Drug use
 - Damage to the university's property or reputation
 - Gambling, stealing and other criminal behavior

| GRADUATION |

In order to graduate, students must complete between 178 to 188 credits based on program requirements. Students should refer to the specific program course record for details.

All students must complete the following three areas of study:

- General education
- Major field of study
- Free electives

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To graduate, students must earn a minimum grade of 2.0 or C for all core courses in a subject major and carry a minimum cumulative GPA of 2.0. The Commission on Higher Education also requires that a student study for at least three years and two trimesters before qualifying for graduation.

To graduate, students need to fill out an application to graduate before registering for their last trimester. Students who complete all course requirements by the second trimester can graduate that academic year.

| HONORS AND AWARDS |

In recognition of exceptional students, the College has an honors system. Students maintaining high scholastic cumulative GPAs are eligible to graduate with honors.

| First Class Honors |

Students will be awarded first class honors if they meet all of the following requirements:

- Earn a cumulative GPA of 3.50 or higher.
- Never receive an F or W grade for any course.
- Must not have an I grade for any course.
- Complete at least 135 credits at MUIC.
- Must never have re-graded or re-examined in any subject.
- Must not have re-graded any subject.
- Must not have transferred more than 25 percent of the total required credits from another institution with the exception of courses taken as part of MUIC study abroad.

| Second Class Honors |

Students will be awarded second class honors if they meet all the above requirements but earn a cumulative GPA between 3.25 and 3.49.

| COMMENCEMENT CEREMONY |

Mahidol University holds its annual commencement ceremony in July at the Suan Amporn Auditorium in Bangkok. His Majesty the King or a member of the Royal Family acting on His Majesty's behalf presides over the ceremony.

To attend, graduates must register for this ceremony at the proper time, generally in early May. Registered students must take part in three rehearsals. The third rehearsal is a dress rehearsal and will take place at Suan Amporn. Graduates who miss any rehearsal will not be allowed to participate in the ceremony.

ACADEMIC PROGRAMS

| GENERAL EDUCATION COURSES |

Depending on the choice of major, students are required to complete between 178 to 188 credits for graduation from three areas of study: general education, the major field of study, and free elective courses. A minimum of C grade is required for each of the core courses in the major field of study to be eligible for graduation. The minimum cumulative GPA for graduation is 2.0.

MUIC believes that specialized academic knowledge is given greater significance when it is pursued in a context of general studies that broadens one's horizons, creates new perspectives, and deepens understanding and appreciation. To assist students in making choices from among the breadth of offerings, MUIC provides guidelines governing General Education, the program of study that gives liberal education its breadth. A student's program of General Education is as important as the selection of a major field and should be chosen with equal care in concert with his or her advisor.

The purpose of the General Education courses is to provide students with a wide-ranging general education. To be a good professional (doctor, food scientist, computer programmer, business person, hotel manager, etc.) requires more than technical training in the relevant skills. Nobody can be truly educated in the modern world if they do not have at least some basic understanding of modern scientific developments or of issues in the social sciences, current events, ethics, and international culture. The General Education courses are in part designed to challenge our students with a wide range of such issues, as well as teach some basic skills which will have wider relevance throughout the student's career.

Central to our students' needs is a high level of English fluency. We live now in a globalizing world in which competence in written and spoken English is commonly a primary requirement for graduates seeking employment in international firms and organizations. It is also the predominant language of international business and the Internet. Again, most local students who want to study for an overseas Master's or Doctoral degree choose to study in an English-speaking country, and should therefore be fluent in English before they go overseas. More basically, any student who wants to have a good knowledge of the literature in his or her specialization must now have an excellent knowledge of English.

Therefore, MUIC requires its students to take a series of courses in English Communication (at either an intermediate or advanced level, depending on English language ability).

As to the other General Education requirements, students have a fairly free choice, being able to take those courses of greatest personal interest. Exceptions are as follows:

1. All science students must take a prescribed list of Natural Science General Education courses as preparation for their more advanced work. These requirements vary from one major to another. Details are given to new students when they register.
2. All students must take a basic course in either Philosophy or Logic or Moral and Ethical Studies or Asian Philosophy or European Enlightenment or Critical Thinking or Western

Classical Ideal.

- Students who choose to study a language as part of their General Education must take at least two courses in that language.

| REGULAR TRACK |

| | | |
|---|----------------|----------------|
| GENERAL EDUCATION | 48-60 | CREDITS |
| - English Communication | 16 | credits |
| - Natural Sciences | 8-16 | credits |
| - Humanities | 12 | credits |
| - Social Sciences | 8-12 | credits |
| - Health Science and Physical Education | 3-4 | credits |
| MAJOR FIELD OF STUDY (EITHER B.A., B.SC., BBA OR B.N.S.) | 110-124 | CREDITS |
| FREE ELECTIVES | 8 | CREDITS |

| SENIOR PROJECT |

Students are encouraged to submit a senior project. Students may elect to do interdisciplinary work as part of their required work for graduation at MUIIC, or off campus or at an overseas institution. The student's advisor and the program manager and/or coordinator must approve senior projects.

| INTERNSHIP AND DIRECTED RESEARCH |

Students in some majors are eligible to take an academic internship and expand it into a seminar project or directed research. Students who wish to do so must receive an approval from Chairman of the Division before undertaking such activities.

BUSINESS ADMINISTRATION DIVISION

The Business Administration Division offers 5 principal programs leading to a Bachelor of Business Administration Degree in a specific major. The current majors available are Business Economics, Finance, Information Systems, International Business, and Marketing, all with an emphasis on Directed Research.

| DIVISION CHAIRMAN |

Senior Fellow Len MacKay-Cruise, B.A.(Hons) (Cantab) (Cambridge University, U.K.), Company Director's Diploma FAICD. Dip. (Australia)

| DIVISION VICE CHAIRMAN |

Assistant Professor Sarayut Nathaphan, DBA (Finance, Thammasat University, Thailand), M.Sc. (Finance, University of Denver, Colorado, U.S.A.), B.B.A. (Finance, Thammasat University, Thailand)

| DIVISION PROGRAM DIRECTORS |

| Business Economics Major |

Dr. Yingyot Chiaravutthi, Ph.D. (Economics, University of South Carolina, U.S.A.), M.B.A. (Finance, Hawaii Pacific University, U.S.A.), B.B.A. (General Management, Assumption University, Thailand)

| Finance Major |

Dr. Jiranart Suthirat, DBA (Finance, Thammasat University, Thailand), M.Sc. (Finance, University of Colorado, U.S.A.), B.B.A. (ChiangMai University, Thailand)

| Information System Major |

Mr. Veera Bhatiasavi, Ph.D. Candidate (Development Administration, National Institute of Development Administration, Thailand), M.Sc. (Information System, Hawaii Pacific University, U.S.A.), B.S. (Computer Science, Hawaii Pacific University, Hawaii U.S.A.)

| International Business Major |

Dr. Chairawee Anamthawat-Kierig, Ph.D. (Marketing, Thammasat University, Thailand), M.B.A. (International Business, Sasin Graduate Institute of Business Administration, Thailand), B.A. (Economic Development, Chulalongkorn University, Thailand)

| Marketing Major |

Ms. Chompunuch Pongjit, M.B.A. (Marketing, Willamette University, Oregon, U.S.A.), B.S. (Business Administration, Western Oregon University, U.S.A.)

| FACULTY MEMBERS |**| Full-Time |**

Mr. Athapong Sakunsriprasert, Ph.D. Candidate (Development Administration, National Institute of Development Administration, Thailand), M.B.A. (Finance, National Institute of Development Administration, Thailand), M.Bus (Marketing, University of Technology, Australia), M.M. (General Management, Mahidol University, Thailand), B.B.A. (International Business Management, Assumption University, Thailand)

Mr. Barry John Clements, Post Graduate Certificate (Business Education, Garnet Teacher Training College, U.K.), B.A. (Accounting/Law, University of Kent, U.K.)

Mr. Ignatius Tan, M.A. (Communication Arts – Advertising, Bangkok University, Thailand), B.I.T. (Information Technology, Queensland University of Technology, Australia)

Mr. Jun Jiang, Ph.D. Candidate (Financial Economics, National Institute of Development Administration, Thailand), M.B.A. (General Management, Assumption University, Thailand), B.A. (Accounting, Soochow University, China)

Ms. Kandapa Thanasuta, M.B.A. (Marketing and Finance, Sasin Graduate Institute of Business Administration, Thailand), B.Sc. (International Business, Georgetown College, U.S.A.)

Ms. Kanokvorn Omoda, M.B.A. (Finance, National Institute of Development Administration, Thailand), B.A. (Political Science, Thammasat University, Thailand)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Ms. Kurniati Ailing Wirakotan, M.B.A. (General Management, Griffith University, Australia), B.A. (Educational Psychology, Atma Jaya Catholic University, Indonesia)

Ms. Myat Thander Tin, M.Sc. (Information Management, Asian Institute of Technology, Thailand), B.C.Sc. (University of Computer Studies Mandalay, Myanmar), B.A. (Business Management, University of Distance Education, Mandalay, Myanmar)

Ms. Sirithida Chaivisuttangkun, M.Sc. (Economics and Finance, University of York, U.K.), B.A. (Finance, Mahidol University International College, Thailand), B.A. (Commerce and Accountancy, Thammasat University, Thailand)

Ms. Thanyawee Pratoomsuwan, M.Comm. (Accounting and Finance, University of Sydney, Australia), B.A. (Finance, Mahidol University International College, Thailand)

Ms. Vanvisa Chaimahawong, M.Comm. (Finance, University of New South Wales, Australia), B.A. (Finance, Mahidol University International College, Thailand)

Ms. Varumpa Temaismithi, M.B.A. (Finance, National Institute of Development Administration, Thailand), B.A. (Finance, Mahidol University International College, Thailand)

| **Part-Time** |

Ms. Jaratchwahn Jantarat, MM (College of Management, Mahidol University, Thailand), B.B.A. (Marketing, Mahidol University International College, Thailand)

Mr. Chaivatna Sumetphone, M.Sc (Computer Science, Asian Institute of Technology), B.Sc (Computer Science, ISDP, Mahidol University)

Mr. Chaiyong Ngampravatdee, Cert., Advanced Taxation (Chulalongkorn University, Thailand), M.C.L. (Indiana University, U.S.A.), Barrister at Laws, LL.B. (Honors) (Thammasat University, Thailand)

Dr. Jade Donovanik, Post Doctoral Research (MaxPlanck Institute, Munich, Germany), Doctor of Science of Law (Stanford University, U.S.A.), M.Sc. (Law, Stanford University, U.S.A.), Bachelor of Law (Thammasat University, Thailand)

Dr. Jaratpan Onghununtakul, DBA (Marketing, Thammasat University, Thailand), M.B.A. (Marketing, University of Texas at Arlington, U.S.A.), B.B.A. (Marketing, Assumption University, Thailand)

Ms. Jirada Pongpun, M.Sc. (Professional Accountancy, Michigan State University, U.S.A.), B.A.

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

(Accounting, Chulalongkorn University, Thailand), Certified Public Accountant, Thailand

Dr. Krizz Chantjiraporn, Ph.D. (Supply Chain Management, Northern Washington University, U.S.A.), M.A (Business Communication and Management, University Thai Chamber of Commerce), M.M. (Joint program of J.L. Kellogg Graduate School of Northwestern University, Wharton Graduate School of University of Pennsylvania and Sasin GIBA of Chulalongkorn University), B.B.A. (Southeast Asia Union College, Singapore)

Mr. Kudatara Nagaviroj, M.P.P (International Development, Duke University, U.S.A.), B.S. (Economics, Duke University, U.S.A.)

Mr. Manit Satitsamitpong, M.Sc. (Georgia Institute of Technology, U.S.A.), M.B.A. (University of Illinois, U.S.A), B.S. (University of Pennsylvania, U.S.A.)

Mr. Michael Naglis, M.B.A. (Assumption University, Thailand), B.A. (International Student Degree Program, Mahidol University, Thailand)

Assistant Professor Nifinant Wisaweisuan, Ph.D. (Economics, University of Cambridge, U.K.), M.Phil. (Economics, University of Cambridge, U.K.), M.A. (Economics, Thammasat University, Thailand), B.A. (Economics, Thammasat University, Thailand)

Dr. Natcha Petchddakul, DBA (International Business, JDBA Thammasat University, Thailand), MBA (Georgia State University, Atlanta, USA), B.Sc. (Pharmaceutical Science, Chulalongkorn University, Thailand)

Mr. Nopporn Ruangwanit, Ph.D. Candidate (Marketing, Thammasat University, Thailand), M.Sc. (Marketing Communication, Illinois Institute of Technology, U.S.A.) B.B.A. (General Management, Assumption University, Thailand)

Dr. Nuntana Udomkit, Ph.D. (Economics and International Development, University of Bath, United Kingdom), M.A. (Economy and Society, Lancaster University, United Kingdom), B.A. (Public Administration, ChiangMai University, Thailand)

Mr. Nutthaboon Pornrattanacharoen, M.Design (Digital Media, University of Western Sydney, Australia), B.Ed (Educational Technology, Silpakorn University, Thailand)

Ms. Orawan Amartayakul Lim, M.B.A. (International Business, Asian Institute of Technology, Thailand), B.A. (Business Administration, ISDP, Thailand)

Mr. Pasun Wattanachai, MSEE (Electrical Engineering, University of Southern California, USA), MSCS (Computer Science, Depaul University), BEEE (Electrical Engineering, Chulalongkorn University, Thailand)

Ms. Patra Shovityakool, M.S. (Engineering Management, University of Southern California, U.S.A.), B.S. (Industrial Engineering, University of Southern California, U.S.A.)

Mr. Phillip Stiens, Post Graduate Certificate (Education, Exeter University, U.K.),

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

B.A. (Humanities, University of Wales, Swansea, U.K.)

Dr. Piriya Pholphirul, Ph.D. (Economics, Georgia State University, Atlanta, U.S.A.), M.S. (Business of Administration and Economics, University of Illinois at Urbana Champaign, U.S.A.), B.S. (Economics, Chulalongkorn University, Thailand)

Assistant Professor Pungpond Rukumnuaykit, Ph.D. (Economics, Michigan State University, E. Lansing, U.S.A.), M.A. (Economics, University of Michigan, Ann Arbor, U.S.A.), B.S. (Economics, the Wharton School, University of Pennsylvania, Philadelphia, U.S.A.), B.A. (major in Economics, minor in Mathematics, The College of Arts and Science, University of Pennsylvania, Philadelphia, U.S.A.)

Mr. Sattar Puangpathanachai, MBA (Business Administration, Thammasat University, Thailand), BS-BA (Accounting, Sukhotahi Thammathirat, Thailand), BS-BA (Management Information System, Boston University, U.S.A)

Mr. Sean Gallagher, DBA Candidate (Business Administration, University of South Australia, Australia), M.B.A. (Heriot-Watt University, United Kingdom), BAS (Administrative Studies, Trent University, Canada)

Ms. Siriporn Jinanarong, M.Sc (Computer Information Systems, San Francisco, California, USA), Bachelor of Education (Honor) (Music, Chulalongkorn University, Thailand)

Mr. Subin Liengpunsakul, M.Phil. (Finance, University of Cambridge, U.K.), M.Sc. (Operations Research, Stanford University, U.S.A.), B.Eng. (Honors) (Electrical Engineering, King Mongkut Institute of Technology, Ladkrabang, Thailand)

Ms. Suwalya Khemvaraporn, B.B.A. (Human Resource Management, Bernard Baruch College, U.S.A.), A.A.S. (Travel and Tourism Management, Borough of Manhattan U.S.A.)

Assistant Professor Toryos Pandejpong, Ph.D. (System Science, Engineering Management, Portland State University, U.S.A.), M.B.A. (University of Portland, U.S.A.), M.Sc. (Engineering Management, Portland State University, U.S.A.), B.Eng. (Chemical Engineering, Chulalongkorn University, Thailand)

Assistant Professor Vassana Maprasert, DBA (Marketing, Thammasat University, Thailand), M.B.A. (Marketing, Chulalongkorn University, Thailand), B.B.A. (Accounting, Assumption University, Thailand)

Mr. Veerachai Chuenchompoonut, LL.M. (University College London, London, United Kingdom), LL.M. (Cornell Law School, New York, U.S.A), LL.B. (Thammasat University, Thailand)

Mr. Worapong Janyangyuen, DBA Candidate (Finance, JDBA, Thailand), M.Sc. (University of Denver, U.S.A.), M.B.A. (Finance, University of Denver, U.S.A.),

B.B.A. (Finance, Assumption University, Thailand), Candidate for Chartered Financial Analyst (C.F.A.) Program Level III

Mr. Yingyong Tanthanapongphan, LL.M. (Stanford Law School, Stanford, California, U.S.A), LL.M. (Harvard Law School, Cambridge, Massachusetts, U.S.A), LL.B. (Thammasat University, Thailand)

| RESEARCH PAPERS |

Dr. Chairawee Anamthawat-Kierig

Anamthawat, C., "Retail Propinquity: A Location Strategy in Thailand," working paper.

Ms. Chompunuch Pongjit

Pongjit, C., "Culture Marketing," working paper.

Nathaphan, S. and **Pongjit**, C., "Diversification and Capital Structure of Agricultural Firms in Thailand," presented at the Academic Business Conference, Prince of Songkla University, 16th to 18th October, 2002.

Dr. Jade Donovanik

Donavanik, J., "Integrating Environmental Considerations into Economic Policy Making Processes," Integration of legal concerns into the research, which is a joint consultation between the Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Environment Programme (UNEP).

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Donavanik, J., "Biodiversity Organization," Thailand Biodiversity Center.

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Donavanik, J., "The Impact of Identification Smart Card," National Health Foundation.

Donavanik, J., "Management of Access and Benefit Sharing of Biological Resources," National Biodiversity Center.

Donavanik, J., "Analysis of the International Treaty on Plant Genetic Resources for Food and Agriculture," Industry of Agriculture and Cooperatives.

Donavanik, J., "Broadcasting Reform: Law," National Research Council.

Donavanik, J., "ASEAN-Rockefeller Project: Intellectual Property Law Review and Capacity Building on Intellectual Property Rights Related to Public Health in the ASEAN Region," Ministry of Public Health.

Dr. Jaratpan Onghununtakul

Onghununtakul, J., "An Examination of Two Subcomponents of Subjective Norm and Their Separate Effects on Green Behaviors," Presented at ANZMAC 2004 Conference, 27 November – 1 December 2004.

Onghununtakul, J., "Is Taste Really Mediating Food Choice?", Presented in the Department of Commerce and Accountancy, Thammasat University, 1998.

Dr. Jiranart Sutthirat

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Mr. Jun Jiang

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Ms. Myat Thander Tin

Tin, M., "Finding Usability Problems by the Heuristic Evaluation Method," National Conference in Science and Technology at Sakon Nakhon Rajabhat University, 14th to 15th December 2006.

Assistant Professor Nitinant Wisawaisuan

Wisawaisuan, N., "Recent Forms of Non-Tariff Barriers: A Comparative Case of US and EU Initiatives," Research Report presented to Ministry of Foreign Affairs, Thailand, 2006.

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Dr. Piriya Pholphirul

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Assistant Professor Pungpond Rukumnuaykit

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Rukumnuaykit, P., "FTA and Health Services in Thailand," with Development Economics Department, NIDA, submitted to the Ministry of Finance 2005.

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Rukumnuaykit, P., Strauss, J. and Witoelar, F. "Smoking Behavior among Youth in Indonesia: Evidence from the Indonesian Family Life Survey," accepted at the World Conference on Tobacco and Health (WCTOH), August, 2003.

Assistant Professor Sarayut Nathaphan

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Nathaphan, S. and Temaismithi, V., "Adjusting toward the Appropriate Underpricing of Initial Public Offerings: Evidence from Stock Exchange of Thailand," forthcoming.

Nathaphan, S., Chunhachinda, P. and Temaismithi, V., "Effect of Estimation Risk on Efficient Set: Evidence from Thai Stock Market," presented at Asian Forum on Business Education, 30th November to 2nd December, 2005.

Nathaphan, S., "Appropriate Underpricing of the IPO Facilitated by the Investment Banks Enforced by the Economic Crisis: Evidence from Thailand," presented at the International Conference, Asian Institute of Technology, May, 2003.

Nathaphan, S. and Bhatiasevi, V., "Grading Techniques: Simplification or Fairness," presented at the Academic Business Conference, Prince of Songkla University, 16th to 18th October, 2002.

Nathaphan, S. and Pongjit, C., "Diversification and Capital Structure of Agricultural Firms in Thailand," presented at the Academic Business Conference, Prince of Songkla University, 16th to 18th October, 2002.

Nathaphan, S., "Evidence on the Existence of Capital Structure: Evidence from the Energy and Food Industry of Thailand," presented at The Twelfth International Conference, 19th to 20th May, 2002.

Nathaphan, S., "Risk Analysis for Capital Budgeting of Business in Thailand," presented at the Academic Business Conference, Chulalongkorn Press, 19th to 20th October, 2000.

Ms. Siriporn Jinanarong

Jinanarong, S. What is PECS (Performance Event Collection Services) INFOracle Jan-Mar 1996

Jinanarong, S. Dynamic SQL using DBMS_SQL Package INFOracle Oct-Dec 1996.

Jinanarong, S. Intensive Course for Oracle Products Oracle Develop/2000: Forms 4.5.

Asst. Prof. Dr. Toryos Pandejpong

Pandejpong, T., "Process for Technology Selection in the Petrochemical Industry," *PICMET 2003*, Portland, Oregon.

Pandejpong, T., "Model Development Technology Selection in the Petrochemical Industry," *INFORMS 2001*, Miami, Florida.

Pandejpong, T., "Strategic Decision: Technology Selection in the Petrochemical IndustryConference:" *PICMET 2001*, Portland, Oregon.

Assistant Professor Vassana Maprasert

Maprasert, V., and Pipop Udorn, "A Double-Bond Perspective of Service Relationship," Proceedings of the 13th Annual Frontiers in Services Conference, Co-Sponsored by the American Marketing Association (AMA), Center of Excellence in Service, University of Maryland, and University of Miami at Miami, Florida, 28th to 31st October, 2004.

Ms. Varumpa Temaismithi

Nathaphan, S. and **Temaismithi, V.**, "Adjusting toward the Appropriate Underpricing of Initial Public Offerings: Evidence from Stock Exchange of Thailand," forthcoming.

Nathaphan, S., Chunhachinda, P. and **Temaismithi, V.**, "Effect of Estimation Risk on Efficient Set: Evidence from Thai Stock Market," presented at Asian Forum on Business Education, 30th November to 2nd December, 2005.

Mr. Veera Bhatiasevi

Bhatiasevi, V., "Integrating Information Technology and Medicine: Benefits and Challenges," working paper.

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Dr. Yingyot Chiaravutthi

Chiaravutthi, Y., "The Existence of Rationale of Predatory Pricing Strategy in the Network Industry: An Experimental Approach," Chiang Mai University Journal, forthcoming.

Chiaravutthi, Y., "Predatory Pricing with the Existence of Network Externalities in the Laboratory," Information Economics and Policy 19(2), 2007: 151-170.

Chiaravutthi, Y., "Network Externalities and Spillovers in the Email Client Software," Suranaree Journal of Science and Technology 14(1), 2007: 25-38.

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Chiaravutthi, Y., "Firms' Strategies and Network Externalities: Empirical Evidence from the Browser War," The Journal of High Technology Management Research 17(1), 2006: 27-42.

BUSINESS ADMINISTRATION PROGRAM

| DEGREES OFFERED |

Bachelor of Business Administration (Business Economics)
BBA (Business Economics)

Bachelor of Business Administration (Finance)
BBA (Finance)

Bachelor of Business Administration (Information Systems)
BBA (Information Systems)

Bachelor of Business Administration (International Business)
BBA (International Business)

Bachelor of Business Administration (Marketing)
BBA (Marketing)

| BUSINESS ADMINISTRATION PROGRAM |

The Business Administration Program is an innovative program that covers a wide range of theories and practices. The program offers a global edge on the international market and prepares students for employment opportunities in any hemisphere. The program will equip students with in-depth useable technical know-how, communication skills, and practical business knowledge embracing every aspect of the international and domestic environment. They will be thoroughly prepared to enter the dynamic and ever changing business world.

| CAREER OPPORTUNITIES AND POST GRADUATE STUDY |

Many Business Administration graduates go directly into national and multinational companies and are well qualified to adapt to the reality of business. More than 50% of our graduates also go on to post-graduate study in Australia, the USA, the UK, Canada or Thailand.

| CURRICULUM STRUCTURE |**| Business Administration Program |**

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 59 |
| Core Business Courses | 56 |
| Required Major Courses | 44 |
| Elective Major Courses | 20 |
| Free Elective Courses | 8 |
| TOTAL | 187 |

| COURSE LIST |**General Education Courses****59 credits****English Communications****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Issues | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Natural Sciences**16 credits**

| | | | |
|------|-----|--|-----------|
| ICNS | 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS | 104 | Fundamental Statistics | 4 (4-0-8) |
| ICNS | 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS | 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS | 131 | Fundamental Physics | 4 (3-2-7) |
| ICNS | 141 | Computer Essentials | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology and Environment | 4 (4-0-8) |
| ICNS | 161 | General Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | The Science of Food | 4 (4-0-8) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Note: Information Systems students are not allowed to take ICNS 141 Computer Essentials and ICNS 142 Introduction to Internet Technology as a natural science course or as a free elective course.

Humanities**12 credits**

| | | | |
|------|-----|------------------------------------|-----------|
| ICHM | 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM | 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM | 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM | 105 | Music Appreciation | 4 (4-0-8) |
| ICHM | 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM | 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM | 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM | 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM | 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM | 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM | 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM | 218 | Film Studies | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM | 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM | 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM | 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM | 223 | Thai Arts | 4 (4-0-8) |
| ICHM | 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM | 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM | 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM | 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML | 101 | Elementary German I | 4 (4-0-8) |
| ICML | 102 | Elementary German II | 4 (4-0-8) |
| ICML | 103 | Elementary German III | 4 (4-0-8) |
| ICML | 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML | 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML | 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML | 121 | Elementary French I | 4 (4-0-8) |

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| | | | |
|------|-----|---|-----------|
| ICML | 122 | Elementary French II | 4 (4-0-8) |
| ICML | 123 | Elementary French III | 4 (4-0-8) |
| ICML | 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML | 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML | 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML | 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML | 161 | Elementary Thai I | 4 (4-0-8) |
| ICML | 162 | Elementary Thai II | 4 (4-0-8) |
| ICML | 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Note: All BBA students are not allowed to take ICSS 114 Introduction to Economics as a social science course or as a free elective course.

Health Science and Physical Education**3 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Requirements to start taking BBA courses:

BBA students may commence taking BBA courses only if they have met the following requirements (there are no exceptions):

1. Have passed ICCM 105 Intermediate English Communication II with a minimum C grade
2. Attained a minimum of 44 credits of General Education Courses
3. Have passed ICNS 104 Fundamental Statistics with a minimum C grade
4. Achieved a minimum GPA of 2.00

Business Administration Courses**Core Business Courses****56 credits**

| | | | |
|------|-----|-----------------------------------|-----------|
| ICMB | 201 | Macroeconomics | 4 (4-0-8) |
| ICMB | 202 | Microeconomics | 4 (4-0-8) |
| ICMB | 211 | Fundamental Financial Accounting | 4 (4-0-8) |
| ICMB | 212 | Managerial Accounting | 4 (4-0-8) |
| ICMB | 221 | Principles of Marketing | 4 (4-0-8) |
| ICMB | 232 | Essentials of Management | 4 (4-0-8) |
| ICMB | 233 | Human Resource Management | 4 (4-0-8) |
| ICMB | 281 | Computers in Management | 4 (4-0-8) |
| ICMB | 341 | Business Law | 4 (4-0-8) |
| ICMB | 351 | International Business Management | 4 (4-0-8) |
| ICMB | 363 | Management Science | 4 (4-0-8) |
| ICMB | 371 | Business Finance | 4 (4-0-8) |
| ICMB | 372 | Financial Management | 4 (4-0-8) |
| ICMB | 431 | Strategic Management | 4 (4-0-8) |

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Note: All BBA students are required to earn at least a C grade in each of the Core Business Courses.

1. Business Economics Major

Required Business Economics Major Courses 44 credits

| | | | |
|------|-----|--|-----------|
| ICBE | 341 | Mathematics for Business and Economics | 4 (4-0-8) |
| ICBE | 342 | Intermediate Microeconomics | 4 (4-0-8) |
| ICBE | 343 | Intermediate Macroeconomics | 4 (4-0-8) |
| ICBE | 344 | Econometrics I | 4 (4-0-8) |
| ICBE | 345 | Monetary Policy | 4 (4-0-8) |
| ICBE | 346 | Public Economics | 4 (4-0-8) |
| ICBE | 441 | Econometrics II | 4 (4-0-8) |
| ICBE | 442 | International Finance | 4 (4-0-8) |
| ICBE | 443 | International Trade | 4 (4-0-8) |
| ICBE | 444 | Industrial Organization | 4 (4-0-8) |
| ICBE | 446 | Cost-Benefit Analysis | 4 (4-0-8) |

Elective Business Economics Major Courses 20 credits

| | | | |
|------|-----|---|--------------|
| ICMB | 491 | Practical Business Training – On Campus* | 8 (0-24-8) |
| ICMB | 492 | Practical Business Training – Off Campus* | 12 (0-36-12) |
| ICMB | 493 | Directed Research* | 8 (8-0-16) |
| ICBE | 347 | Development Economics | 4 (4-0-8) |
| ICBE | 348 | Economics of Human Resources | 4 (4-0-8) |
| ICBE | 445 | Economics of Strategy | 4 (4-0-8) |
| ICBE | 447 | Corporate Governance and Business Ethics | 4 (4-0-8) |
| ICIS | 385 | Information Technology Economics | 4 (4-0-8) |
| ICMF | 375 | Multinational Corporate Finance | 4 (4-0-8) |
| ICMI | 454 | International Logistic Management | 4 (4-0-8) |

Note: All BBA students are required to take either ICMB 491 or ICMB 492 or ICMB 493

Free Elective Courses 8 credits

Students can take any courses (except for ICSS 114 Introduction to Economics) offered by MUIIC as a free elective course with approval from the advisor.

2. Finance Major

Required Finance Major Courses 44 credits

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| | | | |
|------|-----|--|-----------|
| ICBE | 341 | Mathematics for Business and Economics | 4 (4-0-8) |
| ICBE | 344 | Econometrics I | 4 (4-0-8) |
| ICBE | 441 | Econometrics II | 4 (4-0-8) |
| ICMF | 311 | Intermediate Accounting I | 4 (4-0-8) |
| ICMF | 312 | Intermediate Accounting II | 4 (4-0-8) |
| ICMF | 375 | Multinational Corporate Finance | 4 (4-0-8) |
| ICMF | 376 | Financial Modeling | 4 (4-0-8) |
| ICMF | 471 | Financial Investment | 4 (4-0-8) |
| ICMF | 473 | Financial Theory | 4 (4-0-8) |
| ICMF | 478 | Risk Management | 4 (4-0-8) |
| ICMF | 479 | Seminar in Finance | 4 (4-0-8) |

Elective Finance Major Courses**20 credits**

| | | | |
|------|-----|---|--------------|
| ICMB | 491 | Practical Business Training – On Campus* | 8 (0-24-8) |
| ICMB | 492 | Practical Business Training – Off Campus* | 12 (0-36-12) |
| ICMB | 493 | Directed Research* | 8 (8-0-16) |
| ICBE | 342 | Intermediate Microeconomics | 4 (4-0-8) |
| ICBE | 343 | Intermediate Macroeconomics | 4 (4-0-8) |
| ICBE | 442 | International Finance | 4 (4-0-8) |
| ICBE | 447 | Corporate Governance and Business Ethics | 4 (4-0-8) |
| ICMF | 374 | Money, Banking and Financial Markets | 4 (4-0-8) |
| ICMF | 475 | Case Studies in Finance | 4 (4-0-8) |
| ICMK | 424 | Global Marketing Strategy | 4 (4-0-8) |

Note: All BBA students are required to take either ICMB 491 or ICMB 492 or ICMB 493

Free Elective Courses**8 credits**

Students can take any courses (except for ICSS 114 Introduction to Economics) offered by MUIIC as a free elective course with approval from the advisor.

3. Information Systems Major**Required Information Systems Major Courses****44 credits**

| | | | |
|------|-----|-----------------------------------|-----------|
| ICIS | 210 | Introduction to Programming | 4 (3-2-7) |
| ICIS | 381 | Fundamentals of Computer Systems | 4 (4-0-8) |
| ICIS | 382 | Object-Oriented Programming | 4 (3-2-7) |
| ICIS | 383 | Database Management System | 4 (3-2-7) |
| ICIS | 384 | Introduction to Computer Networks | 4 (4-0-8) |
| ICIS | 386 | Electronic Commerce | 4 (4-0-8) |
| ICIS | 388 | Internet Programming | 4 (3-2-7) |
| ICIS | 389 | Management Information Systems | 4 (4-0-8) |
| ICIS | 482 | Systems Analysis & Design | 4 (4-0-8) |
| ICIS | 483 | Software Engineering | 4 (4-0-8) |
| ICMI | 454 | International Logistic Management | 4 (4-0-8) |

Elective Information Systems Major Courses**20 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|---|--------------|
| ICMB | 491 | Practical Business Training – On Campus* | 8 (0-24-8) |
| ICMB | 492 | Practical Business Training – Off Campus* | 12 (0-36-12) |
| ICMB | 493 | Directed Research* | 8 (8-0-16) |
| ICIS | 385 | Information Technology Economics | 4 (4-0-8) |
| ICIS | 387 | Information Systems Security | 4 (4-0-8) |
| ICIS | 481 | Internet Design and Development | 4 (4-0-8) |
| ICIS | 488 | IT Based Knowledge Management | 4 (4-0-8) |
| ICBE | 344 | Econometrics I | 4 (4-0-8) |
| ICBE | 447 | Corporate Governance and Business Ethics | 4 (4-0-8) |
| ICMK | 329 | Advertising and Graphic Design | 4 (4-0-8) |

Note: All BBA students are required to take either ICMB 491 or ICMB 492 or ICMB 493

Free Elective Courses**8 credits**

Information Systems students can take any courses (except for ICSS 114 Introduction to Economics, ICNS 141 Computer Essentials and ICNS 142 Introduction to Internet Technology) offered by MUIC as a free elective course with approval from the advisor.

4. International Business Major**Required International Business Major Courses****44 credits**

| | | | |
|------|-----|---|-----------|
| ICMI | 352 | Legal Issues in International Business | 4 (4-0-8) |
| ICMI | 354 | Cross-cultural Management | 4 (4-0-8) |
| ICMI | 357 | Business Communication | 4 (4-0-8) |
| ICMI | 358 | People and Organization in International Business | 4 (4-0-8) |
| ICMF | 375 | Multinational Corporate Finance | 4 (4-0-8) |
| ICMK | 424 | Global Marketing Strategy | 4 (4-0-8) |
| ICBE | 442 | International Finance | 4 (4-0-8) |
| ICBE | 443 | International Trade | 4 (4-0-8) |
| ICMI | 454 | International Logistic Management | 4 (4-0-8) |
| ICMI | 456 | Export-Import Management | 4 (4-0-8) |
| ICIS | 484 | Management Information System | 4 (4-0-8) |

Elective International Business Major Courses**20 credits**

| | | | |
|------|-----|---|--------------|
| ICMB | 491 | Practical Business Training – On Campus* | 8 (0-24-8) |
| ICMB | 492 | Practical Business Training – Off Campus* | 12 (0-36-12) |
| ICMB | 493 | Directed Research* | 8 (8-0-16) |
| ICMI | 355 | Business Alliance | 4 (4-0-8) |
| ICMI | 360 | Leadership Development | 4 (4-0-8) |
| ICBE | 343 | Intermediate Macroeconomics | 4 (4-0-8) |
| ICBE | 344 | Econometrics I | 4 (4-0-8) |
| ICBE | 447 | Corporate Governance and Business Ethics | 4 (4-0-8) |
| ICMF | 311 | Intermediate Accounting I | 4 (4-0-8) |
| ICMK | 316 | Consumer Behavior | 4 (4-0-8) |

Note: All BBA students are required to take either ICMB 491 or ICMB 492 or ICMB 493

Free Elective Courses**8 credits**

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Students can take any courses (except for ICSS 114 Introduction to Economics) offered by MUIIC as a free elective course with approval from the advisor.

5. Marketing Major

Required Marketing Major Courses

44 credits

| | | | |
|------|-----|------------------------------------|-----------|
| ICMK | 316 | Consumer Behavior | 4 (4-0-8) |
| ICMK | 317 | Marketing Research I | 4 (4-0-8) |
| ICMK | 318 | Marketing Research II | 4 (4-0-8) |
| ICMK | 319 | New Product Management | 4 (4-0-8) |
| ICMK | 323 | Integrated Marketing Communication | 4 (4-0-8) |
| ICMK | 325 | Business Marketing | 4 (4-0-8) |
| ICMK | 328 | Marketing Channel Management | 4 (4-0-8) |
| ICBE | 444 | Industrial Organization | 4 (4-0-8) |
| ICBE | 445 | Economics of Strategy | 4 (4-0-8) |
| ICMI | 454 | International Logistics Management | 4 (4-0-8) |
| ICMK | 428 | Marketing Strategy | 4 (4-0-8) |

Elective Marketing Major Courses

20 credits

| | | | |
|------|-----|---|--------------|
| ICMB | 491 | Practical Business Training – On Campus* | 8 (0-24-8) |
| ICMB | 492 | Practical Business Training – Off Campus* | 12 (0-36-12) |
| ICMB | 493 | Directed Research* | 8 (8-0-16) |
| ICMK | 329 | Advertising and Graphic Design | 4 (4-0-8) |
| ICMK | 330 | Strategic Brand Management | 4 (4-0-8) |
| ICMK | 424 | Global Marketing Strategy | 4 (4-0-8) |
| ICMK | 425 | Retail Management | 4 (4-0-8) |
| ICBE | 344 | Econometrics I | 4 (4-0-8) |
| ICBE | 447 | Corporate Governance and Business Ethics | 4 (4-0-8) |
| ICIS | 389 | Management Information System | 4 (4-0-8) |

Note: All BBA students are required to take either ICMB 491 or ICMB 492 or ICMB 493

Free Elective Courses

8 credits

Students can take any courses (except for ICSS 114 Introduction to Economics) offered by MUIIC as a free elective course with approval from the advisor.

HUMANITIES AND LANGUAGE DIVISION

The Humanities and Languages Division offers 3 major programs in Entertainment Media Production (Television Production, Film Production, and Animation Production), and four programs in Humanities, Physical and Health Education, English Studies and Foreign Languages. The Division offers courses in General Education and minors in English Language and Culture, English Teaching Preparation, Chinese, French, German, Japanese, and Thai. (Please see further details in the Minors Section)

| DIVISION CHAIRMAN |

Assistant Professor Gérard Fouquet, Ph.D., B.A. (French Language & Literature; University of Tours, France), M.A. (French Language & Literature; University of Aix-En-Provence, France), Ph.D. (Oriental Studies; Paris VII University, France)

| PROGRAM DIRECTORS |

| English Studies Program |

Dr. Charles Windish, B.A. (French and History; Florida State University), M.A. (French, Florida State University), Ph.D. (Adult Education Program Management, Georgia State University)

| Entertainment Media Production Program |

Assistant Professor Grirggiat Punpiputt, LL.B. (Thammasat University), M.A. (Drama & Theatre; University of Hawaii, USA)

| Foreign Languages Program |

Mr. Thomas Krey, M.A. (German Language & Literature and Educational Science; Albertus Magnus University, Germany)

| PROGRAM COORDINATORS |

| Foreign Languages Program |

Mr. Bruno Mahon, B.A. (Teaching French as a Foreign Language; Stendhal University, France), DESCAF (Business Administration; Ecole Supérieure de Commerce d' Administration des Entreprises de Bordeaux)

| Humanities Program |

Assistant Professor Gérard Fouquet, B.A. (French Language & Literature; University of Tours, France), M.A. (French Language & Literature; University of Aix-En-Provence, France), Ph.D. (Oriental Studies; Paris VII University, France)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| Physical and Health Education Program |

Mr. Michael Naglis, B.A. (Business Administration; Mahidol University International College), MBA. (Marketing; Assumption University)

| Animation Production Program |

Mr. Nantawat Khansuko, B.A. (Graphic Design), Rangsit University, M.A. (Digital Media), The American Film Institute

| Television Production Program |

Ms. Passara Choonate, B.A. (Mass Communication), Chulalongkorn University, M.A. Broadcast and Film Management, Bournemouth University, UK

| Film Production Program |

Ms. Sarunya Noithai, B.A. (Economics; St. Mary's College of Maryland, USA), M.A. (Organizational Management; University of Phoenix, USA), Studying Extension Program in Film, Television, and Digital Entertainment Media, UCLA, USA

| FACULTY MEMBERS |**| Full-Time |**

Ms. Arpaporn Iemubol, B.A. (English; Thammasat University), M.A. (English Language Studies and Methods; University of Warwick, UK)

Mrs. Barbara Ekamp, M.A. (Philosophy, German Language and Literature; Universität zu Köln), M.A. (Sinology; Freie Universität Berlin)

Assistant Professor Charles Freeland, B.A. (Philosophy; University of Colorado at Boulder, USA), Ph.D. (Philosophy; Duquesne University, USA)

Ms. Cristina Schoonmaker, B.A. (English/French; The American College in Paris), M.A. (Applied Linguistics/TESL; University of California, USA)

Mr. Douglas Rhein, B.Sc. (Psychology; Eastern Michigan University, USA), M.A. (Mass Communication; University of Leicester)

Mr. Euan Harvey, B.Sc. (Geology; Bristol University, UK), M.A. (Applied Linguistics; Macquarie University, Australia)

Mr. Galon Melendy, B.S. (Mechanical Engineering; Florida Institute of Technology), M.A. (Education; California State University)

Dr. Gerald Moshhammer, M.A. (Instrumental Pedagogy/Piano; University of Music and Performing Arts Vienna), M.Phil. (Philosophy; University of Vienna), Ph.D. (Philosophy; University of Vienna)

Mr. Ian McDonald, B.Sc. (Psychology; Eastern Michigan University, USA), M.A. (Psychology; Stephen Austin State University, USA)

Mr. John McNulty, B.S. (Marketing; The University of Oregon), M.B.A. (Heriot-Watt University)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Mr. Jonathan Green, B.A. (English Literature in Law; University of the Witwatersrand), M.Ed. (Edu. Mgt and TESL)

Mr. Mark Rodell, B.A. (English/Creative Writing, San Francisco State University), M.A. (English/Creative Writing, Syracuse University)

Mr. Nicholas Ferriman, B.A. (Physical Education and Sports Science: Loughborough University of Technology), M.A. (TESOL) : Sheffield Hallam University

Ms. Orie Green, B.A. (English; Kanda University of International Studies)

Mr. Phillip Stiens, B.A. (Humanities; University College of Swansea, Wales, UK), PG. Cert. (Education; Exeter, UK)

Mr. Prateep Wongverayuth, B.A. (Political Science; Chulalongkorn University), M.A. (Politics, Chulalongkorn University)

Mr. Russell Pattinson, B.A. (Hons) (Documentary Communication; University of Humberside, UK)

Mr. Sean Gallagher, BAS (Hons) (Trev University Canada/Leeds University English), M.B.A. (Heriot-Watt University, UK)

Mr. Takayoshi Fujiwara, B.A. (Linguistics; University of Tsukuba, Japan), B.A. (Mass Communication; University of Tsukuba, Japan), M.A. (Social Psychology; Hitotsubashi University, Japan)

Ms. Ute Bäuchi, M.A. (Educational Science; Heinrich-Heine University, Germany)

Mr. Zhang Bo, B.A. (Japanese, Haidian Day University, China)

Mrs. Zhang Qiujuan, B.A. (English-Chinese; Beijing Language and Culture University, China)

| Part-Time |

Mr. Adichai Nirattisayangkool, B.Eng. (Civil Engineering), Cert. of Class Teaching Professional

Ms. Ampha Sugino, Master of Sports Management (Mahidol University)

Mr. Anan Janwuwam, B.A. (Journalism and Mass Communication; Thammasat University), M.A. (Mass Communication; Chulalongkorn University)

Mr. Apidej Phattanasutthinon, B.F.A. Honors (Painting; Chulalongkorn University), M.F.A. (Art & Technology; School of the Art Institute of Chicago, USA)

Ms. Auchara Kijkanjanas, B.Arch. (Industrial Design; King Mongkut's Institute of Technology), M.F.A. (Computer Graphic Design; Rochester Institute of Technology, USA)

Mr. Bobbie Wong, Diploma, 3D Design, Technical Institute, Hong Kong

Mr. Boonserm Premthadha, B.A. Honors (Interior Design; Silpakorn University), M.Arch. (Architectural and Urban; Chulalongkorn University), Urban Conservation : Ecole Architecture de Versailles, France

Mr. Charoonporn Parapakpralai, B.A. Honors (Film; Thammasat University)

Mr. Cheksant Gangakate, B.F.A. (University of Nebraska at Kearney)

Mrs. Chitralada Disayanon, LL.B. (Thammasat University), M.A. (Mass Communication; Chulalongkorn University)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Mr. Donald E. Robinson, B.A. (English Literature; University of South Florida, USA), B.F.A. (Film Video; California Institute of the Arts, USA)

Mr. Dorn Rattanatassanee, B.A. (Film & Drama; Alaska Methodist University, USA)

Mr. Henry Tran, Media Professional

Ms. Jiranooch Noochniyom, B.B.A (Marketing; Assumption University), M.SCP (Counseling Psychology; Assumption University)

Mr. John Galvin, Media Professional

Dr. Joseph Bowman, B.M. (Performance; University of Cincinnati), M.M. (Performance; Arizona State University), D.M.A. (Solo Performance; Arizona State University)

Ms. Katia Grau, B.A. (Foreign Languages Applied to the Int. Commerce; University of Paris XII), M.A. (English Language and Civilization; University of Paris III Sorbonne), M.A. (Hons) (FFL; University of Paris III Sorbonne), DESS (Post Degree, Teacher Training in FFL; University of Paris III Sorbonne)

Mr. Kittipong Thongpae, B.A.

Mr. Kittipong W.Pita, B.Sc. (Chemistry; Mahidol University)

Mr. Kittipat Limpasutra, B.A. (Political Science; Kasatsart University, M.A. (Mass Communication; Chulalongkorn University)

Ms. Klairung Attanatho, B.S. (Accounting; Prince of Songkla University), M.B.A. (Management; California University, USA), B.F.A. (Sculpture; University of Tasmania, Australia), M.F.A. (Furniture Design; University of Tasmania, Australia), Diploma of Professional Makeup, Joe Blasco Makeup Centre East, USA, Certificate of Restaurant Management, New School for Social Research, USA

Mr. Kompin Khemkomnerd, B.F.A. (Visual Communication Design; Silpakorn University), B.F.A. (Character Animation; California Institute of the Arts, USA), Experimental Film Workshop, National Film Archive, Thailand

Dr. Kultida Dunagin, B.A. (Drama; Chulalongkorn University), M.A. (Theatre Arts; California State University, USA), M.I.Sc. (University of South Carolina, USA), Ph.D. (Higher Education Administration, Minor in Film and Television, University of North Texas, USA), Cert. (Radio / Television / Film, California State University, USA)

Assistant Professor Kwanruan Kitiwat, B.A. Honors (Public Relations; Chulalongkorn University), M.A. (Mass Communication; Ohio State University, USA)

Mr. Manoch Suarlek, B.Ed (Applied Arts); Product Design, Institute of Technology and Vocation Education, Thailand, M.Ed. (Educational Technology; Ramkhamhaeng University)

Mr. Mark Offedal, Diploma in Arts Animation Program, California Institute of the Arts, USA

Ms. May Yimsai, B.A

Ms. Miki Takii, B.A. (International Studies; Osaka Gakuin University)

Dr. Monrudee Tadaamnuaychai, B.B.A. Honors (Marketing; Assumption University), M.A. (Mass Communication; Chulalongkorn University), M.A. (Journalism and Mass Communication; Thammasat University), Ph.D. (Communication Arts; Chulalongkorn University)

Mr. Napat Jungpatanaprecha, B.Engineering (Computer Engineering; Chulalongkorn University), M.Sc. (Integrated Media System; USC, USA), Cert. (Extension: Application Developer, UCLA, USA)

Dr. Narumol Sriyanond Bartone, B.A. (Chulalongkorn University), M.A. (Theatre Arts; West Virginia University, USA), M.F.A. (Film & Television; Tisch School of the Arts, New York University, USA), Ph.D. (Performance Studies; Tisch School of the Arts, New York University, USA)

Ms. Nataya Panjapokakij, B.Arch. (Industrial Design; King Mongkut's Institute of Technology Ladkrabang, KMITL), M.F.A. (Computer Art - 3D Animation; Savannah College of Art and Design, USA)

Associate Professor Nipant Chitasombat, LL.B. (Chulalongkorn University), Doctor of Laws (University of Paris X, France, Post-Doctoral in Law; University of Alberta, Canada), Diploma (International Studies; University of Paris II), Certificate of the Hague Academy of International Law, The Hague, The Netherlands.

Mr. Nirattisai Kaljareuk, M.A. Honorable (Thai Classical Dance and Dramatic Arts; Suan Sunandha Rajabhat University)

Assistant Professor Olarn Wongbandue, B.A. (Mass Communication; Chulalongkorn University), M.A. (Corporate and Political Communication; Fairfield University, USA), Graduate Certificate (Video Planning, Writing and Production Program; Fairfield University, USA)

Assistant Professor Panadda Thanasatit, B.A. (Mass Communication; Chulalongkorn University), M.S. (Marketing Communications; Roosevelt University, USA)

Ms. Patima Tantikom, B.A. (Honors) (History; Chulalongkorn University), M.A. (Broadcasting Film Communication; University of Alabama, USA)

Mr. Pilan Spanond, B.A. (Motion Pictures; Rangsit University), M.F.A. (Motion Picture and Video; Academy of Art College, USA)

Dr. Pitak Sanitinirand, B.A., M.A., Ph.D.

Mr. Prateep Siamwala, B.Sc. (Mechanical Engineering; Cornell University, USA), M.Sc. (Mechanical Engineering; Stanford University, USA)

Mrs. Puangpayom Yuvaboon, B.A. (Teaching English as a Second Language; Chiangmai University), B.A. (Educational Administration; Sukhothai Thammathirath University), M.A. (Educational Administration and Supervision; Roosevelt University, USA), Diploma (Distinguish); Business English, Business Training Ltd., England, Certificate of Education Counseling Course, Thailand, Certificate of High School Counseling course, Thailand, Certificate of English Curriculum course, Thailand

Associate Professor Raksarn Wiwatsinudom, B.A. (Film and Cinematography; Thammasat University), M.S. (Photography; Brooks Institute of Photography, USA), Certificate of Television Program (NHK Communication Training Institute, Japan)

Ms. Rasika Suansom, B.A. (Journalism & Mass Communication; Thammasat University), M.A. (Language and Culture for Communication and Development; Mahidol University), M.Ed. (University of Melbourne, Australia)

Mr. Rawat Sikhemngam, B.F.A. (Fine Arts; Silpakorn University), M.F.A. (Computer Arts; Silpakorn University)

Mr. Sahatchai Chumrum, B.A. (Automotive Science; National Technical School, LA, USA), Cert. (Business Development, Los Angeles City College, LA, USA)

Assistant Professor Santi Khunprasert, B.A. (Art Education; Chulalongkorn University), M.I.D. (Industrial Design; Pratt Institute, USA), Ed.D. (Industrial Education; New York University, USA)

Dr. Sasiya Wijitjammaree, B.A. (Mass Communication; Chulalongkorn University), M.A. (Mass Communication; Chulalongkorn University), Ph.D. (Mass Communication; Chulalongkorn University)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Ms. Sasikorn Chansate, B.A. (Journalism and Mass Communication; Thammasat University), M.A. (Business Administration Executive; Ashland College, USA)

Ms. Sumon Panleartkitsakul, B.A. (Political Science)

Ms. Supaporn Pokeaw, B.A. Honors (Mass Communication; Chulalongkorn University), M.A. (International Communication; Macquarie University, Australia)

Mr. Supicharn Praphaphan, B.A. (History; Walsh College, Ohio, USA), M.A. (Graphic Design; Kent State University, USA)

Mr. Thana Thanasatit, B.A. (Mass Communication; Chulalongkorn University), M.P.A. (Roosevelt University, USA)

Mr. Thawatpong Tangsajjapoj, B.Arch (Chulalongkorn University), M.Arch (State University of New York, USA), M.F.A. (Computer Animation; Rochester Institute of Technology, USA)

Ms. Tinagorn Cooper, B.A. (Hons.) (Fine Arts, Media, history of Art and Theatre Design; Slade School of Fine Art, University College London)

Mr. Traiphep Wongpaibool, B.A. (Audio Engineering; Columbia College, IL, USA)

Mr. Vijit Kruasophon, M.Eng.

Mr. Vorodom Viravong, B.Sc. (Nursing)

Ms. Wanapat Kotanont, B.Sc (Statistic; Thammasat University), M.A. (Communication Arts; Chulalongkorn University)

Mr. Wasin Buranahet, B.A. (Mass Communication; Sukhothai Thammathirat Open University), Diploma (Computer Technology; King Mongkut's Institute of Technology ,North Bangkok), Cert. (Electronics Mechanics; King Mongkut's Institute of Technology, North Bangkok)

Mr. Wuttichai Wansupong, B.F.A. (Fine Arts; Silpakorn University), M.F.A. (Communication of Design; Bond University, Australia)

Mr. Yodchalerm Chersiridumrong, B.F.A. (Industrial Design; King Mongkut's Institute of Technology Ladkrabang), M.F.A. (Computer Arts (3D Animation); Academy of Art College, San Francisco, USA)

Mrs. Yuwadee Tirataradol, B.A. (Chinese; Thammasart University), M.A. (Chinese; Chulalongkorn University)

| RESEARCH INTERESTS |

Specific research in the various academic fields included in the Division, such as the aesthetics of photography, aesthetics of film (Asian and Western), world literature and linguistics.

Cross-cultural studies on such topics as Thai and Western media approaches to political issues.

The Entertainment Media Production Program researches are entertainment industry oriented concern both national and international context:

Research and development media production

Media business, media audience behavior

Media culture in contemporary society

Media technology, policy and regulation

Comparative study of entertainment media industry in different countries

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Applied research on foreign or second language acquisition and on the use of new technologies for teaching purposes:

| **Foreign and second language acquisition** |

Research in such fields as effectiveness of current language teaching methodologies; learning and teaching styles; cultural, ethical, psychological and biological aspects of foreign and second language acquisition;

Application of the findings of such research to the development/improvement of the English and Foreign Languages curricula, teaching approaches, classroom techniques and teaching materials.

| **Investigation of the possibilities offered by new technologies** |

Research and development of multimedia CD-Roms and e-learning sites (for instance, foreign language courses or teaching aids, CD-Rom on the Arts of Thailand).

Comparative field studies of similar university programs in such areas as courses offered, syllabi design, majors/minors, grading policies and standards, and academic department management styles.

In the field of Health and Physical Education, the Division is considering developing research on sports injuries and rehabilitation in order to reduce the length of injury time and minimize the risk of recurrence.

| **COURSE LIST** |

| **English Communication** |

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

| **Humanities** |

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|------------------------------------|-----------|
| ICHM | 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM | 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM | 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM | 105 | Music Appreciation | 4 (4-0-8) |
| ICHM | 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM | 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM | 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM | 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM | 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM | 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM | 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM | 218 | Film Studies | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM | 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM | 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM | 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM | 223 | Thai Arts | 4 (4-0-8) |
| ICHM | 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM | 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM | 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM | 242 | Intermediate Drawing | 2 (1-2-3) |

Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

| **Health Science** and Physical Education |

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

| **Modern Languages** |

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | |
|----------|---|-----------|
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

ENTERTAINMENT MEDIA PRODUCTION PROGRAM

| DEGREES OFFERED |

Bachelor of Arts (Television Production)
B.A. (Television Production)

Bachelor of Arts (Film Production)
B.A. (Film Production)

Bachelor of Arts (Animation Production)
B.A. (Animation Production)

| THE FIELD |

A major in Entertainment Media Production Program is multi-disciplinary and provides a well-rounded education in media and related fields. MUIIC and Kantana are co-sponsors of the Entertainment Media Production Program offering a curriculum that combines general education with practical production instruction. In addition, the program includes creative individual practice with critical commentary within a context of cutting edge professionalism. Our partnership first and foremost provides professional training in media entertainment production. Our faculty consists of well-recognized academics and highly qualified experts with a technological edge. By using English as the language of instruction, we are contributing to the globalization of the media entertainment industry. Our graduates will have developed their skills and talents to compete in both regional and international media industries.

| CAREER OPPORTUNITIES |

- Entertainment media producers, directors, producers, scriptwriters, etc working in regional and global media industries.
- Entertainment media entrepreneurs.
- Media research, media policy development and management.
- Graduate School in Media and Communication Studies, Television Studies, Television and Video, Television Production, Film Studies, Film Production, Technology and New Media, Mass Communication, TV Management, Entertainment Management, Computer Graphic Design, Technology Education, etc.(within Thailand and internationally).
- MBA, MA in Sociology, Humanities, International Marketing, etc. (within Thailand and internationally)

| CURRICULUM STRUCTURE |**| Entertainment Media Program |**

| Courses | Credits |
|-------------------------------------|----------------|
| General Education Courses | 48 |
| Core Courses in Entertainment Media | 32 |
| Required Major Courses | 76 |
| Elective Major Courses | 16 |
| Free Elective Courses | 8 |
| TOTAL | 180 |

| COURSE LIST |**General Education Courses****48 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |

Natural Sciences**8 credits**

| | | |
|----------|---------------------------|-----------|
| ICNS 105 | Basic Mathematics * | 4 (4-0-8) |
| ICNS 141 | Computer Essentials | 4 (3-2-7) |
| ICNS 142 | Internet Technology | 4 (3-2-7) |
| ICNS 161 | General Geology | 4 (4-0-8) |
| ICNS 162 | Southeast Asian Geography | 4 (4-0-8) |

* Recommended for Entertainment Media Production Program

Humanities**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|----------------------------------|-----------|
| ICHM | 105 | Music Appreciation * | 4 (4-0-8) |
| ICHM | 106 | Moral and Ethical Studies | 4 (4-0-8) |
| ICHM | 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM | 142 | Art Appreciation II * | 4 (4-0-8) |
| ICHM | 143 | Introduction to Photography * | 4 (3-2-7) |
| ICHM | 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM | 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM | 218 | Film Studies | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM | 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM | 223 | Thai Arts | 4 (4-0-8) |
| ICHM | 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM | 225 | The Western Classical Ideal | 4 (4-0-8) |
| ICHM | 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM | 242 | Intermediate Drawing | 2 (1-2-3) |

* Recommended for Entertainment Media Production Program

Social Sciences**8 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications* | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

* Recommended for Entertainment Media Production Program

Health Science and Physical Education**4 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education * | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

* Recommended for Entertainment Media Production Program

Entertainment Media Courses

124 credits

Entertainment Media Core Courses

32 credits

| | | |
|----------|--------------------------------|-----------|
| ICEM 101 | Media Production | 4 (4-0-8) |
| ICEM 102 | Audiovisual Communication | 4 (1-6-5) |
| ICEM 103 | Screen Acting I | 4 (0-8-4) |
| ICEM 201 | Screen Acting II | 4 (0-8-4) |
| ICEM 202 | Storytelling | 4 (3-2-7) |
| ICEM 203 | Audience Analysis | 4 (4-0-8) |
| ICEM 301 | Introduction to Media Research | 4 (4-0-8) |
| ICEM 302 | Media Law and Ethics | 4 (4-0-8) |

1. Television Production Major

Required Courses

76 credits

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|------------|
| ICTV | 101 | TV Production Techniques | 4 (0-8-4) |
| ICTV | 102 | Multi-Camera Production | 4 (0-8-4) |
| ICTV | 201 | TV Production Design | 4 (1-6-5) |
| ICTV | 202 | TV On-Location Production | 4 (0-8-4) |
| ICTV | 203 | TV Pre-Production | 4 (1-6-5) |
| ICTV | 204 | TV Scriptwriting | 4 (1-6-5) |
| ICTV | 205 | TV Production Procedures | 4 (0-8-4) |
| ICTV | 206 | TV Scenery and Props Design | 4 (0-8-4) |
| ICTV | 301 | TV Post Production | 4 (0-8-4) |
| ICTV | 302 | TV News Gathering and Reporting | 4 (0-8-4) |
| ICTV | 303 | TV Marketing and Sales | 4 (1-6-5) |
| ICTV | 304 | Directing TV Drama | 4 (0-8-4) |
| ICTV | 305 | Documentary Program Production | 4 (0-8-4) |
| ICTV | 399 | International Field Study in TV Production | 4 (0-12-4) |
| ICTV | 401 | TV Drama | 4 (0-8-4) |
| ICTV | 455 | Professional Internship in TV Production | 4 (0-12-4) |
| ICTV | 498 | TV Production Final Project I | 4 (0-12-4) |
| ICTV | 499 | TV Production Final Project II | 8 (0-24-8) |

Elective Courses**16 credits**

| | | | |
|------|-----|---|-----------|
| ICTV | 351 | TV Drama Scriptwriting | 4 (0-8-4) |
| ICTV | 352 | Wardrobe for TV and Film | 4 (0-8-4) |
| ICTV | 353 | Make-up for TV and film | 4 (1-6-5) |
| ICTV | 354 | News and Current Affairs Program | 4 (0-8-4) |
| ICTV | 355 | Special Effects Make-up for TV and Film | 4 (1-6-5) |
| ICTV | 370 | Seminar in Television Production | 2 (2-0-4) |
| ICTV | 380 | Selected Topics in TV Production | 4 (0-8-4) |
| ICTV | 381 | Independent Study in TV Production | 4 (0-8-4) |
| ICFM | 101 | Film Production | 4 (0-8-4) |
| ICFM | 102 | Introduction to Film | 4 (1-6-5) |
| ICFM | 201 | Cinematography | 4 (0-8-4) |
| ICFM | 203 | Scriptwriting for Film | 4 (1-6-5) |
| ICFM | 204 | Film Post-Production I | 4 (0-8-4) |
| ICFM | 251 | Music Video Production | 4 (0-8-4) |
| ICFM | 351 | Film Criticism | 4 (2-4-6) |
| ICFM | 402 | Film Producing | 4 (0-8-4) |
| ICAM | 101 | Introduction to Animation | 4 (1-6-5) |
| ICAM | 102 | Color Theory and Application | 4 (1-6-5) |
| ICAM | 103 | Drawing for Animation I | 4 (0-8-4) |
| ICAM | 201 | Character Design I | 4 (1-6-5) |

2. Film Production Major**Required Courses****76 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|------------|
| ICFM | 101 | Film Production | 4 (0-8-4) |
| ICFM | 102 | Introduction to Film | 4 (1-6-5) |
| ICFM | 201 | Cinematography | 4 (0-8-4) |
| ICFM | 202 | Film Analysis | 4 (2-4-6) |
| ICFM | 203 | Scriptwriting for Film | 4 (1-6-5) |
| ICFM | 204 | Film Post-Production I | 4 (0-8-4) |
| ICFM | 301 | Acting for Film | 4 (0-8-4) |
| ICFM | 302 | Film Directing | 4 (0-8-4) |
| ICFM | 303 | Advanced Film Production | 4 (0-8-4) |
| ICFM | 304 | Sound in Film | 4 (0-8-4) |
| ICFM | 305 | Film Post-Production II | 4 (0-8-4) |
| ICFM | 306 | Film Laboratory Procedures | 4 (0-8-4) |
| ICFM | 399 | International Field Study in Film Production | 4 (0-12-4) |
| ICFM | 401 | Film Editing | 4 (0-8-4) |
| ICFM | 402 | Film Producing | 4 (0-8-4) |
| ICFM | 455 | Professional Internship in Film Production | 4 (0-12-4) |
| ICFM | 498 | Film Production Final Project I | 4 (0-12-4) |
| ICFM | 499 | Film Production Final Project II | 8 (0-24-8) |

Elective Courses**16 credits**

| | | | |
|------|-----|---|-----------|
| ICFM | 251 | Music Video Production | 4 (0-8-4) |
| ICFM | 351 | Film Criticism | 4 (2-4-6) |
| ICFM | 370 | Seminar in Film Production | 2 (2-0-4) |
| ICFM | 380 | Selected Topics in Film Production | 4 (0-8-4) |
| ICFM | 381 | Independent Study in Film Production | 4 (0-8-4) |
| ICTV | 101 | TV Production Techniques | 4 (1-6-5) |
| ICTV | 102 | Multi-Camera Production | 4 (0-8-4) |
| ICTV | 201 | TV Production Design | 4 (1-6-5) |
| ICTV | 202 | TV On-Location Production | 4 (0-8-4) |
| ICTV | 352 | Wardrobe for TV and Film | 4 (0-8-4) |
| ICTV | 353 | Make-up for TV and Film | 4 (1-6-5) |
| ICTV | 355 | Special Effects Make-up for TV and Film | 4 (1-6-5) |
| ICAM | 101 | Introduction to Animation | 4 (1-6-5) |
| ICAM | 102 | Color Theory and Application | 4 (1-6-5) |
| ICAM | 103 | Drawing for Animation I | 4 (0-8-4) |
| ICAM | 201 | Character Design I | 4 (1-6-5) |
| ICAM | 203 | Storyboarding I | 4 (1-6-5) |
| ICAM | 356 | Media Compositing | 4 (2-4-6) |

3. Animation Production Major**Required Courses****76 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | |
|----------|---|------------|
| ICAM 101 | Introduction to Animation | 4 (1-6-5) |
| ICAM 102 | Color Theory and Application | 4 (1-6-5) |
| ICAM 103 | Drawing for Animation I | 4 (0-8-4) |
| ICAM 104 | 2D Animation I | 4 (0-8-4) |
| ICAM 201 | Character Design I | 4 (1-6-5) |
| ICAM 202 | Drawing for Animation II | 4 (0-8-4) |
| ICAM 203 | Storyboarding I | 4 (1-6-5) |
| ICAM 204 | 2D Animation II | 4 (0-8-4) |
| ICAM 205 | Computer Programs for Animation | 4 (0-8-4) |
| ICAM 206 | Storyboarding II | 4 (0-8-4) |
| ICAM 301 | Layout Design I | 4 (0-8-4) |
| ICAM 302 | 3D Animation I | 4 (0-8-4) |
| ICAM 303 | 3D Animation II | 4 (0-8-4) |
| ICAM 304 | Character Design II | 4 (0-8-4) |
| ICAM 398 | Professional Internship in Animation Production | 4 (0-12-4) |
| ICAM 399 | International Field Study in Animation Production | 4 (0-12-4) |
| ICAM 498 | Animation Production Final Project I | 4 (0-12-4) |
| ICAM 499 | Animation Production Final Project II | 8 (0-24-8) |

Elective Courses**16 credits**

| | | |
|----------|---|-----------|
| ICAM 351 | Animation Production Management | 4 (4-0-8) |
| ICAM 352 | Layout Design II | 4 (0-8-4) |
| ICAM 353 | Painting I | 4 (0-8-4) |
| ICAM 354 | Painting II | 4 (0-8-4) |
| ICAM 355 | Computer and Video Games | 4 (2-4-6) |
| ICAM 356 | Media Compositing | 4 (2-4-6) |
| ICAM 370 | Seminar in Animation Production | 2 (2-0-4) |
| ICAM 380 | Selected Topics in Animation Production | 4 (0-8-4) |
| ICAM 381 | Independent Study in Animation Production | 4 (0-8-4) |
| ICTV 101 | TV Production Techniques | 4 (0-8-4) |
| ICTV 102 | Multi-Camera Production | 4 (0-8-4) |
| ICTV 201 | TV Production Design | 4 (1-6-5) |
| ICTV 202 | TV On-Location Production | 4 (0-8-4) |
| ICTV 204 | TV Scriptwriting | 4 (1-6-5) |
| ICFM 101 | Film Production | 4 (0-8-4) |
| ICFM 102 | Introduction to Film | 4 (1-6-5) |
| ICFM 201 | Cinematography | 4 (0-8-4) |
| ICFM 203 | Scriptwriting for Film | 4 (1-6-5) |
| ICFM 204 | Film Post-Production I | 4 (0-8-4) |
| ICFM 251 | Music Video Production | 4 (0-8-4) |
| ICFM 304 | Sound in Film | 4 (0-8-4) |
| ICFM 351 | Film Criticism | 4 (2-4-6) |
| ICFM 402 | Film Producing | 4 (0-8-4) |

Free Elective Courses**8 credits**

Entertainment Media students can take any courses offered by MUIC as a free elective.

SCIENCE DIVISION

The Science Division offers 8 major programs in Applied Mathematics, Biological Science, Chemistry, Computer Science, Environment, Food Science and Technology, Nursing Science, and Physics.

| DIVISION CHAIRMAN |

Professor Maleeya Kruatrachue, B.S. (Botany; University of California, Davis, USA), M.S. (Botany; University of Wisconsin, USA), Ph.D. (Botany; University of Wisconsin, USA)

| PROGRAM DIRECTORS |

| Applied Mathematics Program |

Associate Professor Chinda Achariyakul, B.A. (University of Illinois, USA), M.A. (Mathematics; University of Illinois, USA), Ph.D. (Mathematics; Southern Illinois University, USA)

| Biological Program |

Associate Professor Prayad Pokethitiyook, B.Sc. (Biology; Mahidol University), M.Sc. (Environmental Biology; Mahidol University), M.Sc. (Environmental Science and Engineering; Virginia Technology, USA), Ph.D. (Chemical Engineering; University of Melbourne, Australia)

| Chemistry Program |

Dr. Pakorn Bovonsombat, B.A. (Chemistry; Vassar College, USA), M.A. (Chemistry; Vassar College), M.A. (Chemistry; Columbia University, USA), Ph.D. (Organic Chemistry; New York University, USA), Postdoctoral (Organic Chemistry; New York University), Postdoctoral Fellow (Photochemistry; The Rockefeller University, USA)

| Computer Science Program |

Dr. Udom Silparcha, B.Eng (Computer Engineering, 2nd class honor; King Mongkut's Institute of Technology), M.Sc. (Computer Science; Ball State University, USA), Ph.D (Computer Science; University of New South Wales, Australia)

| Environment Program |

Assistant Professor Kobkaew Manomaipiboon, B.Eng. (Civil Engineering; Kobe University, Japan), M.Eng. (Architecture and Civil Engineering; Kobe University, Japan), Dr.P.H. (Environmental Science; National Institute of Public Health, Japan)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| Food Science and Technology Program |

Assistant Professor Anadi Nitithamyong, B.Sc. (Food Technology; Chulalongkorn University), M.Sc. (Food Science; University of Wisconsin-Madison, USA), Ph.D. (Food Science; University of Wisconsin-Madison, USA)

| Nursing Science Program |

Assistant Professor Wanida Sanasuttipun, Diploma in Nursing and Midwifery (Nursing; Mahidol University), M.S. (Nursing; Mahidol University), Ph.D. (Nursing; University of Pittsburgh, Pennsylvania, USA)

| Physics Program |

Assistant Professor Santi Wattanayon, B. Sc. (Physics; Chulalongkorn University), M.Sc. (Physics; Case Western Reserve University, USA), Ph.D. (Materials Science; Case Western Reserve University, USA)

| SENIOR PROGRAM COORDINATORS |**| Natural Science Program |**

Mr. Laird Allan, B.S. (Biology; Bates College, USA), M.S. (Marine Biology; University of Delaware, USA)

| PROGRAM COORDINATORS |**| Computer Science Program |**

Mr. Poramin Bheganan, B.Sc. (Statistics; Chulalongkorn University), M.Sc. (Information Management; Asian Institute of Technology)

Dr. Krittaya Leelawong, B.S. (Applied Mathematics; King Mongkut Institute of Technology, Ladkrabang), M.S. (Computer Science; Vanderbilt University, USA), Ph.D. (Computer Science; Vanderbilt University, USA)

| FACULTY MEMBERS |**| Full-Time |**

Mr. Brian Phillips, M.B.A. (Financial Emphasis; University of Southern Colorado, USA)

Dr. Michael Hurt, B.S. (Microbiology; University of Texas, Arlington, Texas, USA), Ph.D. (Molecular Microbiology; University of Texas, Southwestern Medical Center, Dallas, Texas, USA)

Dr. Nirutchara Laohaprasit, B.Sc. (Food Technology; Chulalongkorn University), M.S. (Food Science & Technology; University of New South Wales, Australia) Ph.D. (Food Science & Technology; University of New South Wales, Australia)

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Ms. Valeeratana Sinsawasdi, B.S. (Food Science and Technology; Chiang Mai University, Thailand, M.S. (Food Science; University of Hawaii, USA)

Dr. Wayne N. Phillips, B.Sc. (Hons) (Human Environmental Science; King's College University, UK), M.Sc. (Aquatic Resource Management; King's College University, UK), Ph.D. (Biology; Essex University, UK)

| Part-Time |

Professor Amnuay Thithapandha, B.Sc., M.S., Ph.D.: Faculty of Medicine, Ramathibodi Hospital, Mahidol University

Associate Professor Anuchat Pongsomlee, B.A., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Dr. Aram Tangboondouangjit, Ph.D.: Faculty of Science, Mahidol University

Dr. Boonyanit Mathayomchan, Ph.D.: Fabrinet Co., Ltd.

Associate Professor Chainarong Cherdchu, B.Sc., M.Sc., Ph.D.: Chemical Metrology and Biometry Department, National Institute of Metrology

Associate Professor Chalie Navanugraha, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Dr. Choowong Auesukaree, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Chounchom Charoenyooth, B.Sc., M.A., M.C.H., Ph.D.: Faculty of Nursing, Mahidol University

Dr. Duanpen Lertpibulpanya, Ph.D.: Laboratory of Medicinal Chemistry, Chulabhorn Research Institute

Associate Professor Fongcum Tilokskulchai, B.Sc., M.S., Ph.D.: Faculty of Nursing, Mahidol University

Professor I Ming Tang, B.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Junya Pattara-archachai, B.Sc., M.Sc., M.S.P.H., Ph.D.: Faculty of Medicine, Thammasat University

Assistant Professor Kampanad Bhaktikul, B.Ed., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University.

Assistant Professor Kanaungnit Pongthavornkamol, B.Sc., M.Sc., Ph.D.: Faculty of Nursing, Mahidol University

Dr. Keerin Mekhora, B.Sc., M.Sc., Ph.D.: Faculty of Physical Therapy and Applied Movement Science Project, Siriraj Hospital, Mahidol University

Associate Professor Kobkul Phanchaenworakul, B.Sc., M.S., Ph.D.: Faculty of Nursing, Mahidol University

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Associate Professor Manus Watanasak, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Dr. Michael Antony Allen, B.Sc., Ph.D., Faculty of Science, Mahidol University

Associate Professor Naiphinich Kotchabhakdi, B.Sc., Ph.D.: Institute of Sciences and Technology for Development

Assistant Professor Nantawon Suwonnaroop, Cert. (Nursing), M.S., Ph.D.: Faculty of Nursing, Mahidol University

Associate Professor Nardtida Tumrasvin, B.S., M.S.: Faculty of Science, Mahidol University

Dr. Narumon Emarat, B.Sc., Ph.D., Faculty of Science, Mahidol University

Assistant Professor Nittaya Sinsuksai, B.Sc. (Nursing), M.S. (Human Repro & Population Planning), Ph.D. (Nursing)

Assistant Professor Orasa Pancharoen, B.Sc., (Pharm.), M.S., Ph.D., (Organic Chemistry): Faculty of Science, Silpakorn Univeristy

Assistant Professor Pairoj Luangpituksa, B.Sc., M.Agr., D.Agr. Chem: Faculty of Science, Mahidol University

Dr. Pahol Kosiyachinda, B.Sc., Ph.D. Faculty of Science, Mahidol University

Assistant Professor Pakorn Suwanich, B.Sc., B.P.A., M.S.: Faculty of Environment and Resource Studies, Mahidol University

Associate Professor Panya Khaimuk, M.D.: College of Sport Science and Technology, Mahidol University

Assistant Professor Patana Thavipoke, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Mr. Patompong Saguanwong, B.A., M.A., MBA.: Faculty of Environment and Resource Studies, Mahidol University

Professor Peerapan Tan-Ariya, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Piyakarn Tearlisup, B.Sc., M.Sc.: Faculty of Environment and Resource Studies, Mahidol University

Prof. Pongpit Piyapongse, Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Associate Professor Pongsri Srimoragot, B.Sc., M.S.C., DNS.: Faculty of Nursing, Mahidol University

Professor Pornsawan Visoothiviseth, B.Sc., M.S., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Prapaisri P. Sirichakwal, B.Sc., M.Sc., Ph.D.: Institute of Nutrition, Mahidol University

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Associate Professor Prapee Sretarugsa, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Prapin Wilairat, B.Sc. (Hons), M.S., Ph.D., Faculty of Science, Mahidol University

Associate Professor Pratap Singhasivanon, B.S., M.P.H., Ph.D.: Faculty of Tropical Medicine, Mahidol University

Assistant Professor Rachanee Sujjantararat, B.Ed., M.Ed., DSN.: Faculty of Nursing, Mahidol University

Dr. Rapee Boonplueang, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Raywadee Roachanakanan, B.Sc., M.Sc. (Hons): Faculty of Environment and Resource Studies, Mahidol University

Dr. Roppon Picha, B.S., M.S, Ph.D.: Office of Atoms for Peace

Assistant Professor Rungchai Chaunchaiyakul, B.Sc., M.Sc., Ph.D.: College of Sport Science and Technology, Mahidol University

Associate Professor Sansanee Chaiyaroj, Ph.D.: Faculty of Science, Mahidol University

Associate Professor Sansanee Choowaew, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Associate Professor Sayam Aroonsrimorakot, B.Ed., B.Sc., M.Sc.: Faculty of Environment and Resource Studies, Mahidol University

Assistant Professor Sittipong Dilokwanich, B.Sc., M.Env.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Assistant Professor Sittiwat Lertsiri, B.Agr., M.Agr., Ph.D.: Faculty of Science, Mahidol University

Professor Somjit Supannatas, B.Ed., M.P.H., Ph.D., Faculty of Public Health, Mahasarakham University

Emeritus Professor Sititaya Sirisinha, D.M.D., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Suda Riengrojpitak, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Sujinda Thanaphum, B.Sc., M.S., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Sukajit Leelaprute, B.Sc., M.Sc., Ph.D., Faculty of Science, Mahidol University.

Associate Professor Sumalee Tungpradabkul, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Dr. Supeecha Kumkate, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Suvaluck Satumanatpan, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Associate Professor Taweeratana Siwadune, B.S., M.A.S.: Faculty of Science, Mahidol University

Dr. Thitinun Sumranwanich, B.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Vacharobon Thirakhuft, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Associate Professor Visit Chavisit, Ph.D.: Institute of Nutrition, Mahidol University

Assistant Professor Wanida Koo-amornpattana, B., M., Ph.D.: Faculty of Engineering, Mahidol University

Assistant Professor Wannapong Triampho, B.Sc., M.Sc., Ph.D., Faculty of Science, Mahidol University

Associate Professor Wantanee Trakulrangsi, B.Sc., M.Sc.: Faculty of Science, Mahidol University

Associate Professor Wilai Noonpakdee, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

Assistant Professor Winai Nutmakul, B.Sc., M.Sc., Ph.D.: Faculty of Environment and Resource Studies, Mahidol University

Dr. Wisuit Pradidaracheep, B.Sc., M.Sc., Ph.D.: Faculty of Medicine, Srinakarinwirot University

Associate Professor Yajai Sithhimongkol, B.Sc., M.S., M.S., Ph.D.: Faculty of Nursing, Mahidol University

Professor Yongwimol Lenbury, B.Sc., M.Sc., Ph.D.: Faculty of Science, Mahidol University

| RESEARCH INTERESTS |

Assistant Professor Kobkaew Manomaipiboon:

- Climate Change and Health Impact
- Water Resources Management
- Lifestyle in Urban Environment

Dr. Krittaya Leelawong:

- Interactive learning environments; learning-by-teaching systems

Mr. Laird Allan:

- Biology and Ecology of Aquatic Organisms; Water Resources; Marine Resources

Professor Maleeya Kruatrachue:

- Phytoremediation of Heavy Metals Contaminated Sites
- Toxic Effects of Heavy Metals and Pesticides on Aquatic Organisms

Dr. Michael Hurt:

- Discovery of New Anti-Microbial Molecules, Pathogenic Mechanisms, Amoebic Ocular Disease, and Mechanisms of Acanthamoeba Keratitis

Dr. Pakorn Bovonsombat:

- Hypervalent-iodine Chemistries
- Aromatic Halogenation of Natural Aromatic Amino Acids
- Development of α -halogenations of enones

- Electrophilic cyanation
- Rearrangement and Chemistry of Alkynols

Associate Professor Prayad Pokethitiyook:

- Bioremediation of Organics and Metals Contaminated Areas
- Water Quality Assessment, Stream Sanitation
- Environmental Biotechnology, emphasizing Toxic Organic Compound Biodegradation

Mr. Poramin Bhenganan:

- System Development Methodology
- Information Technology and Enterprise Resource Planning

Dr. Wayne Phillips:

- Aquatic Ecology, Primary Productivity, Marine Biology
- Aquatic Photosynthesis

APPLIED MATHEMATICS MAJOR

| DEGREES OFFERED |

Bachelor of Science (Applied Mathematics)
B.Sc. (Applied Mathematics)

| THE FIELD |

Mathematics is one of the oldest human disciplines dating back to the earliest civilizations. Since its origins, it has proved to be an indispensable tool for understanding the world around us. Mathematics is the language of modern science and basic training in the discipline. It is essential for those who want to understand the important scientific developments of our time.

MUIC offers a mathematics major that combines the benefits of a rounded general education in science and humanities with applied mathematics to produce high caliber graduates capable of undertaking graduate study, secondary school teaching and careers such as IT related professions, Finance, Banking and actuarial science.

Mathematics is the study of and search for patterns, and permeates almost every aspect of life. It plays a fundamental role both in the sciences and in the world of commerce and finance. It also provides the tools and skills we need for dealing with the most abstract concepts. An understanding of mathematics is also extremely useful for students in the social sciences and valuable for anyone interested in the full range of human culture and the development of abstract thought.

| CAREER OPPORTUNITIES |

Excellent career opportunities for bi-lingual and multi-lingual applied mathematics graduates exist. Even in areas where the application of mathematics may not be obvious, a mathematical education provides training in logical and analytical skills, which are invaluable in many industries. As well as the obvious careers in teaching and science, opportunities exist in insurance companies, industry and commerce, economics, genetics, meteorology and forestry.

| CURRICULUM STRUCTURE |**| Applied Mathematics Major |**

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 60 |
| Core Science Courses | 28 |
| Required Major Courses | 64 |
| Elective Major Courses | 28 |
| Free Elective Courses | 8 |
| TOTAL | 188 |

| COURSE LIST |**General Education Courses****60 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Natural Sciences**16 credits**

| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

| | | | |
|------|-----|------------------------------------|-----------|
| ICHM | 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM | 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM | 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM | 105 | Music Appreciation | 4 (4-0-8) |
| ICHM | 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM | 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM | 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM | 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM | 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM | 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM | 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM | 218 | Film Studies | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM | 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM | 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM | 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM | 223 | Thai Arts | 4 (4-0-8) |
| ICHM | 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM | 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM | 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM | 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML | 101 | Elementary German I | 4 (4-0-8) |
| ICML | 102 | Elementary German II | 4 (4-0-8) |
| ICML | 103 | Elementary German III | 4 (4-0-8) |
| ICML | 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML | 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML | 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML | 121 | Elementary French I | 4 (4-0-8) |

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| | | | |
|------|-----|---|-----------|
| ICML | 122 | Elementary French II | 4 (4-0-8) |
| ICML | 123 | Elementary French III | 4 (4-0-8) |
| ICML | 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML | 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML | 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML | 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML | 161 | Elementary Thai I | 4 (4-0-8) |
| ICML | 162 | Elementary Thai II | 4 (4-0-8) |
| ICML | 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**3 credits**

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| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**120 credits****Core Science Courses****28 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICCH | 210 | General Chemistry I | 4 (4-0-8) |
| ICCH | 221 | Organic Chemistry I | 4 (4-0-8) |
| ICMA | 211 | General Mathematics I | 4 (4-0-8) |
| ICPY | 211 | General Physics I | 4 (4-0-8) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (3-2-7) |

Required Major Courses**64 credits**

| | | | |
|------|-----|---|------------|
| ICCS | 199 | Computer Concepts and Fundamentals | 4 (4-0-8) |
| ICCS | 201 | Computer Programming I | 4 (4-0-8) |
| ICCS | 203 | Computer Programming II | 4 (4-0-8) |
| ICMA | 212 | General Mathematics II | 4 (4-0-8) |
| ICMA | 214 | Ordinary Differential Equations | 4 (4-0-8) |
| ICMA | 222 | Introduction to Pascal | 4 (4-0-8) |
| ICMA | 321 | Linear Algebra | 4 (4-0-8) |
| ICMA | 322 | Advanced Calculus | 4 (4-0-8) |
| ICMA | 323 | Partial Differential Equations | 4 (4-0-8) |
| ICMA | 331 | Special Functions | 4 (4-0-8) |
| ICMA | 335 | Theory of Complex Numbers | 4 (4-0-8) |
| ICMA | 336 | Numerical Analysis | 4 (4-0-8) |
| ICMA | 424 | Abstract Algebra | 4 (4-0-8) |
| ICMA | 442 | Discrete Mathematics | 4 (4-0-8) |
| ICMA | 444 | Research Project in Applied Mathematics | 6 (0-12-6) |
| ICMA | 445 | Seminar in Applied Mathematics | 2 (2-0-4) |

Elective Major Courses**28 credits**

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| | | |
|----------|--|-----------|
| ICMA 324 | Real Analysis | 4 (4-0-8) |
| ICMA 333 | Boundary Value Problems | 4 (4-0-8) |
| ICMA 341 | Fluid Dynamics | 4 (4-0-8) |
| ICMA 423 | Set Theory | 4 (4-0-8) |
| ICMA 425 | Introduction to Topology | 4 (4-0-8) |
| ICMA 441 | Viscous Fluid | 4 (4-0-8) |
| ICSC 301 | Data Collection and Laboratory Methods | 4 (3-2-7) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

BIOLOGICAL SCIENCE MAJOR

| DEGREES OFFERED |

1. Bachelor of Science (Biological Sciences: Biology)
2. Bachelor of Science (Biological Sciences: Biomedical Science)
B.Sc. (Biological Sciences)

| THE FIELD |

The Biological Science Program of MUIC offers quality education which allows students entry into a wide variety of occupations, professional degree programs, and advanced research degree programs. The courses offered are surprisingly diverse for a college as small as MUIC, and are interesting and challenging. Required courses emphasize the basic principles required for all advanced programs. These principles cover every field from environmental science, population biology and regulatory biology to cell and molecular biology. The program offers two concentrations: Biology and Biomedical Science.

Biology is the science of life. The vast scope of its subject matter makes biology an extremely diverse field of study. This diversity stems not only from the tremendous variety of life forms with which we share our planet, but also from the multiple levels of organization available for biological investigation. Given an organism, a biologist might choose to investigate how it behaves, how it fits into its ecosystem, the mechanisms by which its genes shape its appearance, what its ancestors were like, how its cells divide, how it grows and develops, or how it derives energy from nourishment. Biological inquiry encompasses perspectives from the planetary to the submicroscopic.

Biomedical sciences provide an understanding of the human body and the way it works. Graduates are prepared to pursue professions allied with medical research. These include areas such as human anatomy and physiology, pharmacology and toxicology, pathobiology, neurobiology, epidemiology and tropical medicine.

| CAREER OPPORTUNITIES |

For many biology majors, undergraduate studies are preliminary to the pursuit of an advanced degree that will lead to a career as a medical doctor, veterinarian, academic, or scientist. A graduate degree is not, however, required to pursue a career related to biology. A bachelor's degree in biology can lead to employment in the large and growing biotechnology, health care, or pharmaceutical industries. Many openings in the dynamic, high-tech fields require a degree in the life sciences. Biology majors are likewise well prepared for careers as secondary-school science teachers, certain government agencies, including the departments of natural resources, health departments, state or national parks, and environmental regulatory offices. Businesses and industries also hire biologists to conduct technical research, to sell scientific equipment and supplies, and to work as environmental consultants. Many students interested in medical careers major in biology as undergraduates. Teaching biology in high school or middle school is another career choice of biology majors.

The aim of the biomedical science concentration is to provide graduates with the scientific, technical, communication and teamwork skills suitable for direct entry into a wide range of biomedical careers. Graduates are able to work in industry, hospitals, medical schools or graduate programs in all fields of biological sciences and medical sciences (anatomy, physiology, microbiology, pathobiology, pharmacology). Biomedical researchers apply their scientific knowledge to a range of problems in medicine and the health sciences. Depending on their area of interest, they investigate aspects of the structure and function of the human body, disease and disease prevention.

| CURRICULUM STRUCTURE |

| Biological Science Major |

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 60 |
| Core Science Courses | 32 |
| Required Major Courses | 52 |
| Elective Major Courses | 32 |
| Free Elective Courses | 8 |
| TOTAL | 184 |

| COURSE LIST |

| | |
|----------------------------------|-------------------|
| General Education Courses | 60 credits |
| English Communication | 16 credits |

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| | | | |
|------|-----|--|-----------|
| ICCM | 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM | 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM | 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM | 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM | 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM | 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM | 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM | 204 | Creative Writing | 4 (4-0-8) |
| ICEG | 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG | 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG | 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG | 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

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| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

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| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**116 credits****Core Science Courses****32 credits**

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| | | | |
|------|-----|---------------------------------------|-----------|
| ICCH | 111 | General Chemistry | 4 (3-2-7) |
| ICCH | 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICMA | 215 | Calculus | 4 (4-0-8) |
| ICPY | 210 | General Physics | 4 (3-2-7) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (3-2-7) |
| ICSC | 333 | Statistics for Research | 4 (4-0-8) |

Required Major Courses**52 credits**

| | | | |
|------|-----|---|------------|
| ICBI | 102 | Integrated Laboratory in Biological Sciences I | 2 (0-4-2) |
| ICBI | 202 | Integrated Laboratory in Biological Sciences II | 2 (0-4-2) |
| ICBI | 204 | Developmental Biology | 4 (4-0-8) |
| ICBI | 211 | General Microbiology | 4 (3-2-7) |
| ICBI | 212 | General Biochemistry | 4 (3-2-7) |
| ICBI | 213 | Genetics | 4 (4-0-8) |
| ICBI | 216 | Cell Biology | 4 (4-0-8) |
| ICBI | 231 | Plant Biology | 4 (3-2-7) |
| ICBI | 308 | Molecular Biology | 4 (4-0-8) |
| ICBI | 344 | Environmental Science | 4 (4-0-8) |
| ICBI | 412 | Parasitology | 4 (3-2-7) |
| ICBI | 464 | Cell Technology | 4 (4-0-8) |
| ICBI | 491 | Seminar in Biological Sciences | 2 (2-0-4) |
| ICBI | 498 | Research Project in Biological Sciences | 6 (0-12-6) |

Elective Major Courses**32 credits****A. BIOLOGY CONCENTRATION**

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| | | | |
|------|-----|--|-----------|
| ICBI | 221 | Animal Biology | 4 (3-2-7) |
| ICBI | 241 | Ecology and Conservation | 4 (3-2-7) |
| ICBI | 255 | Introduction to Oceanography | 4 (3-2-7) |
| ICBI | 256 | Sustainable Development | 4 (4-0-8) |
| ICBI | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |
| ICBI | 314 | Tropical Ecology | 4 (3-2-7) |
| ICBI | 315 | Microbial Physiology and Genetics | 4 (4-0-8) |
| ICBI | 316 | Environmental Microbiology | 4 (3-2-7) |
| ICBI | 317 | Aquatic Ecology | 4 (3-2-7) |
| ICBI | 318 | Aquatic Ecology Field Course | 4 (0-8-4) |
| ICBI | 319 | Conservation Biology | 4 (4-0-8) |
| ICBI | 320 | Population and Community Ecology | 4 (3-2-7) |
| ICBI | 321 | Invertebrate Zoology | 4 (3-2-7) |
| ICBI | 322 | Vertebrate Zoology | 4 (3-2-7) |
| ICBI | 323 | Experimental Embryology | 4 (3-2-7) |
| ICBI | 324 | Reproductive Biology | 4 (3-2-7) |
| ICBI | 331 | Plant Physiology | 4 (3-2-7) |
| ICBI | 413 | Microtechniques in Biology | 4 (3-2-7) |
| ICBI | 414 | Industrial Microbiology | 4 (3-2-7) |
| ICBI | 415 | Biotechnology | 4 (4-0-8) |
| ICBI | 421 | Entomology | 4 (3-2-7) |
| ICBI | 422 | Animal Behavior | 4 (4-0-8) |
| ICBI | 431 | Plant Tissue Culture | 4 (3-2-7) |
| ICBI | 441 | Marine Biology | 4 (3-2-7) |
| ICBI | 442 | Pollution Biology | 4 (3-2-7) |
| ICBI | 465 | Cytogenetics | 4 (3-2-7) |
| ICFS | 372 | Utilization of Water and Wastewater Treatment | 2 (2-0-4) |

B. BIOMEDICAL SCIENCE CONCENTRATION

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| | | | |
|------|-----|------------------------------------|-----------|
| ICBI | 203 | Comparative Biology of Vertebrates | 4 (3-2-7) |
| ICBI | 206 | Medical Ethics | 2 (2-0-4) |
| ICBI | 301 | Functional Histology | 4 (3-2-7) |
| ICBI | 304 | Basic Immunology | 2 (2-0-4) |
| ICBI | 305 | Human Biology I | 4 (2-4-6) |
| ICBI | 306 | Human Biology II | 4 (2-4-6) |
| ICBI | 307 | Nutrition and Dietetics | 4 (4-0-8) |
| ICBI | 309 | Pathobiology | 4 (3-2-7) |
| ICBI | 310 | Mammalian Physiology | 4 (3-2-7) |
| ICBI | 311 | Pharmacology and Toxicology | 4 (3-2-7) |
| ICBI | 341 | Neurobiology | 4 (3-2-7) |
| ICBI | 342 | Developmental Neurobiology | 4 (4-0-8) |
| ICBI | 343 | Endocrinology | 4 (3-2-7) |
| ICBI | 391 | Health Psychology | 4 (4-0-8) |
| ICBI | 401 | Medical Physiology | 4 (4-0-8) |
| ICBI | 402 | Epidemiology | 4 (3-2-7) |
| ICBI | 403 | Introduction to Tropical Medicine | 4 (4-0-8) |
| ICBI | 405 | Community Health | 4 (3-2-7) |
| ICBI | 406 | Ergonomics | 2 (2-0-4) |
| ICBI | 407 | Occupational Health and Safety | 4 (4-0-8) |
| ICBI | 411 | Psychopathology | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

CHEMISTRY MAJOR

| DEGREES OFFERED |

Bachelor of Science (Chemistry)
B.Sc. (Chemistry)

| THE FIELD |

Chemistry is one of the physical sciences subjects that, over many years of development - often in conjunction with the evolution of modern-day physics, have become an essential, yet a hidden and little-known force behind the births of many objects and useful materials that we often take for granted in modern-day life. The study of chemistry is vital towards understanding the materials that surround this world. Behind the sciences and the industries of pharmaceuticals, petroleum, petrochemical, biological sciences, polymer sciences, automotive catalysts and many others, lay the concepts and application of chemistry. Modern-day chemistry has developed into a subject where knowledge of modern physics, particularly quantum mechanics, has become so interwoven, and so indispensable towards understanding many reactions and molecular structural characterizations. Moreover, the discipline has undergone so much realignment that many of the present day research topics have become more interfaced and intertwined with those in the biological sciences and physics.

The Chemistry Program at Mahidol University International College reflects and is built on the changes that have occurred in the subject over the last few decades. Chemistry majors will be taught with full rigor the essential but key subjects such as General Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry and Physical Chemistry, with one trimester allotted for mandatory Quantum Mechanics. Reflecting the modern trends of chemistry, the majors by means of selecting appropriate elective courses, can orient their preference towards physical chemistry-oriented elective courses, or biological chemistry or even towards industrial chemistry selections. Though not called concentration in the official sense, the elective courses in the Chemistry Program offer the opportunity for the Chemistry majors to orient their elective-course selection towards a concentration in physical chemistry, organic chemistry, biological chemistry, analytical chemistry or industrial/applied chemistry.

| CAREER OPPORTUNITIES |

Career opportunities include lucrative positions with pharmaceutical companies, research positions in all fields of sciences and industry and graduate studies. There are many opportunities for chemists in governmental positions at the local, state and national levels. In addition, chemists are engaged in a large number of related fields which include medicine, dentistry, law, secondary school education, administration, technical sales, scientific journalism and illustrative arts.

| CURRICULUM STRUCTURE |**| Chemistry Major |**

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 60 |
| Core Science Courses | 28 |
| Required Major Courses | 62 |
| Elective Major Courses | 30 |
| Free Elective Courses | 8 |
| TOTAL | 188 |

| COURSE LIST |**General Education Courses****60 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

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| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**120 credits****Core Science Courses****28 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICCH | 210 | General Chemistry I | 4 (4-0-8) |
| ICCH | 221 | Organic Chemistry I | 4 (4-0-8) |
| ICMA | 211 | General Mathematics I | 4 (4-0-8) |
| ICPY | 211 | General Physics I | 4 (4-0-8) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (4-0-8) |

Required Major Courses**62 credits**

| | | | |
|------|-----|--|------------|
| ICCH | 211 | General Chemistry II | 4 (4-0-8) |
| ICCH | 222 | Organic Chemistry II | 4 (4-0-8) |
| ICCH | 224 | Integrated Laboratory Techniques in Chemistry I | 2 (0-4-2) |
| ICCH | 311 | Analytical Chemistry | 4 (3-2-7) |
| ICCH | 316 | Modern Methods of Analysis | 4 (3-2-7) |
| ICCH | 321 | Organic Spectroscopy | 4 (4-0-8) |
| ICCH | 322 | Advanced Organic Chemistry | 4 (4-0-8) |
| ICCH | 329 | Integrated Laboratory Techniques in Chemistry II | 2 (0-4-2) |
| ICCH | 333 | Physical Chemistry I | 4 (4-0-8) |
| ICCH | 334 | Physical Chemistry II | 4 (4-0-8) |
| ICCH | 381 | Mathematics for Chemists | 4 (4-0-8) |
| ICCH | 390 | Organic Chemistry Laboratory Techniques | 2 (0-4-2) |
| ICCH | 441 | Inorganic Chemistry I | 4 (4-0-8) |
| ICCH | 442 | Inorganic Chemistry II | 4 (4-0-8) |
| ICCH | 454 | Seminar in Chemistry | 2 (2-0-4) |
| ICCH | 455 | Research Project in Chemistry | 6 (0-12-6) |
| ICBI | 212 | General Biochemistry | 4 (3-2-7) |

Elective Major Courses**30 credits**

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| | | | |
|------|-----|--|-----------|
| ICCH | 335 | Physical Chemistry III | 4 (4-0-8) |
| ICCH | 421 | Physical Organic Chemistry | 4 (4-0-8) |
| ICCH | 422 | Organic Synthesis | 4 (4-0-8) |
| ICCH | 423 | Heterocyclic Chemistry | 4 (4-0-8) |
| ICCH | 424 | Natural Product Chemistry | 4 (4-0-8) |
| ICCH | 431 | Advanced Physical Chemistry | 4 (4-0-8) |
| ICCH | 432 | Special Topics in Physical Chemistry | 2 (2-0-4) |
| ICCH | 443 | Special Topics in Inorganic Chemistry | 2 (2-0-4) |
| ICCH | 444 | Environmental Chemistry | 4 (3-2-7) |
| ICCH | 451 | Industrial Chemistry | 4 (3-2-7) |
| ICCH | 452 | Polymer Science and Technology | 4 (4-0-8) |
| ICCH | 453 | Special Topics in Industrial Chemistry | 2 (2-0-4) |
| ICCH | 456 | Nuclear and Radiochemistry | 4 (3-2-7) |
| ICCH | 457 | Industrial Chemical Processes | 4 (3-2-7) |
| ICCH | 461 | Medicinal Chemistry | 4 (4-0-8) |
| ICCH | 462 | Macromolecules | 4 (4-0-8) |
| ICCH | 471 | Bioorganic Chemistry | 4 (4-0-8) |
| ICCH | 472 | Secondary Metabolism | 4 (4-0-8) |
| ICBI | 311 | Pharmacology and Toxicology | 4 (3-2-7) |
| ICFS | 312 | Food Chemistry I | 4 (3-2-7) |
| ICFS | 313 | Food Chemistry II | 4 (3-2-7) |

Free Elective Courses**8 credits**

Note: Chemistry students can take any course offered by MUIC as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

COMPUTER SCIENCE MAJOR

| DEGREES OFFERED |

Bachelor of Science (Computer Science)
B.Sc. (Computer Science)

| THE FIELD |

Computer Science is one of the promising disciplines for career opportunities. It emphasizes a wide range of computing fields from theoretical foundations to the state-of-the-art technology development in robotics, computer vision, intelligent systems, bioinformatics, and more. Students who take Computer Science major will receive solid groundings in such areas as programming, algorithm analysis and design, software development, and information management.

The Computer Science Program at MUIIC offers students the opportunity to become involved in many areas of interest in terms of theory, software, and hardware. This includes microprocessors and computer architecture, computer graphics, database systems, distributed systems, computer networks, numerical analysis, operating systems, programming languages, software engineering, artificial intelligence including data warehousing and mining, and information technology management.

| CAREER OPPORTUNITIES |

The Computer science major is designed to prepare students for the following career paths.

- Designing and implementing software, which involves the software development, including web development, interface design, security issues, mobile computing, and so on. Career opportunities occur in a wide variety of settings including large or small software companies, large or small computer services companies, and large organizations of all kinds (industry, government, banking, healthcare, etc.).
- Devising new ways to use computers, which conducts innovation in the application of computer technology. Career opportunities in this area can involve a position in a research university or industrial research and development laboratory, entrepreneurial activity, or a combination of the two.
- Developing effective ways to solve computing problems including the application or development of computer science theory algorithms for the best possible solutions for computationally intensive problems. Career opportunities typically require graduate work to a Ph.D. level, followed by a position in a research university or an industrial research and development laboratory.
- Planning and managing organizational technology infrastructure. This is also the type of work aimed by those who study information technology (IT).

| CURRICULUM STRUCTURE |**| Computer Science Major |**

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 60 |
| Core Science Courses | 32 |
| Required Major Courses | 54 |
| Elective Major Courses | 32 |
| Free Elective Courses | 8 |
| TOTAL | 186 |

| COURSE LIST |**General Education Courses****60 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

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| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**118 credits****Core Science Courses****32 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICMA | 211 | General Mathematics I | 4 (4-0-8) |
| ICMA | 212 | General Mathematics II | 4 (4-0-8) |
| ICPY | 211 | General Physics I | 4 (4-0-8) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |
| ICCS | 199 | Computer Concepts and Fundamentals | 4 (4-0-8) |
| ICCS | 201 | Computer Programming I | 4 (3-2-7) |
| ICCS | 204 | Introduction to Digital Electronics | 4 (4-0-8) |

Required Major Courses**54 credits**

| | | | |
|------|-----|--|-----------|
| ICCS | 203 | Computer Programming II | 4 (3-2-7) |
| ICCS | 207 | Introduction to File Processing | 4 (4-0-8) |
| ICCS | 208 | Computer Logic | 4 (4-0-8) |
| ICCS | 306 | Numerical Methods I | 4 (4-0-8) |
| ICCS | 315 | Operating Systems | 4 (4-0-8) |
| ICCS | 316 | Computer Architectures | 4 (4-0-8) |
| ICCS | 321 | Data Structures and Algorithm Analysis | 4 (4-0-8) |
| ICCS | 323 | Computer Data Communication | 4 (4-0-8) |
| ICCS | 324 | Discrete Structure | 4 (4-0-8) |
| ICCS | 325 | Theory of Computation | 4 (4-0-8) |
| ICCS | 365 | Information System Analysis and Design | 4 (4-0-8) |
| ICCS | 371 | Internship in Computer Science | 2 (2-0-4) |
| ICCS | 411 | Database Management Systems | 4 (4-0-8) |
| ICCS | 499 | Senior Project in Computer Science | 4 (0-8-4) |

Elective Major Courses**32 credits**

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| | | | |
|------|-----|--|-----------|
| ICMA | 321 | Linear Algebra | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (3-2-7) |
| ICCS | 281 | Advanced Mathematics for Computer Science | 4 (4-0-8) |
| ICCS | 311 | Compilers | 4 (3-2-7) |
| ICCS | 312 | Human Computer Interaction | 4 (4-0-8) |
| ICCS | 322 | Microcomputer Systems and Interfacing | 4 (3-2-7) |
| ICCS | 331 | Organization of Programming Languages | 4 (4-0-8) |
| ICCS | 332 | Image Processing and Visualization | 4 (4-0-8) |
| ICCS | 333 | Introduction to Cognitive Science | 4 (4-0-8) |
| ICCS | 366 | Management Information System | 4 (4-0-8) |
| ICCS | 367 | Design Patterns | 4 (4-0-8) |
| ICCS | 398 | Special Topics in Computer Science I | 4 (4-0-8) |
| ICCS | 406 | Numerical Methods II | 4 (4-0-8) |
| ICCS | 412 | Distributed Database Systems | 4 (3-2-7) |
| ICCS | 413 | Data Warehousing and Data Mining | 4 (4-0-8) |
| ICCS | 414 | Information Storage and Retrieval | 4 (4-0-8) |
| ICCS | 415 | Computer Graphics | 4 (3-2-7) |
| ICCS | 416 | Knowledge Management | 4 (4-0-8) |
| ICCS | 421 | Computer Networks and Distributed Processing | 4 (3-2-7) |
| ICCS | 425 | Algorithms | 4 (4-0-8) |
| ICCS | 426 | Advanced Data Communications | 4 (3-2-7) |
| ICCS | 427 | Enterprise Networking | 4 (4-0-8) |
| ICCS | 428 | Object-oriented Concepts | 4 (4-0-8) |
| ICCS | 429 | Microprocessor Concepts and Applications | 4 (3-2-7) |
| ICCS | 432 | Software Engineering Project Management | 4 (4-0-8) |
| ICCS | 433 | Network Analysis | 4 (3-2-7) |
| ICCS | 434 | Computer Security | 4 (4-0-8) |
| ICCS | 435 | Database System Development and Analysis | 4 (3-2-7) |
| ICCS | 436 | Operating Systems Analysis | 4 (4-0-8) |
| ICCS | 437 | Fundamental of Natural Computation | 4 (4-0-8) |
| ICCS | 438 | Introduction to Computer Forensics | 4 (4-0-8) |
| ICCS | 439 | Evolutionary Computation | 4 (4-0-8) |
| ICCS | 441 | Business Application Programming | 4 (3-2-7) |
| ICCS | 442 | Decision Support System | 4 (4-0-8) |
| ICCS | 451 | Artificial Intelligence | 4 (4-0-8) |
| ICCS | 452 | Intelligent Robotics | 4 (4-0-8) |
| ICCS | 453 | Machine Learning | 4 (4-0-8) |
| ICCS | 454 | Natural Language Processing and Applications | 4 (4-0-8) |
| ICCS | 455 | Virtual Reality | 4 (4-0-8) |
| ICCS | 473 | Technology of Computer Center Management | 4 (4-0-8) |
| ICCS | 474 | Internet Programming | 4 (3-2-7) |
| ICCS | 476 | Internet Enterprise Design and Development | 4 (3-2-7) |
| ICCS | 477 | System Simulation | 4 (4-0-8) |
| ICCS | 478 | Pattern Recognition | 4 (4-0-8) |
| ICCS | 479 | Electronic Commerce | 4 (4-0-8) |
| ICCS | 497 | Seminar in Computer Science | 2 (2-0-4) |
| ICCS | 498 | Special Topics in Computer Science II | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICGM 206, ICNS 101, ICNS 103, ICNS 104, ICNS 105, ICNS 111, ICNS 121, ICNS 131, ICNS 141 and ICNS 142

ENVIRONMENT MAJOR

| DEGREES OFFERED |

Bachelor of Science (Environment)
B.Sc. (Environment)

| THE FIELD |

Contemporary society is being challenged by a diverse array of extremely complex environmental problems driven by rapid increases in population and the demands on our life-support systems. Increased environmental pollution from the physical, chemical, and biological contaminants generated by industrial activities, agriculture and food production, and poor natural resource management continue to threaten the ecological and economic stability of our planet. Environmental studies have become necessary to meet the needs of the present age.

The Environment Program provides educational and technical services in the fields of environment and natural resource management. There are two concentrations: Environmental Science and Ecology. The program trains students to explore environmental issues in Thailand and to conduct research projects with an aim towards sustainable development. Environment students learn how to follow a rigorous interdisciplinary approach to measure, quantify, predict, and resolve serious environmental threats by integrating knowledge from appropriate disciplines. Students are expected to respond to issues such as sensitive habitat protection, ecosystem restoration, global warming, waste management, ground and surface water contamination, pesticide toxicity, resistance, and degradation, and the effect of environmental stress on terrestrial and aquatic ecosystems.

| CAREER OPPORTUNITIES |

The B.S. degree in Environment leads to a variety of career opportunities in private industry and governmental agencies concerned with environmental quality assessment, community environment program, and interagency coordination in environmental quality maintenance. Graduates in Environment can work as scholars, researchers, experts on the national and international levels as well as in the public sector in the supervision of environment and resources; private and business sectors in the production of goods and services which require secured technology to the environment, monitoring environment and reducing pollution in the environmental organization for competition and sustenance.

Graduates are well prepared for their further studies in postgraduate levels in environmental management and resources, environmental biology, applied biology, conservation biology, environmental toxicology and environmental technology.

| CURRICULUM STRUCTURE |**| Environment Major |**

| Courses | Credits |
|---------------------------|----------------|
| General Education Courses | 60 |
| Core Science Courses | 32 |
| Required Major Courses | 50 |
| Elective Major Courses | 28 |
| Free Elective Courses | 8 |
| TOTAL | 178 |

| COURSE LIST |**General Education Courses****60 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

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| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

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| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

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Major Courses**110 credits****Core Science Courses****32 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICNS | 153 | Ecosystems and Natural Resource | 4 (3-2-7) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICCH | 111 | General Chemistry | 4 (3-2-7) |
| ICCH | 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICMA | 215 | Calculus | 4 (4-0-8) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (3-2-7) |

Required Major Courses**50 credits**

| | | | |
|------|-----|--|------------|
| ICBI | 211 | General Microbiology | 4 (3-2-7) |
| ICEN | 212 | Ecological Systems Analysis | 4 (4-0-8) |
| ICEN | 241 | Environmental Pollution I | 4 (4-0-8) |
| ICEN | 301 | Basic Environmental Statistics | 4 (4-0-8) |
| ICEN | 311 | Environmental Analysis Laboratory | 4 (2-4-6) |
| ICEN | 312 | Environmental Toxicology | 4 (4-0-8) |
| ICEN | 342 | Environmental Pollution II | 4 (4-0-8) |
| ICEN | 351 | Population and the Environment | 4 (4-0-8) |
| ICEN | 361 | Principle of Environmental Impact Assessment | 4 (4-0-8) |
| ICEN | 362 | Natural Resource Conservation and Management | 4 (4-0-8) |
| ICEN | 491 | Seminar in Environment Studies | 2 (2-0-4) |
| ICEN | 492 | Excursions on Environment Studies | 2 (0-4-2) |
| ICEN | 496 | Senior Project in Environment Studies | 6 (0-12-6) |

Elective Major Courses**28 credits****A. ENVIRONMENTAL SCIENCE CONCENTRATION**

| | | | |
|------|-----|---|-----------|
| ICCH | 311 | Analytical Chemistry I | 4 (3-2-7) |
| ICEN | 313 | Cleaner Technology | 4 (3-2-7) |
| ICEN | 331 | Soil, Land Use and Degradation | 4 (3-2-7) |
| ICEN | 352 | Environmental and Resource Economics | 4 (4-0-8) |
| ICEN | 401 | Applied Mathematics for Environment Studies | 4 (4-0-8) |
| ICEN | 402 | Map and Photo Interpretation | 4 (3-2-7) |
| ICEN | 411 | Climate Change and Its Impact | 4 (4-0-8) |
| ICEN | 431 | Land Use and Urban Environmental Planning | 4 (4-0-8) |
| ICEN | 432 | Global Geomorphology | 4 (4-0-8) |
| ICEN | 441 | Occupational Health and Safety | 4 (3-2-7) |
| ICEN | 461 | Energy Conservation and Development | 4 (3-2-7) |
| ICEN | 462 | Coastal Zone and Resource Management | 4 (4-0-8) |
| ICEN | 463 | Forest Management in the field of Environment | 4 (4-0-8) |
| ICEN | 464 | Water Resources Management | 4 (4-0-8) |
| ICEN | 465 | Resource Inventory and Baseline Studies Methods | 4 (3-2-7) |
| ICEN | 466 | Environmental Management Systems Management | 4 (4-0-8) |
| ICEN | 467 | Environmental Risk Assessment and Management | 4 (4-0-8) |
| ICEN | 468 | Environmental Management Policy | 4 (4-0-8) |

B. ECOLOGY CONCENTRATION

| | | | |
|------|-----|--|-----------|
| ICBI | 102 | Integrated Laboratory in Biological Sciences | 2 (0-4-2) |
| ICBI | 212 | General Biochemistry | 4 (3-2-7) |
| ICBI | 231 | Plant Biology | 4 (3-2-7) |
| ICBI | 241 | Ecology and Conservation | 4 (3-2-7) |
| ICBI | 310 | Mammalian Physiology | 4 (3-2-7) |
| ICBI | 321 | Invertebrate Zoology | 4 (3-2-7) |
| ICBI | 322 | Vertebrate Zoology | 4 (3-2-7) |
| ICBI | 421 | Entomology | 4 (3-2-7) |
| ICBI | 441 | Marine Biology | 4 (3-2-7) |
| ICEN | 314 | Tropical Ecology | 4 (3-2-7) |
| ICEN | 317 | Aquatic Ecology | 4 (3-2-7) |
| ICEN | 318 | Aquatic Ecology Field Course | 4 (0-8-4) |
| ICEN | 319 | Conservation Biology | 4 (4-0-8) |
| ICEN | 320 | Population and Community Ecology | 4 (3-2-7) |
| ICEN | 332 | Introduction of Oceanography | 4 (3-2-7) |
| ICEN | 391 | Sustainable Development | 4 (4-0-8) |
| ICEN | 392 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

FOOD SCIENCE AND TECHNOLOGY MAJOR

| DEGREES OFFERED |

Bachelor of Science (Food Science and Technology)
B.Sc. (Food Science and Technology)

| THE FIELD |

Food Science and Technology involves the application of a variety of scientific disciplines to food manufacturing. Food Science and Technology students learn the chemistry, microbiology, structure, engineering, safety, and nutrition of food as it is processed, packed, distributed, stored and used.

Food manufacturing is the mass production of food products from raw animal and plant materials utilizing principles of food technology. It is one of the largest industries in Thailand and involves selection, preservation, processing, packaging, distribution, and use of safe, nutritious, and wholesome food. Modern consumers generally take for granted the vast array of foods available in the modern diet and do not know about the extensive research and development that has resulted in the means to deliver tasty, nutritious, safe, and convenient foods.

A Food Scientist studies the physical, microbiological, and chemical makeup of food and compiles information about foods and their components. Depending on their area of specialization, Food Scientists may develop ways to process, preserve, package, or store food, according to industry and government specifications and regulations, either domestically or internationally.

| CAREER OPPORTUNITIES |

In Thailand, the food manufacturing industry is export-oriented both to neighbouring ASEAN countries and to the larger export markets of Europe, North America, and Japan. Thus there is often a need for highly trained technical personnel who are able to communicate well in English because in these countries most people concerned with food imports use English as a second language. In the Food Science and Technology Program at MUIC, students receive rigorous theoretical and practical training in the basic sciences and also in applied food technology courses as they do in most food technology programs. The difference at MUIC is that all lectures, written materials, special lectures, and trips are completely in English. Internationally oriented graduate studies programs either in Thailand or abroad typically require a strong command of English as demonstrated in standard English exams such as TOEFL or the IELTS exams. This gives the MUIC Food Science and Technology graduates a large competitive advantage upon completion of the degree. Because of their broad scientific and technical background, graduates are well prepared to work in the food manufacturing industry or to continue their studies toward a master's or doctorate degree in either Food Science or other related subjects.

| CURRICULUM STRUCTURE |**| Food Science and Technology Major |**

| Courses | Credits |
|---------------------------------|----------------|
| General Education Courses | 59 |
| Core Science Courses | 28 |
| Required Major Courses | 64 |
| Required Major Business Courses | 12 |
| Elective Major Courses | 16 |
| Free Elective Courses | 8 |
| TOTAL | 187 |

| COURSE LIST |**General Education Courses****59 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

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| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

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| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**3 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses **120 credits****Core Science Courses** **28 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICCH | 111 | General Chemistry | 4 (3-2-7) |
| ICCH | 211 | General Chemistry II | 4 (4-0-8) |
| ICCH | 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICMA | 215 | Calculus | 4 (4-0-8) |
| ICPY | 210 | General Physics | 4 (3-2-7) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 303 | Statistics | 4 (4-0-8) |

Required Major Courses **64 credits**

| | | | |
|------|-----|--|------------|
| ICBI | 211 | General Microbiology | 4 (3-2-7) |
| ICBI | 212 | General Biochemistry | 4 (3-2-7) |
| ICCH | 311 | Analytical Chemistry I | 4 (3-2-7) |
| ICFS | 312 | Food Chemistry I | 4 (3-2-7) |
| ICFS | 313 | Food Chemistry II | 4 (3-2-7) |
| ICFS | 314 | Food Analysis | 4 (3-2-7) |
| ICFS | 315 | Food Processing I | 4 (3-2-7) |
| ICFS | 316 | Food Processing II | 4 (3-2-7) |
| ICFS | 321 | Principles of Quality Assurance in Food Processing | 4 (4-0-8) |
| ICFS | 331 | Food Hygiene and Sanitation | 4 (4-0-8) |
| ICFS | 372 | Utilization of Water and Wastewater Treatment | 2 (2-0-4) |
| ICFS | 421 | Food and Nutrition | 4 (4-0-8) |
| ICFS | 431 | Food Microbiology | 4 (3-2-7) |
| ICFS | 441 | Food Engineering I | 4 (3-2-7) |
| ICFS | 442 | Food Engineering II | 4 (3-2-7) |
| ICFS | 491 | Seminar in Food Science and Technology | 2 (2-0-4) |
| ICFS | 492 | Senior Project in Food Science and Technology | 6 (0-12-6) |
| ICFS | 493 | Internship | 4 (0-12-4) |

Required Major Business Courses **12 credits**

| | | | |
|------|-----|---|-----------|
| ICFS | 332 | Food Law and Standard of Commercial Food Products * | 4 (4-0-8) |
| ICMB | 341 | Business Law * | 4 (4-0-8) |
| ICFS | 381 | Products Management and Marketing of Food Products ** | 4 (4-0-8) |
| ICMB | 221 | Principles of Marketing ** | 4 (4-0-8) |
| ICMB | 211 | Fundamental Financial Accounting *** | 4 (4-0-8) |

* Either ICFS 332 or ICMB 341

** Either ICFS 381 or ICMB 221

*** Either ICMB 211 or any BBA course for which there is no prerequisite.

Elective Major Courses **16 credits**

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| | | | |
|------|-----|---|-----------|
| ICFS | 322 | Fruits and Vegetables Technology | 4 (4-0-8) |
| ICFS | 323 | Marine and Freshwater Products Technology | 4 (4-0-8) |
| ICFS | 324 | Meat and Poultry Products Technology | 4 (4-0-8) |
| ICFS | 325 | Dairy Products Technology | 4 (4-0-8) |
| ICFS | 371 | Food Product Development | 4 (4-0-8) |
| ICFS | 423 | Beverage Technology | 4 (4-0-8) |
| ICFS | 424 | Fat and Oil Technology | 4 (4-0-8) |
| ICFS | 425 | Cereal Science and Technology | 4 (3-2-7) |
| ICFS | 432 | Sensory Evaluation of Food Products | 4 (4-0-8) |
| ICFS | 452 | Food Packaging | 4 (4-0-8) |
| ICFS | 463 | Field Trip | 2 (0-6-2) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

NURSING SCIENCE MAJOR

| DEGREES OFFERED |

Bachelor of Nursing Science
B.N.S.

| THE FIELD |

The Bachelor of Nursing Science is a 4-year full time degree designed for students from all over the world to prepare them to be nurses. The courses enable students to develop the knowledge, critical thinking, communication skills, ethical principles, and competency necessary to be a professional nurse. The nurse graduates are expected to function as caring professionals, in both autonomous and collaborative roles, using their knowledge and skills in providing high-quality nursing care to clients, family, and groups regardless of diverse cultural background, and to assist them in achieving a level of optimal health.

The major is organized to facilitate learning through lectures, tutorials, laboratory, clinical placements, and nursing informatics. In the first two years, students take various courses in general nursing education, mathematics and computer studies at MUIC, and then continue their professional courses at M.U.'s the Faculty of Nursing for the third and final years of the program. Clinical practice makes up approximately 40 percent of the course content. Students are provided with clinical experiences in a broad range of areas of nursing care to individuals across the life span, focusing on adults and elderly, maternity and child care, pediatrics, mental health, and community health.

| CAREER OPPORTUNITIES |

It has been recognized that nurses play a significant role in providing essential health care services to individuals, families, and groups from diverse cultural backgrounds. Since a nursing shortage still exists in Thailand and other countries throughout the world, our new nurses are always employed immediately after graduation. It is anticipated that there will be a big demand for registered nurses to work in public and private hospitals as well as in other health care facilities over the next 5-10 years.

In terms of career advancement and professional development, the nursing profession provides great opportunities for our nurses to pursue their education onto a Master and Ph.D. level.

Nursing is now undergoing big changes as a result of health care reform with an emphasis placed on the promotion of people's health. Nurses, therefore, need to work in a new health care environment. With a Masters or Ph.D., nurses can function effectively in diverse and more advanced roles such as nurse educators, nurse researchers, nurse administrators, clinical nurse specialists, and nurse practitioners.

| CURRICULUM STRUCTURE |**| Nursing Science Major |**

| Courses | Credits |
|-----------------------------------|----------------|
| General Education Courses | 58 |
| Major Courses | 119 |
| Preprofessional Education Courses | 35 |
| Professional Education Courses | 84 |
| Free Elective Courses | 8 |
| TOTAL | 185 |

| COURSE LIST |**General Education Courses****58 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I* | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II* | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICML 101 | Elementary German I*** | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I*** | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 121 | Elementary French I*** | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I*** | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 161 | Elementary Thai I** | 4 (4-0-8) |
| ICML 162 | Elementary Thai II** | 4 (4-0-8) |

* Compulsory for Thai residents

** Compulsory for non-Thai residents

*** Choose one course and continue with level II of foreign language courses

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Natural Sciences**28 credits**

| | | | |
|------|-----|------------------------------------|-----------|
| ICCH | 111 | General Chemistry | 4 (3-2-7) |
| ICCH | 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICCS | 199 | Computer Concepts and Fundamentals | 4 (4-0-8) |
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICPY | 210 | General Physics | 4 (3-2-7) |
| ICSC | 303 | Statistics | 4 (4-0-8) |

Humanities**4 credits**

| | | | |
|------|-----|----------------------------|-----------|
| ICHM | 101 | Introduction to Philosophy | 4 (4-0-8) |
|------|-----|----------------------------|-----------|

Social Sciences**8 credits**

| | | | |
|------|-----|----------------------------|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |

Health Science and Physical Education**2 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**119 credits****Preprofessional Education Courses****35 credits**

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| | | | |
|------|-----|--|-----------|
| ICBI | 310 | Mammalian Physiology | 4 (3-2-7) |
| ICBI | 211 | General Microbiology | 4 (3-2-7) |
| ICBI | 311 | Pharmacology and Toxicology | 4 (3-2-7) |
| ICBI | 212 | General Biochemistry | 4 (3-2-7) |
| NSNS | 103 | Basic Anatomy | 4 (2-4-6) |
| NSNS | 201 | Developmental Psychology and Mental Health | 3 (3-0-6) |
| NSNS | 203 | Nutrition and Nutritional Therapy | 3 (3-0-6) |
| NSNS | 205 | Pathophysiology | 4 (4-0-8) |
| NSNS | 301 | Introduction to Research | 3 (3-0-6) |
| NSNS | 302 | Epidemiology | 2 (2-0-2) |

Professional Education Courses**84 credits**

| | | | |
|------|-----|--|------------|
| NSNS | 101 | Introduction to Nursing Profession and Ethics | 3 (3-0-6) |
| NSNS | 102 | Conceptual Basis of Nursing | 3 (3-0-6) |
| NSNS | 202 | Health Promotion | 4 (4-0-8) |
| NSNS | 204 | Health Assessment | 4 (2-4-6) |
| NSNS | 206 | Fundamental Nursing | 4 (2-4-6) |
| NSNS | 207 | Maternity and Newborn Nursing I | 3 (3-0-6) |
| NSNS | 208 | Community Health Nursing I | 3 (3-0-6) |
| NSNS | 281 | Fundamental Nursing Practicum | 4 (0-16-4) |
| NSNS | 303 | Maternity and Newborn Nursing II | 3 (3-0-6) |
| NSNS | 304 | Primary Medical Care | 4 (4-0-8) |
| NSNS | 305 | Adult and Elderly Nursing I | 4 (4-0-8) |
| NSNS | 306 | Adult and Elderly Nursing II | 4 (4-0-8) |
| NSNS | 307 | Cultural Diversity in Health Care | 4 (4-0-8) |
| NSNS | 381 | Maternity and Newborn Nursing Practicum | 3 (0-12-3) |
| NSNS | 382 | Adult and Elderly Nursing Practicum I | 3 (0-12-3) |
| NSNS | 383 | Adult and Elderly Nursing Practicum II | 3 (0-12-3) |
| NSNS | 401 | Nursing Management | 2 (2-0-4) |
| NSNS | 402 | Seminar in Issues and Trends in Nursing Profession | 3 (3-0-6) |
| NSNS | 403 | Child and Adolescent Nursing | 4 (4-0-8) |
| NSNS | 404 | Community Health Nursing II | 3 (3-0-6) |
| NSNS | 405 | Psychiatric Nursing | 4 (4-0-8) |
| NSNS | 481 | Nursing Management Practicum | 2 (0-8-2) |
| NSNS | 482 | Child and Adolescent Nursing Practicum | 3 (0-12-3) |
| NSNS | 483 | Community Health Nursing Practicum | 4 (0-16-4) |
| NSNS | 484 | Psychiatric Nursing Practicum | 3 (0-12-3) |

Free Elective Courses**8 credits**

Students can take any MUIC courses as a free elective. This is a suggested course:

| | | | |
|------|-----|---------------------------|-----------|
| NSNS | 308 | Health Information System | 4 (3-2-7) |
|------|-----|---------------------------|-----------|

PHYSICS MAJOR

| DEGREES OFFERED |

Bachelor of Science (Physics)
B.Sc. (Physics)

| THE FIELD |

Physics is one of the major basic sciences. The study in physics essentially focuses on the elements of matter, their interaction energy and applications. Physics plays a fundamental role both in the sciences and in the world of technology. It also provides the skills for dealing with all the scientific concepts. An understanding of physics is also useful for students in social sciences and valuable for anyone interested in the full range of human culture.

MUIC offers a Physics major to produce graduates who are knowledgeable and highly qualified in this scientific discipline. There is a great demand for graduates in physics who can contribute to both national development in science and technology and international scientific advancement.

| CAREER OPPORTUNITIES |

Excellent career opportunities for physics and applied physics graduates exist. Graduates in physics can work as researchers or laboratory assistants in industrial R&D and government agencies, including the departments of science and technology. Graduates are able to work in hospitals, medical schools or graduate programs in all fields of medical physics and physical science. For many physics majors, undergraduates studies are preliminary to the pursuit of an advanced degree that will lead to a career as an academic, scientist or researcher.

| CURRICULUM STRUCTURE |

| Physics Major |

| Courses | Credits |
|-----------------------------------|---------|
| General Education Courses | 60 |
| Core Science Courses | 32 |
| Required & Elective Major Courses | 84 |
| Free Elective Courses | 8 |
| TOTAL | 184 |

| COURSE LIST |**General Education Courses****60 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

| | | |
|----------|--|-----------|
| ICNS 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS 112 | Principles of Biology | 4 (4-0-8) |
| ICNS 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS 132 | Principles of Physics | 4 (4-0-8) |
| ICNS 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS 151 | Basic Ecology | 4 (3-2-7) |
| ICNS 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS 251 | Medical Ethics | 2 (2-0-4) |
| ICNS 252 | Marine Biology | 4 (3-2-7) |
| ICNS 253 | Environmental Science | 4 (4-0-8) |
| ICNS 254 | Pollution Biology | 4 (3-2-7) |
| ICNS 256 | Sustainable Development | 4 (4-0-8) |
| ICNS 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

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| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

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| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Major Courses**116 credits****Core Science Courses****32 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICCH | 111 | General Chemistry | 4 (3-2-7) |
| ICCH | 220 | Basic Organic Chemistry | 4 (3-2-4) |
| ICMA | 215 | Calculus | 4 (4-0-8) |
| ICPY | 211 | General Physics I | 4 (4-0-8) |
| ICPY | 212 | General Physics II | 4 (4-0-8) |
| ICSC | 302 | Scientific Research and Presentations | 4 (4-0-8) |
| ICSC | 304 | Computer for Research | 4 (4-0-8) |
| ICSC | 333 | Statistics for Research | 4 (4-0-8) |

Required & Elective Major Courses**84 credits**

| | | | |
|------|-----|--|-----------|
| ICPY | 321 | Intermediate Mechanics | 4 (4-0-8) |
| ICPY | 322 | Electricity and Magnetism | 4 (4-0-8) |
| ICPY | 323 | Electrodynamics | 4 (4-0-8) |
| ICPY | 324 | Optics | 4 (4-0-8) |
| ICPY | 331 | Mathematical Methods in Physics I | 4 (4-0-8) |
| ICPY | 332 | Mathematical Methods in Physics II | 4 (4-0-8) |
| ICPY | 333 | Mathematical Methods in Physics III | 4 (4-0-8) |
| ICPY | 341 | Intermediate Laboratory in Physics I | 1 (0-3-1) |
| ICPY | 342 | Intermediate Laboratory in Physics II | 1 (0-3-1) |
| ICPY | 343 | Intermediate Laboratory in Physics III | 1 (0-3-1) |
| ICPY | 361 | Quantum Mechanics I | 4 (4-0-8) |
| ICPY | 371 | Thermal physics | 4 (4-0-8) |
| ICPY | 441 | Senior Projects in Physics I | 4 (4-0-8) |
| ICPY | 442 | Senior Projects in Physics II | 4 (4-0-8) |
| ICPY | 443 | Senior Projects in Physics III | 4 (4-0-8) |
| ICPY | 451 | Analytical Mechanics | 4 (4-0-8) |
| ICPY | 452 | Statistical Mechanics | 4 (4-0-8) |
| ICPY | 453 | Special Theory of Relativity | 4 (4-0-8) |
| ICPY | 461 | Quantum Mechanics II | 4 (4-0-8) |
| ICPY | 471 | Atomic and Molecular Physics | 4 (4-0-8) |
| ICPY | 472 | Solid State Physics | 4 (4-0-8) |
| ICPY | 473 | Nuclear and Particle Physics | 4 (4-0-8) |
| ICPY | 474 | Astronomy | 4 (4-0-8) |
| ICPY | 475 | Plasma Physics | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective, except for ICNS 101, ICNS 103, ICNS 105, ICNS 111, ICNS 121, and ICNS 131.

SOCIAL SCIENCE DIVISION

| DIVISION CHAIRMAN |

Associate Professor Peter R. Smith, B.Ed. (Hons.) (Geography; University of Bristol, UK),
Ph.D. (Sociology; University of Lancaster, UK)

| FACULTY MEMBERS |

| Full-Time |

Dr. Dale Rorex, M.A., M.S., Ph.D.

Assistant Professor Eugene Jones, B.A. (History; Lincoln University, Missouri, USA), M.A. (Philosophy; University of Missouri, Columbia, USA), Ph.D. (Social and Political Philosophy; University of Missouri, Columbia, USA)

Assistant Professor Marja-Leena Heikilä-Horn, M.A. (History; Abo Akademi University, Finland), Ph.D. (Comparative Religions; University of Abo, Finland)

Dr. Matthew Copeland, B.A. (Chinese Studies; University of Boulder, USA), Ph.D. (Asian Studies; Australian National University, Australia)

Ms. Ruchi Agarwal, B.A. (Business Administration; Mahidol University International College, Thailand),
M.A. (International Economics and Finance; Chulalongkorn University, Thailand)

| Part-Time |

Assistant Professor Charles Freeland, B.A., Ph.D.: Humanities & Modern Languages Division, MUIC.

Mr. Jukka Miettinen, M.A.

Dr. Mike Hayes, B.A. (Hons.), M.A., Ph.D.

Mr. Takayoshi Fujiwara, B.A., M.A.: Humanities & Modern Languages Division, MUIC.

Associate Professor Wariya Chinwanno, B.A., M.A., Ph.D.: Faculty of Social Science, Mahidol University.

Mr. Rohit Agarwal, B.A., M.A.

Ms. Ute Baeuchi, M.A. Educational Science

Mr. Jose Angel Hernaiz-Cotrina

Dr. Thanik Lertcharnit

Dr. Colin MacAndrews

Dr. Ramesh Boonratana

Mr. Ian Mc Donald

Mr. Douglas Rhein, B.A., M.A.: Mass Communication

Mr. Ilijas Baker

Dr. Kullaya Pisitsungkagarn, B.A., M.A., PhD.

Dr. Panrapee Suttiwan, BS, M.S., M.A., PhD.

| RESEARCH INTERESTS |

Areas of research interest in the Division include: Altruism and Interpersonal Behavior; Bereavement; Asian Studies; Babi and Baha'i Studies; Nationalism and Social Change; Politics and the Media; Sociology of Religion; Southeast Asian History; Thai Buddhism; Women in Southeast Asia; Religious Influence on Thai Society; Poverty and Rural Development; Southeast Asian Press and Media; Youth and Information & Communications Technology; Thai Cinema.

SOCIAL SCIENCE MAJOR

| DEGREES OFFERED |

Bachelor of Arts (Social Science)
B.A. (Social Science)

There are 2 concentrations:

1. Southeast Asian Studies
2. International Studies

| THE FIELD |

All students in the Social Science major take a set of common core courses designed to introduce them to the key elements of theory and methodology in the Social Sciences as well as various issues and aspects of the modern world. They are also required to conduct some independent research and write a dissertation in their chosen subject area. Critical and original thinking is encouraged. Students also have the opportunity to attend and help organize MUIC Social Science conferences and to participate in seminar discussions. The whole program is subject to regular review, so that course materials and content can be improved. A consultative relationship between faculty and students is fostered.

Southeast Asian Studies:

The Southeast Asian Studies concentration provides students with a comprehensive introduction to modern Southeast Asia, with required courses on the geography, history, religions, political systems, economics and gender relations of the region, and electives in a wide range of specific topics relating to the societies, culture and arts of Southeast Asia, some with a particular reference to Thailand. Non-Thai students may also undertake an intensive, year-long study of the Thai language as part of their degree.

International Studies:

The International Studies concentration will offer students an introduction to selected aspects of contemporary world affairs. Students can choose to focus either on global politics (Option 1: International Relations) or on The International Economy (Option 2), each with an appropriate selection of courses. In addition, all International Studies students will be given an extensive introduction to modern world history, study various global issues, and be able to take intensive courses on various world regions.

| CAREER OPPORTUNITIES |

Studying for a degree in Social Science (International Studies/Southeast Asian Studies) should accomplish two objectives: (1) to give students a good knowledge of a particular subject area and (2) to train students in the critical analysis of systems of ideas, enabling them to analyze, evaluate and correlate new information and apply theory to practice. Both of these objectives are relevant in pursuing a career. Thus, the analytical skills which the student acquires in the process of studying their subject area can be used in entirely different types of careers. Careers

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which may be of particular interest to Social Science graduates include: international business, work in international and non-governmental organizations, journalism and the media, and higher education both in teaching and administration. A Social Science undergraduate degree also provides an excellent base for many higher degrees, including International Relations.

| **CURRICULUM STRUCTURE** || **Social Science Major** |

| Courses | Credits |
|-----------------------------|----------------|
| General Education Courses | 60 |
| Core Social Science Courses | 28 |
| Common Required Courses | 12 |
| Required Major Courses | |
| - Southeast Asian Studies | 28 |
| - International Studies | 16 |
| Elective Major Courses | |
| - Southeast Asian Studies | 44 |
| - International Studies | 56 |
| Free Elective Courses | 8 |
| TOTAL | 180 |

| **COURSE LIST** |**General Education Courses****60 credits****English Communication****16 credits**

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| | | | |
|------|-----|--|-----------|
| ICCM | 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM | 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM | 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM | 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM | 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM | 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM | 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM | 204 | Creative Writing | 4 (4-0-8) |
| ICEG | 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG | 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG | 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG | 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

| | | | |
|------|-----|--|-----------|
| ICNS | 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS | 112 | Principles of Biology | 4 (4-0-8) |
| ICNS | 122 | Principles of Chemistry | 4 (4-0-8) |
| ICNS | 132 | Principles of Physics | 4 (4-0-8) |
| ICNS | 141 | Introduction to Computers | 4 (3-2-7) |
| ICNS | 142 | Introduction to Internet Technology | 4 (3-2-7) |
| ICNS | 151 | Basic Ecology | 4 (3-2-7) |
| ICNS | 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS | 154 | Science, Technology, and Environment | 4 (4-0-8) |
| ICNS | 161 | Introduction to Geology | 4 (4-0-8) |
| ICNS | 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS | 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS | 211 | Introduction to Food Science and Technology | 4 (4-0-8) |
| ICNS | 251 | Medical Ethics | 2 (2-0-4) |
| ICNS | 252 | Marine Biology | 4 (3-2-7) |
| ICNS | 253 | Environmental Science | 4 (4-0-8) |
| ICNS | 254 | Pollution Biology | 4 (3-2-7) |
| ICNS | 256 | Sustainable Development | 4 (4-0-8) |
| ICNS | 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Humanities**12 credits**

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| | | |
|----------|---|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 222 | Advanced Music Appreciation | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 160 | Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |
| ICML 163 | Elementary Thai III | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225

Social Sciences**12 credits**

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| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

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Major Courses **112 credits****Core Social Science Courses** **28 credits**

| | | | |
|------|-----|---|-----------|
| ICSO | 202 | Major Social Institutions | 4 (4-0-8) |
| ICSO | 203 | Global Change in the Late Twentieth Century | 4 (4-0-8) |
| ICSO | 205 | Paradigms in the Social Sciences I | 4 (4-0-8) |
| ICSO | 206 | Paradigms in the Social Sciences II | 4 (4-0-8) |
| ICSO | 301 | Research Methods in the Social Sciences | 4 (4-0-8) |
| ICSO | 332 | Human Rights | 4 (4-0-8) |
| ICSO | 401 | Independent Study in the Social Sciences | 4 (4-0-8) |

Common Required Courses **12 credits**

| | | | |
|------|-----|-----------------------------------|-----------|
| ICSO | 302 | Historiography | 4 (4-0-8) |
| ICSO | 303 | Modern Social Theory | 4 (4-0-8) |
| ICSP | 250 | History and Systems of Psychology | 4 (4-0-8) |
| ICSO | 400 | Senior Seminar (Social Science) | 4 (4-0-8) |

1. Southeast Asian Studies Concentration**Required Courses** **28 credits**

| | | | |
|------|-----|---|-----------|
| ICSA | 201 | Geography of Southeast Asia | 4 (4-0-8) |
| ICSA | 203 | The History of Southeast Asia up to 1800 | 4 (4-0-8) |
| ICSA | 204 | Modern History of Southeast Asia, c. 1800-Present | 4 (4-0-8) |
| ICSA | 205 | Religion in Southeast Asia | 4 (4-0-8) |
| ICSA | 206 | Political Systems of Southeast Asia | 4 (4-0-8) |
| ICSA | 211 | Economics of Southeast Asia | 4 (4-0-8) |
| ICSA | 214 | Women in Southeast Asia | 4 (4-0-8) |

Elective Courses **44 credits**

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| | | | |
|------|-----|---|-----------|
| ICML | 161 | Elementary Thai I | 4 (4-0-8) |
| ICML | 162 | Elementary Thai II | 4 (4-0-8) |
| ICML | 163 | Elementary Thai III | 4 (4-0-8) |
| ICSA | 202 | Ecology of Southeast Asia | 4 (4-0-8) |
| ICSA | 212 | Peasant Societies in Southeast Asia | 4 (4-0-8) |
| ICSA | 213 | Poverty and Rural Development in Southeast Asia | 4 (3-2-7) |
| ICSA | 231 | Southeast Asian Arts I | 4 (4-0-8) |
| ICSA | 232 | Southeast Asian Literature I | 4 (4-0-8) |
| ICSA | 233 | Dance and Theatre in Southeast Asia | 4 (4-0-8) |
| ICSA | 251 | Thai Arts (SAS Major) | 4 (4-0-8) |
| ICSA | 252 | Thai Music (SAS Major) | 4 (4-0-8) |
| ICSA | 253 | Thai Society and Culture | 4 (4-0-8) |
| ICSA | 254 | Introduction to Thai History | 4 (4-0-8) |
| ICSA | 255 | Thai Economic History | 4 (4-0-8) |
| ICSA | 311 | International Politics in Southeast Asia | 4 (4-0-8) |
| ICSA | 312 | Ethnicity and Nationalism in Southeast Asia | 4 (4-0-8) |
| ICSA | 314 | Economics Problems in Southeast Asia | 4 (4-0-8) |
| ICSA | 331 | Southeast Asian Arts II | 4 (4-0-8) |
| ICSA | 332 | Southeast Asian Literature II | 4 (4-0-8) |
| ICSO | 201 | Human Geography | 4 (4-0-8) |
| ICSO | 207 | The History of the World Economy | 4 (4-0-8) |
| ICSO | 231 | Modern History of East Asia | 4 (4-0-8) |
| ICSO | 232 | Civilizations of East Asia | 4 (4-0-8) |
| ICSO | 234 | The Indian Sub-Continent up to c. 1500 | 4 (4-0-8) |
| ICSO | 235 | The Indian Sub-Continent since c. 1500 | 4 (4-0-8) |
| ICSO | 271 | International Relations | 4 (4-0-8) |
| ICSO | 272 | Comparative Political Systems | 4 (4-0-8) |
| ICMB | 201 | Macroeconomics | 4 (4-0-8) |
| ICMB | 202 | Microeconomics | 4 (4-0-8) |
| ICHM | 225 | The Western Classical Ideal | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |

2. International Studies Concentration**Required Courses****16 credits**

| | | | |
|------|-----|--------------------------------|-----------|
| ICSO | 210 | World History A (c. 1400-1763) | 4 (4-0-8) |
| ICSO | 211 | World History B (c. 1763-1914) | 4 (4-0-8) |
| ICSO | 212 | World History C (c. 1914-1945) | 4 (4-0-8) |
| ICSO | 213 | World History D (c. 1945-2000) | 4 (4-0-8) |

Elective Courses**56 credits**

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| | | | |
|------|-----|---|-----------|
| ICSA | 201 | Geography of Southeast Asia | 4 (4-0-8) |
| ICSA | 202 | Ecology of Southeast Asia | 4 (4-0-8) |
| ICSA | 203 | The History of Southeast Asia up to 1800 | 4 (4-0-8) |
| ICSA | 204 | Modern History of Southeast Asia, c. 1800-Present | 4 (4-0-8) |
| ICSA | 205 | Religion in Southeast Asia | 4 (4-0-8) |
| ICSA | 206 | Political Systems of Southeast Asia | 4 (4-0-8) |
| ICSA | 211 | Economics of Southeast Asia | 4 (4-0-8) |
| ICSA | 212 | Peasant Societies in Southeast Asia | 4 (4-0-8) |
| ICSA | 213 | Poverty and Rural Development in Southeast Asia | 4 (3-2-7) |
| ICSA | 255 | Thai Economic History | 4 (4-0-8) |
| ICSA | 311 | International Politics in Southeast Asia | 4 (4-0-8) |
| ICSA | 312 | Ethnicity and Nationalism in Southeast Asia | 4 (4-0-8) |
| ICSA | 314 | Economics Problems in Southeast Asia | 4 (4-0-8) |
| ICSO | 201 | Human Geography | 4 (4-0-8) |
| ICSO | 207 | The History of the World Economy | 4 (4-0-8) |
| ICSO | 231 | Modern History of East Asia | 4 (4-0-8) |
| ICSO | 232 | Civilizations of East Asia | 4 (4-0-8) |
| ICSO | 234 | The Indian Sub-Continent up to c. 1500 | 4 (4-0-8) |
| ICSO | 235 | The Indian Sub-Continent since c. 1500 | 4 (4-0-8) |
| ICSO | 237 | Australasia Since 1770 | 4 (4-0-8) |
| ICSO | 238 | Africa Since 1800 | 4 (4-0-8) |
| ICSO | 239 | The Middle East Since 1800 | 4 (4-0-8) |
| ICSO | 241 | Latin America Since 1800 | 4 (4-0-8) |
| ICSO | 243 | North America c. 1763-1900 | 4 (4-0-8) |
| ICSO | 244 | The United States and Canada since 1900 | 4 (4-0-8) |
| ICSO | 245 | European Society and Culture up to 1945 | 4 (4-0-8) |
| ICSO | 246 | Europe Since 1945 | 4 (4-0-8) |
| ICSO | 247 | The European Union: Development, Institutions and Politics | 4 (4-0-8) |
| ICSO | 248 | Russia and The Soviet Union since 1800 | 4 (4-0-8) |
| ICSO | 261 | Economic Geography | 4 (4-0-8) |
| ICSO | 262 | Global Resources | 4 (4-0-8) |
| ICSO | 263 | Population and Migration in the Modern World | 4 (4-0-8) |
| ICSO | 264 | The World Economy since 1945 | 4 (4-0-8) |
| ICSO | 271 | International Relations | 4 (4-0-8) |
| ICSO | 272 | Comparative Political Systems | 4 (4-0-8) |
| ICSO | 273 | World Politics and World Order | 4 (4-0-8) |
| ICSO | 274 | International Organizations | 4 (4-0-8) |
| ICSO | 275 | Democracy as a Political System | 4 (4-0-8) |
| ICSO | 276 | History of War | 4 (4-0-8) |
| ICSO | 280 | Gender Issues in the Modern World | 4 (4-0-8) |
| ICSO | 281 | The Social Impact of Science and Technology on Societies | 4 (4-0-8) |
| ICSO | 282 | Global Media and Social Change | 4 (4-0-8) |
| ICSO | 283 | International Cultural Studies | 4 (4-0-8) |
| ICSO | 285 | Drugs and Society | 2 (2-0-4) |
| ICSO | 302 | Historiography | 4 (4-0-8) |
| ICSO | 303 | Modern Social Theory | 4 (4-0-8) |
| ICSO | 341 | Society, Politics and Economics in Contemporary East Asia | 4 (4-0-8) |
| ICSO | 342 | Society, Politics and Economics in Contemporary South Asia | 4 (4-0-8) |

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| | | | |
|------|-----|--|-----------|
| ICSO | 343 | Society, Politics and Economics in Contemporary Australasia | 4 (4-0-8) |
| ICSO | 344 | Society, Politics and Economics in Contemporary Africa | 4 (4-0-8) |
| ICSO | 345 | Society, Politics and Economics in the Contemporary Middle East | 4 (4-0-8) |
| ICSO | 346 | Society, Politics and Economics in Contemporary Latin America & the Caribbean | 4 (4-0-8) |
| ICSO | 347 | Society, Politics and Economics in Contemporary North America | 4 (4-0-8) |
| ICSO | 348 | Society, Politics and Economics in Contemporary Europe | 4 (4-0-8) |
| ICSO | 349 | Society, Politics and Economics in Contemporary Russia and the Former Soviet Republics | 4 (4-0-8) |
| ICSO | 350 | Contemporary China and the Chinese World | 4 (4-0-8) |
| ICSO | 351 | Contemporary Japan and Korea | 4 (4-0-8) |
| ICSO | 360 | Patterns and Consequences of Development | 4 (4-0-8) |
| ICSO | 366 | Indigenous Cultures in the Modern World | 4 (4-0-8) |
| ICSO | 367 | Environmental Issues in Social Context | 4 (4-0-8) |
| ICSO | 369 | NGOs and Political and Business Contexts | 4 (4-0-8) |
| ICSO | 370 | Diplomacy and Negotiation | 4 (4-0-8) |
| ICSO | 371 | Foreign Policy of the Major Powers Since 1945 | 4 (4-0-8) |
| ICSO | 374 | Revolution, Terrorism and the Modern State | 4 (4-0-8) |
| ICSO | 376 | War, the Military, Society, and the State | 4 (4-0-8) |
| ICSO | 377 | Devolution, Privatization and the State | 4 (4-0-8) |
| ICSO | 378 | International Law and the State | 4 (4-0-8) |
| ICSO | 381 | Ethnicity, Society and the State | 4 (4-0-8) |
| ICSO | 382 | Religion, Society and the State | 4 (4-0-8) |
| ICSO | 383 | International Crime and Law Enforcement | 4 (4-0-8) |
| ICSO | 384 | Migration, Diasporas, and Culture | 4 (4-0-8) |
| ICSO | 390 | Tourism : Development and Cultural Change | 4 (4-0-8) |
| ICMB | 201 | Macroeconomics | 4 (4-0-8) |
| ICMB | 202 | Microeconomics | 4 (4-0-8) |
| ICHM | 225 | The Western Classical Ideal | 4 (4-0-8) |
| ICHM | 219 | 20th Century Philosophy | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective.

TRAVEL INDUSTRY MANAGEMENT DIVISION

| DIVISION CHAIRMAN |

Professor Chariya R. Brockelman, B.S. (Biology; Eberhard Karls University, Tuebingen, Germany), Ph.D. (Zoology; Eberhard Karls University, Tuebingen, Germany).

| DIVISION VICE CHAIRMAN |

Assistant Professor Sompong Amnuay-ngerntra, Ph.D., B.A. (Journalism; Thammasat University), MITM (Tourism Management; Southern Cross University, Australia), Ph.D. (Architectural Heritage Management and Tourism, Silpakorn University)

| FACULTY MEMBERS |

| Full-Time |

Ms. Kaewta Muangasame, B.A. (Communication Art), M.Sc. (International Hospitality Management)

Ms. Naphawan Chantadoan, B.A. (Travel Industry Management; Mahidol University International College), MSc. (Tourism and Hospitality Management; School of Economics and Commercial Law, Gothenburg University, Sweden)

Ms. Narumon Sriratanaviriyakul, Dip. (Integrated Marketing Communication), B.A. (Travel Industry management), M.Sc. (Internet & E-Commerce Technology), Ph.D. Candidate (Business Administration)

Ms. Nate-tra Tevabanchachai, Dip. (Secretarial Program), B.Sc. (International Hospitality Management), M.Ed. (Organizational Training & Management in Hospitality Industry)

Mr. Pisut Yuwanond, Dip. (Hotel Management; Hotel Management School "LesRoches"; Switzerland), BSBA. (Travel Industry Management and Marketing; Hawaii Pacific University, USA), MSIS. (Information Systems; Hawaii Pacific University, USA)

Dr. Ramesh Boonratana, B.Sc. (Anthropology), M.Sc. (Anthropology), Ph.D. (Biology)

| Part-Time |

Assistant Professor Anusorn Sornpohm, B.A. (Economic Theory), M.A. (Economics), Ph.D. (Economics)

Dr. Benjalux Sakunassingha, B.S. (Biology), M.B.A. (Finance), D.B.A. (Finance & Performance Measurement)

Mr. Brian Philips, M.B.A. (Financial Emphasis; University of Southern Colorado, USA)

Mr. John McNulty B.S. (Marketing), M.B.A.

Ms. Pimwadee Phandhumkomol, B.A. (Accountancy), M.A. (Professional Accounting)

Mr. Porrerk Komolvaniij, B.S. (Aeronautical Engineering), M.B.A. (Marketing Management)

Ms. Quanvari Pramoj na Ayudhaya, LL.B., LL.M. (Maritime Law)

Mr. Rohit Agarwal, B.A. (Business English), M.A. (International Tourism & Hospitality Management)

Mr. Sophon Kongvananon, B.A. (Accounting), M.A. (Accounting)

Ms. Sunanta Chutinan, B.A. (Travel & Tourism Management), M.S. (International Hotel & Tourism Management), Ph.D. Candidate (Architectural Heritage Management and Tourism)

| RESEARCH INTERESTS |**Ms. Kaewta Muangasame**

- Crisis Management
- Disaster Management
- Tourist Making Decision Process
- Consumer Behaviour
- Corporate Social Responsibility
- Modern Marketing

Ms. Naphawan Chantradoan

- Research on Exhibition participation
- Price adjustments to reestablish a market
- Public relations techniques to restore confidence and risk analysis.

Ms. Narumon Sriratanaviriyakul

- Community-based Tourism and Sustainable Tourism

Ms. Nate-tra Tevabanchachai

- Authentic skills needed for hospitality industry

- Human resources in hospitality industry

Mr. Pisut Yuwanond

- Hotel Management
- Hospitality Marketing
- Service Management

Dr. Ramesh Boonratana

- Biodiversity Conservation
- Protected Area Planning & Management
- Training & Capacity Development
- Participatory Conservation & Natural Resources Co-Management
- Ecotourism, Sustainable Tourism, & Community-based Tourism
- Primate Behavior & Ecology

Assistant Professor Sompong Amnuay-ngerntra

- Heritage Tourism Management
- Marketing Heritage Tourism
- Heritage Interpretation
- Medical Tourism Marketing

TOURISM AND HOSPITALITY MANAGEMENT MAJOR

| DEGREES OFFERED |

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

There are 2 Modules:

1. Travel and Sustainable Tourism Development
2. Hospitality Management

| THE FIELD |

Tourism is one of the fastest growing and most dynamic industries in the world. This is especially true in Thailand where tourism has enormous importance for both public and private sectors.

In line with industry needs, the focus of the TIM major is the critical interface between theory and practice. This is clearly demonstrated by the courses' strong vocational nature and their analytical approach to this global industry.

As part of its commitment to both students and industry, MUIIC recently opened its own fully functional 4-star training hotel. Here students can gain a genuine insight into the running and management of a live hotel and experience real life situations, functions, guests and conferences.

At MUIIC, the integration of faculty expertise, industry links and state of the art facilities provide the most comprehensive training environment in Thailand.

To provide students with a greater range of career options, Travel Industry Management Division provides 2 modules from which students can choose.

Travel & Sustainable Tourism Development Module:

Travel & Sustainable Tourism Development Module engages students in the areas of tourism business management, passenger transportation management, tourism promotion, and destination management. This module also develops analytical thinking towards the planning, development and management of the industry. The sustainable tourism development prepares students towards reducing environmental impacts, increasing benefits for stakeholder communities, safeguarding the future livelihood of local people, and ensuring the protection of destinations for future generations.

Hospitality Management Module:

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The Hospitality Management Module focuses on the importance of quality services within hotels, strategic management, service marketing, human resource training and development, food and beverage management, event management, and feasibility studies and business development in the industry. In relation to this module, students are trained within the individual departments of a hotel, and more importantly, they are trained from a managerial perspective. The students also have the opportunity to put the management training and theory into practice during their internships with the industry's practitioners.

| CAREER OPPORTUNITIES |

According to leading authorities, including Thai Hotel Association (THA) and Tourism Authority of Thailand (TAT), the tourism and hospitality industry in Thailand needs more than 8,000 new graduates over the next 5 years. This is, therefore, an industry that provides unique opportunities for career advancement and professional development.

The MUIC Travel Industry Management Division is Thailand's leading force in the training of middle and senior management professionals of the future. It has established excellent links with the industry and has a growing national and international reputation for quality.

| CURRICULUM STRUCTURE |

| Tourism and Hospitality Management Major |

| Courses | Credits |
|-------------------|----------------|
| General Education | 52 |
| Core Courses | 28 |
| Required Courses | 64 |
| Elective Courses | 32 |
| Free Electives | 8 |
| TOTAL | 184 |

| COURSE LIST |

General Education Courses**52 credits****English Communication****16 credits**

| | | |
|----------|--|-----------|
| ICCM 104 | Intermediate English Communication I | 4 (4-0-8) |
| ICCM 105 | Intermediate English Communication II | 4 (4-0-8) |
| ICCM 106 | Intermediate English Communication III | 4 (4-0-8) |
| ICCM 111 | Advanced English Communication I | 4 (4-0-8) |
| ICCM 112 | Advanced English Communication II | 4 (4-0-8) |
| ICCM 202 | Exploring Global Realities | 4 (4-0-8) |
| ICCM 203 | Introduction to Literary Analysis | 4 (4-0-8) |
| ICCM 204 | Creative Writing | 4 (4-0-8) |
| ICEG 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG 265 | Literature into Film | 4 (4-0-8) |

Note I: All 4 General Education English Communication classes must be completed on schedule (i.e. ICCM 104 and ICCM 105, ICCM 106 and one elective class at the 200 level) or students may be asked to retake.

Note II: Students may also select ICEG 232 or ICEG 250 to meet the EC IV requirement.

Natural Sciences**16 credits**

| | | |
|----------|--|-----------|
| ICNS 101 | Introduction to Mathematics* | 4 (4-0-8) |
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 104 | Fundamental Statistics | 4 (4-0-8) |
| ICNS 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICNS 141 | Computer Essentials* | 4 (3-2-7) |
| ICNS 142 | Internet Technology | 4 (3-2-7) |
| ICNS 151 | Basic Ecology | 4 (3-2-7) |
| ICNS 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| ICNS 154 | Science, Technology and Environment | 4 (4-0-8) |
| ICNS 161 | General Geology | 4 (4-0-8) |
| ICNS 162 | Southeast Asian Geography | 4 (4-0-8) |
| ICNS 171 | The Scientific Approach and Society | 4 (3-2-7) |
| ICNS 211 | The Science of Food | 4 (4-0-8) |
| ICNS 256 | Sustainable Development | 4 (4-0-8) |
| ICNS 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Note: Mandatory Courses

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Humanities**12 credits**

| | | |
|----------|------------------------------------|-----------|
| ICHM 101 | Introduction to Philosophy * | 4 (4-0-8) |
| ICHM 102 | Man and Nature in World Literature | 4 (4-0-8) |
| ICHM 103 | Introduction to Logic * | 4 (4-0-8) |
| ICHM 105 | Music Appreciation | 4 (4-0-8) |
| ICHM 106 | Moral and Ethical Studies* | 4 (4-0-8) |
| ICHM 107 | Introduction to Asian Philosophy * | 4 (4-0-8) |
| ICHM 141 | Art Appreciation I | 4 (4-0-8) |
| ICHM 142 | Art Appreciation II | 4 (4-0-8) |
| ICHM 143 | Introduction to Photography | 4 (3-2-7) |
| ICHM 206 | Ethics and Technology | 4 (4-0-8) |
| ICHM 216 | Tragedy and Comedy in Literature | 4 (4-0-8) |
| ICHM 218 | Film Studies | 4 (4-0-8) |
| ICHM 219 | 20th Century Philosophy | 4 (4-0-8) |
| ICHM 220 | The European Enlightenment * | 4 (4-0-8) |
| ICHM 221 | Critical Thinking* | 4 (4-0-8) |
| ICHM 223 | Thai Arts | 4 (4-0-8) |
| ICHM 224 | Introduction to Thai Music | 4 (2-2-5) |
| ICHM 225 | The Western Classical Ideal* | 4 (4-0-8) |
| ICHM 241 | Introduction to Drawing | 2 (1-2-3) |
| ICHM 242 | Intermediate Drawing | 2 (1-2-3) |
| ICML 101 | Elementary German I | 4 (4-0-8) |
| ICML 102 | Elementary German II | 4 (4-0-8) |
| ICML 103 | Elementary German III | 4 (4-0-8) |
| ICML 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML 113 | Elementary Japanese III | 4 (4-0-8) |
| ICML 121 | Elementary French I | 4 (4-0-8) |
| ICML 122 | Elementary French II | 4 (4-0-8) |
| ICML 123 | Elementary French III | 4 (4-0-8) |
| ICML 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML 133 | Elementary Chinese III | 4 (4-0-8) |
| ICML 161 | Elementary Thai I | 4 (4-0-8) |
| ICML 162 | Elementary Thai II | 4 (4-0-8) |

Note: Mandatory Humanities courses : Either ICHM 101 or ICHM 103 or ICHM 106 or ICHM 107 or ICHM 220 or ICHM 221 or ICHM 225 and reach level II in a foreign language other than in their native language or English.

Social Sciences**12 credits**

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| | | | |
|------|-----|--|-----------|
| ICSS | 112 | Introduction to Psychology | 4 (4-0-8) |
| ICSS | 113 | Introduction to Sociology | 4 (4-0-8) |
| ICSS | 114 | Introduction to Economics* | 4 (4-0-8) |
| ICSS | 115 | Introduction to Physical Anthropology | 4 (4-0-8) |
| ICSS | 116 | Introduction to Political Science | 4 (4-0-8) |
| ICSS | 117 | Introduction to Social Anthropology | 4 (4-0-8) |
| ICSS | 118 | Introduction to Mass Communications | 4 (4-0-8) |
| ICSS | 121 | Southeast Asian Studies | 4 (4-0-8) |
| ICSS | 135 | Introduction to Human Geography | 4 (4-0-8) |
| ICSS | 136 | Religious Experience and Traditions | 4 (4-0-8) |
| ICSS | 137 | Introduction to Archaeology | 4 (4-0-8) |
| ICSS | 139 | Tourism Geography* | 4 (4-0-8) |
| ICSS | 202 | Social Institutions | 4 (4-0-8) |
| ICSS | 203 | Globalization and the Modern World | 4 (4-0-8) |
| ICSS | 211 | Regional Geography of Southeast Asia | 4 (4-0-8) |
| ICSS | 212 | History of Southeast Asia in the Modern Period | 4 (4-0-8) |
| ICSS | 213 | Southeast Asian Political Systems | 4 (4-0-8) |
| ICSS | 214 | Southeast Asian Women | 4 (4-0-8) |
| ICSS | 215 | Southeast Asian Religious and Cultural Traditions | 4 (4-0-8) |
| ICSS | 221 | Thai Society and Thai Culture | 4 (4-0-8) |
| ICSS | 222 | Thai History | 4 (4-0-8) |
| ICSS | 231 | The History of East Asia in the Modern Age | 4 (4-0-8) |
| ICSS | 234 | The History and Culture of South Asia up to c.1500 | 4 (4-0-8) |
| ICSS | 235 | The History and Culture of South Asia since c.1500 | 4 (4-0-8) |
| ICSS | 251 | Developmental Psychology I | 4 (4-0-8) |
| ICSS | 252 | Developmental Psychology II | 4 (4-0-8) |
| ICSS | 332 | Introduction to Human Rights | 4 (4-0-8) |

Health Science and Physical Education**4 credits**

| | | | |
|------|-----|--|-----------|
| ICHE | 101 | Health Education | 2 (2-0-4) |
| ICPE | 101 | Physical Education: Badminton | 1 (0-3-1) |
| ICPE | 102 | Physical Education: Basketball | 1 (0-3-1) |
| ICPE | 103 | Physical Education: Golf | 1 (0-3-1) |
| ICPE | 105 | Physical Education: Swimming | 1 (0-3-1) |
| ICPE | 106 | Physical Education: Tennis | 1 (0-3-1) |
| ICPE | 107 | Physical Education: Volleyball | 1 (0-3-1) |
| ICPE | 109 | Physical Education: Social Dance | 1 (0-3-1) |
| ICPE | 113 | Physical Education: Modern Dance | 1 (0-3-1) |
| ICPE | 114 | Thai Sports | 1 (0-3-1) |
| ICPE | 115 | Self Defense | 1 (0-3-1) |
| ICPE | 116 | Adapted Physical Activities | 2 (1-2-3) |
| ICPE | 117 | Physical Education: Mind and Body | 1 (0-3-1) |
| ICPE | 118 | Physical Education: American Flag Football | 1 (0-3-1) |
| ICPE | 119 | Physical Education: Weight Training | 1 (0-3-1) |
| ICPE | 121 | Physical Education: Soccer | 1 (0-3-1) |
| ICPE | 122 | Selected Topics in Sports | 1 (0-3-1) |

Travel Industry Management Courses**124 credits****Core Courses****28 credits**

| | | | |
|------|-----|--|-----------|
| ICBC | 201 | Business Communication I | 4 (4-0-8) |
| ICBC | 202 | Business Communication II | 4 (4-0-8) |
| ICTM | 200 | Fundamental Accounting | 4 (4-0-8) |
| ICTM | 201 | Principles of Marketing | 4 (4-0-8) |
| ICTM | 212 | Introduction to Travel Industry | 4 (4-0-8) |
| ICMS | 301 | Management and Organizational Behavior | 4 (4-0-8) |
| ICTM | 401 | Strategic Management for Travel Industry | 4 (4-0-8) |

Note: Students are required to earn at least a C grade in each of these courses.

Required Courses**64 credits**

| | | | |
|------|-----|--|--------------|
| ICML | 103 | Elementary German III* | 4 (4-0-8) |
| ICML | 113 | Elementary Japanese III* | 4 (4-0-8) |
| ICML | 123 | Elementary French III* | 4 (4-0-8) |
| ICML | 133 | Elementary Chinese III* | 4 (4-0-8) |
| ICML | 163 | Elementary Thai III* | 4 (4-0-8) |
| ICTM | 210 | Accounting for Travel Industry | 4 (4-0-8) |
| ICTM | 211 | Statistics for Travel Industry | 4 (4-0-8) |
| ICTM | 213 | Finance for Travel Industry | 4 (4-0-8) |
| ICTM | 310 | Event Management | 4 (3-2-7) |
| ICTM | 311 | Sales and Marketing for Travel Industry | 4 (4-0-8) |
| ICTM | 312 | Human Resources Management for Travel Industry | 4 (4-0-8) |
| ICTM | 313 | Tourism Environments | 4 (3-2-7) |
| ICTM | 319 | Eco-tourism Studies | 4 (3-2-7) |
| ICTM | 352 | Tourism and Hospitality Law | 4 (4-0-8) |
| ICTM | 400 | Tourism Business Management | 4 (4-0-8) |
| ICTM | 413 | Service and Quality Management | 4 (4-0-8) |
| ICTM | 414 | Ethics in Hospitality Operations | 4 (4-0-8) |
| ICTM | 420 | Sustainable Tourism Studies | 4 (3-2-7) |
| ICTM | 461 | Travel Industry Management : Internship I | 12 (0-48-12) |
| ICTM | 480 | Tourism and Hospitality Research Methods | 4 (4-0-8) |

Note: Students must continue with level III in foreign language other than in their native language or English.

Major Elective Courses**32 credits**

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Travel & Sustainable Tourism Development Module

| | | | |
|------|-----|--|--------------|
| ICTM | 214 | Economics of Tourism | 4 (4-0-8) |
| ICTM | 270 | Consumer Behavior in Tourism | 4 (4-0-8) |
| ICTM | 307 | International Travel & Tourism | 4 (4-0-8) |
| ICTM | 313 | Tourism Environments | 4 (3-2-7) |
| ICTM | 319 | Eco-tourism Studies | 4 (3-2-7) |
| ICTM | 330 | Cultural Heritage Management | 4 (4-0-8) |
| ICTM | 331 | Guide to Tourist Health and Safety | 4 (4-0-8) |
| ICTM | 341 | Wilderness Tourism Management | 4 (3-2-7) |
| ICTM | 370 | Technology for Tourism Industry | 4 (4-0-8) |
| ICTM | 410 | Passenger Transportation Management | 4 (4-0-8) |
| ICTM | 423 | Seminar in Tourism Planning and Promotion | 4 (4-0-8) |
| ICTM | 428 | Tourism Guide | 4 (3-2-7) |
| ICTM | 430 | Managing Package Tourism | 4 (4-0-8) |
| ICTM | 431 | Rural Tourism | 4 (4-0-8) |
| ICTM | 433 | Tourism in Developing Countries | 4 (4-0-8) |
| ICTM | 462 | Travel Industry Management : Internship II | 12 (0-48-12) |
| ICTM | 471 | Seminar in Tourism Industry | 4 (4-0-8) |
| ICTM | 472 | Airline Business Management | 4 (4-0-8) |

Hospitality Management Module

| | | | |
|------|-----|--|--------------|
| ICTM | 320 | Lodging Property Management | 4 (4-0-8) |
| ICTM | 323 | Front Office Management | 4 (4-0-8) |
| ICTM | 324 | Food and Beverage Management | 4 (4-0-8) |
| ICTM | 325 | Housekeeping Management | 4 (4-0-8) |
| ICTM | 442 | Hospitality Training | 4 (4-0-8) |
| ICTM | 462 | Travel Industry Management : Internship II | 12 (0-48-12) |
| ICTM | 473 | Seminar in Service Management | 4 (4-0-8) |
| ICTM | 474 | Supervision in Hospitality Business | 4 (4-0-8) |
| ICTM | 475 | Introduction to Culinary Arts | 4 (3-2-7) |
| ICTM | 477 | Hospitality Facilities Management | 4 (4-0-8) |
| ICTM | 478 | Facilities Development & Planning in Hospitality | 4 (4-0-8) |

Free Elective Courses**8 credits**

Note: Students can take any MUIC courses as a free elective. The following is a suggested course.

| | | | |
|------|-----|-------------------------------|-----------|
| ICTM | 318 | Business and Social Etiquette | 4 (4-0-8) |
|------|-----|-------------------------------|-----------|

MINORS

MUIC offers a series of subject minors in various programs so that students can major in one subject and minor in another. Each minor will normally consist of between 28 and 40 credit hours of courses approved and specified by the program offering it. These 28-40 credits would be additional to the courses required by the student's subject major.

Individual students who wish to take a subject minor in another subject must obtain the approval of both the major program in which they are registered and the program offering the minor.

| BUSINESS ADMINISTRATION MINOR | (for non-BBA students)

Students from other majors besides Business Administration can earn a minor in Business Administration by completing the following eight subjects:

| | | |
|----------|----------------------------------|-----------|
| ICMB 201 | Macroeconomics | 4 (4-0-8) |
| ICMB 202 | Microeconomics | 4 (4-0-8) |
| ICMB 211 | Fundamental Financial Accounting | 4 (4-0-8) |
| ICMB 221 | Principles of Marketing | 4 (4-0-8) |
| ICMB 232 | Essentials of Management | 4 (4-0-8) |
| ICMB 233 | Human Resource Management | 4 (4-0-8) |
| ICMB 341 | Business Law | 4 (4-0-8) |
| ICMB 371 | Business Finance | 4 (4-0-8) |

Note: Students who wish to apply to study for a Business Administration Minor should approach the BA Office and get approvals from the BA Office Manager, and from the Students' own Major Advisor. Only students with a GPA of 3.00 and above are eligible to apply.

| ENGLISH STUDIES MINORS |

The core courses in English Communication do not make a student truly bilingual. However, the completion of a minor or certificate shows a level of knowledge with which the student is able to function well in any English speaking environment or workplace; or even teach English as a foreign language at a beginning to intermediate level. The MUIC English Program offers a certificate program and two minors, one track for English Teaching Preparation and the other for English Language and Culture.

Permission from the English Studies Program Director and the student's own major is required before any student undertakes a certificate program or a minor. Note that a GPA of 2.5 or above is recommended.

The two minors currently offered by the English Studies Program are English Language and Culture and English Teaching Preparation. The certificate program is a general English Studies Program.

The requirements for the minors are 8 courses (32 credits) in each of the two emphases as shown below. Electives are also available from the other English Communication classes listed here, or the suggestions cross-listed in Humanities or Social Sciences. For students who select the English

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Teaching Preparation track, a practicum in teaching English may serve as the senior project for ICEG 490.

The certificate program in English Studies consists of four courses which include English Studies classes or electives.

Required Courses for each minor track:

English Language and Culture

| | | | |
|------|-----|-----------------------------|-----------|
| ICEG | 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG | 250 | Introduction to Linguistics | 4 (4-0-8) |

English Teaching Preparation

| | | | |
|------|-----|--|-----------|
| ICEG | 250 | Introduction to Linguistics | 4 (4-0-8) |
| ICEG | 484 | First and Second Language Acquisition | 4 (4-0-8) |
| ICEG | 485 | Teaching Methodology A: Basic to Lower Intermediate Students | 4 (4-0-8) |
| ICEG | 486 | Teaching Methodology B: Upper Intermediate to Advanced Students | 4 (4-0-8) |

Elective courses

(200 level courses can also be used to meet the General Education English Language requirement, with appropriate permission)

| | | | |
|------|-----|---|-----------|
| ICEG | 232 | Advanced Oral Communication | 4 (4-0-8) |
| ICEG | 243 | Belief Systems in English Usage | 4 (4-0-8) |
| ICEG | 265 | Literature into Film | 4 (4-0-8) |
| ICEG | 342 | Diverse English Speaking Cultures | 4 (4-0-8) |
| ICEG | 344 | Language and Culture | 4 (4-0-8) |
| ICEG | 353 | Linguistic Interaction and Community Theory | 4 (4-0-8) |
| ICEG | 355 | The Story of English | 4 (4-0-8) |
| ICEG | 360 | Literature for Children and Young Adults | 4 (4-0-8) |
| ICEG | 425 | Advanced Rhetoric | 4 (4-0-8) |
| ICEG | 461 | Topics in Comparative Literature A: Poetry | 4 (4-0-8) |
| ICEG | 462 | Topics in Comparative Literature B: Short Story and Novel | 4 (4-0-8) |
| ICEG | 463 | Topics in Comparative Literature C: Drama | 4 (4-0-8) |
| ICEG | 490 | Senior Project | 4 (4-0-8) |

| FOREIGN LANGUAGE MINORS |

The fact that English is today's international medium of communication does not imply that learning a second foreign language has become obsolete. A brief look at job advertisements shows that many important Thai and international companies need to recruit staff possessing a good command of at least another foreign language, if not two. As MUIIC students plan for an international career, they must be ready to quickly learn and master (at least) an intermediate level of a foreign language or otherwise remain a complete stranger to their new working and cultural environment with all the drawbacks it implies.

At a more general level, the knowledge of a second foreign language is a major personal enrichment. Not only does it help students develop communication abilities, allowing them to better understand and overcome communication handicaps in a truly international environment, but—by introducing them to new ways of reasoning and of understanding/approaching the world—it broadens their intellectual scope.

The Foreign Language Program reflects this overall approach to modern language studies and, as a first step towards the development of full-fledged majors, is offering the minors and also the certificate programs listed below to students from other majors. The requirements for the minors are 8 courses (32 credits) and for the certificate programs are 4 courses.

Permission of the program directors of both the foreign language and the student's own major is required before any student undertakes a minor. Interested students should contact the appropriate foreign language advisor.

Note that:

1. A student must have a minimum grade of C+ in level I, II & III of the elementary courses in the language he or she wishes to study and a GPA of 3.0 or higher is recommended before being accepted in that minor.
2. For European languages in the following course descriptions, the terms elementary and intermediate refer to the definition of language proficiency levels given by the European Council. Students having completed a given level should be able to successfully pass the corresponding standardized language proficiency examinations. The same principle is applied for Asian languages whenever there exists a national proficiency examination.
3. BBA and TIM students taking a minor in a modern language will be encouraged to do their final internship in an environment in which they will have to make use of the language competency acquired in their minor subject.

Minor advisor in charged:

1. Chinese (Advisor: Ms. Zhang Qiujuan)
2. French (Advisor: Mr. Bruno Mahon)
3. German (Advisor: Mr. Thomas Krey)
4. Japanese (Advisor: Ms. Orié Green)
5. Thai (Advisor: Ms. Arpaporn Iemubol)

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| CHINESE |

Students in other majors who wish to take a minor in Chinese must complete the courses listed below.

Prerequisites

| | | | |
|------|-----|--|-----------|
| ICML | 131 | Elementary Chinese I | 4 (4-0-8) |
| ICML | 132 | Elementary Chinese II | 4 (4-0-8) |
| ICML | 133 | Elementary Chinese III (taken as free elective) | 4 (4-0-8) |

Required Courses**32 credits**

| | | | |
|------|-----|---------------------------------------|-----------|
| ICLC | 211 | Pre-intermediate Chinese I | 4 (4-0-8) |
| ICLC | 212 | Pre-intermediate Chinese II | 4 (4-0-8) |
| ICLC | 213 | Pre-intermediate Chinese III | 4 (4-0-8) |
| ICLC | 311 | Intermediate Chinese I | 4 (4-0-8) |
| ICLC | 312 | Intermediate Chinese II | 4 (4-0-8) |
| ICLC | 313 | Intermediate Chinese III | 4 (4-0-8) |
| ICLC | 320 | Intermediate Chinese: Oral Skills A | 4 (4-0-8) |
| ICLC | 330 | Intermediate Chinese: Written Skill A | 4 (4-0-8) |

| FRENCH |

Students in other majors who wish to take a minor in French must complete the courses listed below.

Prerequisites

| | | | |
|------|-----|---|-----------|
| ICML | 121 | Elementary French I | 4 (4-0-8) |
| ICML | 122 | Elementary French II | 4 (4-0-8) |
| ICML | 123 | Elementary French III (taken as free elective) | 4 (4-0-8) |

Required Courses**32 credits**

| | | | |
|------|-----|--------------------------------------|-----------|
| ICLF | 211 | Pre-intermediate French I | 4 (4-0-8) |
| ICLF | 212 | Pre-intermediate French II | 4 (4-0-8) |
| ICLF | 213 | Pre-intermediate French III | 4 (4-0-8) |
| ICLF | 311 | Intermediate French I | 4 (4-0-8) |
| ICLF | 312 | Intermediate French II | 4 (4-0-8) |
| ICLF | 313 | Intermediate French III | 4 (4-0-8) |
| ICLF | 320 | Intermediate French: Oral Skills A | 4 (4-0-8) |
| ICLF | 330 | Intermediate French: Written Skill A | 4 (4-0-8) |

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| GERMAN |

Students in other majors who wish to take a minor in German must complete the courses listed below.

Prerequisites

| | | | |
|------|-----|---|-----------|
| ICML | 101 | Elementary German I | 4 (4-0-8) |
| ICML | 102 | Elementary German II | 4 (4-0-8) |
| ICML | 103 | Elementary German III (taken as free elective) | 4 (4-0-8) |

Required Courses**32 credits**

| | | | |
|------|-----|--------------------------------------|-----------|
| ICLG | 211 | Pre-intermediate German I | 4 (4-0-8) |
| ICLG | 212 | Pre-intermediate German II | 4 (4-0-8) |
| ICLG | 213 | Pre-intermediate German III | 4 (4-0-8) |
| ICLG | 311 | Intermediate German I | 4 (4-0-8) |
| ICLG | 312 | Intermediate German II | 4 (4-0-8) |
| ICLG | 313 | Intermediate German III | 4 (4-0-8) |
| ICLG | 320 | Intermediate German: Oral Skills A | 4 (4-0-8) |
| ICLG | 330 | Intermediate German: Written Skill A | 4 (4-0-8) |

| JAPANESE |

Students in other majors who wish to take a minor in Japanese must complete the courses listed below.

Prerequisites

| | | | |
|------|-----|---|-----------|
| ICML | 111 | Elementary Japanese I | 4 (4-0-8) |
| ICML | 112 | Elementary Japanese II | 4 (4-0-8) |
| ICML | 113 | Elementary Japanese III (taken as free elective) | 4 (4-0-8) |

Required Courses**32 credits**

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| | | | |
|------|-----|--|-----------|
| ICLJ | 211 | Pre-intermediate Japanese I | 4 (4-0-8) |
| ICLJ | 212 | Pre-intermediate Japanese II | 4 (4-0-8) |
| ICLJ | 213 | Pre-intermediate Japanese III | 4 (4-0-8) |
| ICLJ | 311 | Intermediate Japanese I | 4 (4-0-8) |
| ICLJ | 312 | Intermediate Japanese II | 4 (4-0-8) |
| ICLJ | 313 | Intermediate Japanese III | 4 (4-0-8) |
| ICLJ | 320 | Intermediate Japanese: Oral Skills A | 4 (4-0-8) |
| ICLJ | 330 | Intermediate Japanese: Written Skill A | 4 (4-0-8) |

| THAI |

Students in other majors who wish to take a minor in Thai must complete the courses listed below.

Prerequisites

| | | | |
|------|-----|---|-----------|
| ICML | 161 | Elementary Thai I | 4 (4-0-8) |
| ICML | 162 | Elementary Thai II | 4 (4-0-8) |
| ICML | 163 | Elementary Thai III (taken as free elective) | 4 (4-0-8) |

Required Courses**32 credits**

| | | | |
|------|-----|------------------------------------|-----------|
| ICLT | 211 | Pre-intermediate Thai I | 4 (4-0-8) |
| ICLT | 212 | Pre-intermediate Thai II | 4 (4-0-8) |
| ICLT | 213 | Pre-intermediate Thai III | 4 (4-0-8) |
| ICLT | 311 | Intermediate Thai I | 4 (4-0-8) |
| ICLT | 312 | Intermediate Thai II | 4 (4-0-8) |
| ICLT | 313 | Intermediate Thai III | 4 (4-0-8) |
| ICLT | 320 | Intermediate Thai: Oral Skills A | 4 (4-0-8) |
| ICLT | 330 | Intermediate Thai: Written Skill A | 4 (4-0-8) |

| ENTERTAINMENT MEDIA PRODUCTION MINOR |

Students who are interested in having a minor in Entertainment Media Production (EM) must complete a minimum of 32 credits, 16 of which are from the required courses, and the remaining 16 credits are from the major elective courses.

Required Course **16 credits**

| | | | |
|------|-----|---------------------------|-----------|
| ICEM | 101 | Media Production | 4 (4-0-8) |
| ICEM | 102 | Audiovisual Communication | 4 (1-6-5) |
| ICEM | 103 | Screen Acting I | 4 (0-8-4) |
| ICEM | 202 | Storytelling | 4 (3-2-7) |

Elective Courses **16 credits**

| | | | |
|------|-----|---|-----------|
| ICAM | 101 | Introduction to Animation | 4 (1-6-5) |
| ICAM | 102 | Color Theory and Application | 4 (1-6-5) |
| ICAM | 103 | Drawing for Animation I | 4 (0-8-4) |
| ICAM | 201 | Character Design I | 4 (1-6-5) |
| ICFM | 101 | Film Production | 4 (0-8-4) |
| ICFM | 102 | Introduction to Film | 4 (1-6-5) |
| ICFM | 201 | Cinematography | 4 (0-8-4) |
| ICFM | 203 | Scriptwriting for Film | 4 (1-6-5) |
| ICFM | 204 | Film Post Production I | 4 (0-8-4) |
| ICFM | 251 | Music Video Production | 4 (0-8-4) |
| ICFM | 301 | Acting for Film | 4 (0-8-4) |
| ICFM | 402 | Film Producing | 4 (0-8-4) |
| ICTV | 101 | TV Production Techniques | 4 (0-8-4) |
| ICTV | 102 | Multi-Camera Production | 4 (0-8-4) |
| ICTV | 201 | TV Production Design | 4 (1-6-5) |
| ICTV | 202 | TV On-Location Production | 4 (0-8-4) |
| ICTV | 353 | Make-up for TV and Film | 4 (1-6-5) |
| ICTV | 355 | Special Effects Make-up for TV and Film | 4 (1-6-5) |

| SOCIAL SCIENCE MINORS |**Purpose**

The Social Science Minors are designed to enable students to make a short intensive study of a particular subject area in addition to their chosen major. To complete a Social Science Minor, a student must complete a total of eight agreed higher level Social Science courses in addition to the courses which they study for their General Education, free electives and subject major.

Minors and available courses

A total of four Social Science minors are currently available. Students who are not studying for a Social Science Major may take any of the four minors; students who are majoring in Social Science are allowed to apply for minors which are not in the area of their concentration. The minors are as follows:

1. Southeast Asian Studies
2. International Studies
3. Modern World History
4. Psychology

Student information

MUIC students who wish to take one of the minors in Social Science must complete eight of the listed courses in addition to their subject major and their General Education requirement. Permission of the both the Coordinator of the particular Social Science Minor and the Program Director of the student's own major is required before any student undertakes a minor.

Interested students should contact the appropriate Social Science Coordinator for information about a particular minor.

A student who wishes to take a Social Science Minor must register twice, once each with the Social Science program and with the Office for Academic Services. The Social Science Administrative Coordinator will supply details and an application/ registration form on request.

Notes:

1. It is not possible to count any course for both General Education and a Social Science minor.
2. Before being accepted to study a Social Science Minor, students must have both a GPA close to 3.0 or higher (GPA of 2.75 as minimum requirement) and proven English competence.
3. Students who have taken any of the specialist Social Science courses for a particular minor as General Education courses should consult the Coordinator for details of alternative courses they may take.

Course requirements

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The course requirements for each minor are listed below. Substitutions for certain courses may be allowed after consultation with the responsible Minor Coordinator, and with the formal approval of the Social Science Division Executive Committee. Details of course availability must be checked with the responsible Minor Coordinator.

| **SOUTHEAST ASIAN STUDIES** |**Required Courses****16 credits**

| | | | |
|------|-----|---|-----------|
| ICSA | 201 | Geography of Southeast Asia | 4 (4-0-8) |
| ICSA | 203 | The History of Southeast Asia up to 1800 | 4 (4-0-8) |
| ICSA | 204 | Modern History of Southeast Asia, c. 1800-Present | 4 (4-0-8) |
| ICSA | 206 | Political Systems of Southeast Asia | 4 (4-0-8) |

Elective Courses**16 credits**

| | | | |
|------|-----|---|-----------|
| ICSA | 202 | Ecology of Southeast Asia | 4 (4-0-8) |
| ICSA | 205 | Religion in Southeast Asia | 4 (4-0-8) |
| ICSA | 211 | Economics of Southeast Asia | 4 (4-0-8) |
| ICSA | 212 | Peasant Societies in Southeast Asia | 4 (4-0-8) |
| ICSA | 213 | Poverty and Rural Development in Southeast Asia | 4 (4-0-8) |
| ICSA | 214 | Women in Southeast Asia | 4 (4-0-8) |
| ICSA | 253 | Thai Society and Culture | 4 (4-0-8) |
| ICSA | 255 | Thai Economic History | 4 (4-0-8) |
| ICSA | 311 | International Politics in Southeast Asia | 4 (4-0-8) |
| ICSA | 312 | Ethnicity and Nationalism in Southeast Asia | 4 (4-0-8) |
| ICSA | 314 | Economic Problems in Southeast Asia | 4 (4-0-8) |

| **INTERNATIONAL STUDIES** |**Required Courses****12 credits**

| | | | |
|------|-----|---|-----------|
| ICSO | 202 | Major Social Institutions | 4 (4-0-8) |
| ICSO | 203 | Global Change in the Late Twentieth Century | 4 (4-0-8) |
| ICSO | 207 | The History of the World Economy | 4 (4-0-8) |

Elective Courses**20 credits**

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| | | | |
|------|-----|---|-----------|
| ICSO | 261 | Economic Geography | 4 (4-0-8) |
| ICSO | 262 | Global Resources | 4 (4-0-8) |
| ICSO | 263 | Population and Migration in the Modern World | 4 (4-0-8) |
| ICSO | 264 | The World Economy Since 1945 | 4 (4-0-8) |
| ICSO | 271 | International Relations | 4 (4-0-8) |
| ICSO | 272 | Comparative Political Systems | 4 (4-0-8) |
| ICSO | 273 | World Politics and World Order | 4 (4-0-8) |
| ICSO | 274 | International Organizations | 4 (4-0-8) |
| ICSO | 275 | Democracy as a Political System | 4 (4-0-8) |
| ICSO | 276 | History of War | 4 (4-0-8) |
| ICSO | 280 | Gender Issues in the Modern World | 4 (4-0-8) |
| ICSO | 282 | The Global Media and Social Change | 4 (4-0-8) |
| ICSO | 285 | Drugs and Society | 4 (4-0-8) |
| ICSO | 332 | Human Rights | 4 (4-0-8) |
| ICSO | 360 | Patterns and Consequences of Development | 4 (4-0-8) |
| ICSO | 366 | Indigenous Cultures in the Modern World | 4 (4-0-8) |
| ICSO | 367 | Environmental Issues in Social Context | 4 (4-0-8) |
| ICSO | 369 | NGOs and Political and Business Contexts | 4 (4-0-8) |
| ICSO | 370 | Diplomacy and Negotiation | 4 (4-0-8) |
| ICSO | 371 | Foreign Policy of the Major Powers Since 1945 | 4 (4-0-8) |
| ICSO | 374 | Revolution, Terrorism and the Modern State | 4 (4-0-8) |
| ICSO | 378 | International Law and the State | 4 (4-0-8) |
| ICSO | 381 | Ethnicity, Society and the State | 4 (4-0-8) |
| ICSO | 382 | Religion, Society and the State | 4 (4-0-8) |
| ICSO | 383 | International Crime and Law Enforcement | 4 (4-0-8) |
| ICSO | 384 | Migration, Diasporas, and Culture | 4 (4-0-8) |
| ICSO | 390 | Tourism, Development and Cultural Change | 4 (4-0-8) |

| MODERN WORLD HISTORY |

Required Courses**20 credits**

| | | | |
|------|-----|-----------------------------------|-----------|
| ICSO | 210 | World History A (c. 1400-c. 1763) | 4 (4-0-8) |
| ICSO | 211 | World History B (c. 1763-c. 1914) | 4 (4-0-8) |
| ICSO | 212 | World History C (c. 1914-c. 1945) | 4 (4-0-8) |
| ICSO | 213 | World History D (c. 1945-c. 2000) | 4 (4-0-8) |
| ICSO | 302 | Historiography | 4 (4-0-8) |

Elective Courses**12 credits**

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| | | | |
|------|-----|---|-----------|
| ICSO | 203 | Global Change in the Late Twentieth Century | 4 (4-0-8) |
| ICSO | 207 | The History of the World Economy | 4 (4-0-8) |
| ICSO | 231 | Modern History of East Asia | 4 (4-0-8) |
| ICSO | 232 | Civilizations of East Asia | 4 (4-0-8) |
| ICSO | 234 | The Indian Sub-Continent up to c. 1500 | 4 (4-0-8) |
| ICSO | 235 | The Indian Sub-Continent since c. 1500 | 4 (4-0-8) |
| ICSO | 237 | Australasia Since 1770 | 4 (4-0-8) |
| ICSO | 238 | Africa Since 1800 | 4 (4-0-8) |
| ICSO | 239 | The Middle East Since 1800 | 4 (4-0-8) |
| ICSO | 241 | Latin America Since 1800 | 4 (4-0-8) |
| ICSO | 243 | North America, c. 1763-1900 | 4 (4-0-8) |
| ICSO | 244 | The United States and Canada Since 1900 | 4 (4-0-8) |
| ICSO | 245 | European Society and Culture up to 1900 | 4 (4-0-8) |
| ICSO | 246 | Europe Since 1945 | 4 (4-0-8) |
| ICSO | 248 | Russia and the Soviet Union Since 1800 | 4 (4-0-8) |
| ICSO | 264 | The World Economy Since 1945 | 4 (4-0-8) |
| ICSO | 276 | History of War | 4 (4-0-8) |
| ICSO | 281 | The Social Impact of Science and Technology in The Modern World | 4 (4-0-8) |
| ICSO | 341 | Society, Politics and Economics in Contemporary East Asia | 4 (4-0-8) |
| ICSO | 342 | Society, Politics and Economics in Contemporary South Asia | 4 (4-0-8) |
| ICSO | 343 | Society, Politics and Economics in Contemporary Australasia | 4 (4-0-8) |
| ICSO | 344 | Society, Politics and Economics in Contemporary Africa | 4 (4-0-8) |
| ICSO | 345 | Society, Politics and Economics in the Contemporary Middle East | 4 (4-0-8) |
| ICSO | 346 | Society, Politics and Economics in Contemporary Latin America and the Caribbean | 4 (4-0-8) |
| ICSO | 347 | Society, Politics and Economics in Contemporary North America | 4 (4-0-8) |
| ICSO | 348 | Society, Politics and Economics in Contemporary Europe | 4 (4-0-8) |
| ICSO | 349 | Society, Politics and Economics in Contemporary Russia and the Former Soviet Republics | 4 (4-0-8) |
| ICSO | 371 | Foreign Policy of the Major Powers Since 1945 | 4 (4-0-8) |

| PSYCHOLOGY |**Required Course****4 credits**

ICSP 250 History and Systems of Psychology

4 (4-0-8)

Elective Courses**28 credits****Social Science**

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| | | | |
|------|-----|---|-----------|
| ICSO | 301 | Research Methods in the Social Sciences | 4 (4-0-8) |
| ICSP | 251 | Introduction to Developmental Psychology I | 4 (4-0-8) |
| ICSP | 252 | Introduction to Developmental Psychology II | 4 (4-0-8) |
| ICSP | 253 | Introduction to Social Psychology | 4 (4-0-8) |
| ICSP | 254 | Theories of Personality | 4 (4-0-8) |
| ICSP | 255 | Introduction to Abnormal Psychology | 4 (4-0-8) |
| ICSP | 256 | Industrial and Organizational Psychology | 4 (4-0-8) |
| ICSP | 257 | Educational Psychology | 4 (4-0-8) |
| ICSP | 258 | Cross-Cultural Psychology | 4 (4-0-8) |
| ICSP | 350 | Evolutionary Psychology | 4 (4-0-8) |
| ICSP | 351 | Introduction to the Freudian and Psychodynamic Traditions | 4 (4-0-8) |
| ICSP | 352 | Prosocial and Antisocial Behaviour | 4 (4-0-8) |
| ICSP | 353 | Clinical Psychology | 4 (4-0-8) |
| ICSP | 354 | Psychological Testing | 4 (4-0-8) |
| ICSP | 355 | Drug Use and Behaviour | 4 (4-0-8) |
| ICSP | 356 | Psychology of Emotion | 4 (4-0-8) |
| ICSP | 357 | Psychology of Motivation | 4 (4-0-8) |

Biomedical Science

| | | | |
|------|-----|-------------------|-----------|
| ICBI | 341 | Neurobiology** | 4 (4-0-8) |
| ICBI | 391 | Health Psychology | 4 (4-0-8) |

* Students who are Biomedical Science majors should consult their Program Director if they wish to include any of these courses as part of their Psychology Minor.

** Prerequisites: ICBI 112; ICBI 204

Recommended GE courses

Students should have some background knowledge in Psychology, and will be required to complete extra reading if they have not already taken ICSS 112 (Introduction to Psychology) as part of their GE requirement.

| TRAVEL INDUSTRY MANAGEMENT MINOR |

Students who are interested in having a minor in Travel Industry Management (TIM) must complete a minimum of 32 credits, 16 of which are from the required courses, and the remaining 16 credits are from each concentration elective courses.

Required Courses **16 credits**

| | | | |
|------|-----|--|-----------|
| ICTM | 212 | Introduction to the Tourism Industry | 4 (4-0-8) |
| ICTM | 313 | The Tourism Environment | 4 (4-0-8) |
| ICTM | 327 | Sales and Marketing for the Tourism Industry | 4 (4-0-8) |
| ICTM | 400 | Tourism Business Management | 4 (4-0-8) |

Elective Courses **16 credits****| Hospitality Management |**

| | | | |
|------|-----|---|-----------|
| ICTM | 204 | Accounting for The Tourism Industry | 4 (4-0-8) |
| ICTM | 205 | Finance for the Tourism Industry | 4 (4-0-8) |
| ICTM | 320 | Lodging Property Management | 4 (4-0-8) |
| ICTM | 324 | Food and Beverage Management | 4 (4-0-8) |
| ICTM | 326 | Meeting, Incentives, Conventions and Exhibitions Management | 4 (4-0-8) |
| ICTM | 333 | Human Resources Management for the Tourism Industry | 4 (4-0-8) |
| ICTM | 352 | Tourism and Hospitality Law | 4 (4-0-8) |
| ICTM | 443 | Planning and Operations of Food and Beverage Production | 4 (4-0-8) |
| ICTM | 470 | Strategic Management in the Tourism Industry | 4 (4-0-8) |

| Tourism Management |

| | | | |
|------|-----|---|-----------|
| ICTM | 214 | Economics of Tourism | 4 (4-0-8) |
| ICTM | 221 | Consumer Behavior in the Tourism Industry | 4 (4-0-8) |
| ICTM | 319 | Eco-tourism Studies | 4 (4-0-8) |
| ICTM | 329 | Technology for the Tourism Industry | 4 (4-0-8) |
| ICTM | 330 | Cultural Heritage Management | 4 (4-0-8) |
| ICTM | 341 | Forest Tourism Management | 4 (4-0-8) |
| ICTM | 352 | Tourism and Hospitality Law | 4 (4-0-8) |
| ICTM | 410 | Passenger Transportation Management | 4 (4-0-8) |
| ICTM | 420 | Sustainable Tourism Studies | 4 (4-0-8) |
| ICTM | 480 | Tourism and Hospitality Research Methods | 4 (4-0-8) |

| **SCIENCE MINORS** |**For Science Majors**| **MINOR IN APPLIED MATHEMATICS** |

Mathematics is the study of and search for patterns. As such, it plays a fundamental role in many fields. The ubiquitous application of statistical analysis in both commerce and science makes mathematics useful for almost anyone.

Required Courses**20 credits**

| | | |
|----------|-----------------------------|-----------|
| ICMA 211 | General Mathematics I OR | 4 (4-0-8) |
| ICMA 215 | Calculus | 4 (4-0-8) |
| ICMA 212 | General Mathematics II | 4 (4-0-8) |
| ICMA 321 | Linear Algebra | 4 (4-0-8) |
| ICMA 322 | Advanced Calculus | 4 (4-0-8) |
| ICMA 442 | Discrete Mathematics OR | 4 (4-0-8) |
| ICCS 324 | Discrete Structures | 4 (4-0-8) |

Elective Courses**12 credits**

| | | |
|----------|---|-----------|
| ICMA 214 | Ordinary Differential Equations OR | 4 (4-0-8) |
| ICCS 281 | Advanced Mathematics for Computer Science | 4 (4-0-8) |
| ICMA 323 | Partial Differential Equations | 4 (4-0-8) |
| ICMA 324 | Real Analysis | 4 (4-0-8) |
| ICMA 335 | Theory of Complex Numbers | 4 (4-0-8) |
| ICMA 336 | Numerical Analysis OR | 4 (4-0-8) |
| ICCS 306 | Numerical Methods I | 4 (4-0-8) |

| **MINOR IN BIOLOGICAL SCIENCE** |

The study of life is of enormous relevance to everyone. Our existence is an amazing synergy of matter and energy. Before we are managers, secretaries, travel agents or CEO's, CFO's or CIO's, we are living organisms. There is no doubt that any human would find knowledge of biology useful throughout their lives.

For science majors, biology integrates much of what is learned in isolation in other disciplines. It applies what is taught theoretically. Life science applications of the physical and mathematical sciences are abundant and include mathematical modeling for epidemiology, development of

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miniaturized (and eventually nano-scale) non-invasive medical technology, and pharmaceutical research and development.

Course Requirements**Required Courses** **20 credits**

| | | |
|----------|--------------------------|-----------|
| ICBI 211 | General Microbiology | 4 (3-2-7) |
| ICBI 212 | General Biochemistry | 4 (3-2-7) |
| ICBI 213 | Genetics | 4 (4-0-8) |
| ICBI 216 | Cell Biology | 4 (4-0-8) |
| ICBI 241 | Ecology and Conservation | 4 (3-2-7) |

Elective Courses **12 credits**

| | | |
|----------|---|-----------|
| ICBI 102 | Integrated Laboratory in Biological Science I | 2 (0-4-2) |
| ICBI 221 | Animal Biology | 4 (3-2-7) |
| ICBI 231 | Plant Biology | 4 (3-2-7) |
| ICBI 314 | Tropical Ecology | 4 (3-2-7) |
| ICBI 317 | Aquatic Ecology | 4 (3-2-7) |
| ICBI 344 | Environmental Science | 4 (4-0-8) |
| ICBI 415 | Biotechnology | 4 (4-0-8) |
| ICBI 441 | Marine Biology | 4 (3-2-7) |
| ICBI 464 | Cell Technology | 4 (4-0-8) |

| MINOR IN CHEMISTRY |

The Chemistry minor teaches understanding of the elements, their reactivity and their interactions. It complements studies in Biology, Biomedical Science, Environment and Food Science and would be valuable for business managers in most industries.

Course Requirements**Required Courses** **24 credits**

| | | |
|----------|-------------------------|-----------|
| ICCH 210 | General Chemistry I | 4 (4-0-8) |
| ICCH 211 | General Chemistry II | 4 (4-0-8) |
| ICCH 221 | Organic Chemistry I | 4 (4-0-8) |
| | OR | |
| ICCH 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICCH 222 | Organic Chemistry II | 4 (4-0-8) |
| ICCH 311 | Analytical Chemistry I | 4 (3-2-7) |
| ICCH 441 | Inorganic Chemistry I | 4 (4-0-8) |

Elective Courses **4 credits**

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| | | |
|----------|----------------------------|-----------|
| ICCH 321 | Organic Spectroscopy | 4 (4-0-8) |
| ICCH 421 | Physical Organic Chemistry | 4 (4-0-8) |
| ICCH 423 | Heterocyclic Chemistry | 4 (4-0-8) |
| ICCH 424 | Natural Product Chemistry | 4 (4-0-8) |

| MINOR IN COMPUTER SCIENCE |

The study of Computer Science can be applied to every job function. The minor in Computer Science teaches a broad understanding of computer methodology. It is open to all majors and with the ubiquity of computer-based research and analysis, forms a complement for studies in all fields.

Course Requirements**Required Courses****20 credits**

| | | |
|----------|--|-----------|
| ICCS 201 | Computer Programming I | 4 (3-2-7) |
| ICCS 321 | Data Structures and Algorithm Analysis | 4 (4-0-8) |
| ICCS 323 | Computer Data Communication | 4 (4-0-8) |
| ICCS 365 | Information System Analysis and Design | 4 (4-0-8) |
| ICCS 411 | Database Management Systems | 4 (4-0-8) |

Elective Courses**12 credits**

| | | |
|----------|-------------------------------|-----------|
| ICCS 315 | Operating Systems | 4 (4-0-8) |
| ICCS 366 | Management Information System | 4 (4-0-8) |
| ICCS 415 | Computer Graphic | 4 (3-2-7) |
| ICCS 428 | Object-Oriented Concepts | 4 (4-0-8) |
| ICCS 431 | Software Design Development | 4 (4-0-8) |
| ICCS 434 | Computer Security | 4 (4-0-8) |
| ICCS 451 | Artificial Intelligence | 4 (4-0-8) |
| ICCS 474 | Internet Programming | 4 (3-2-7) |
| ICCS 477 | System Simulation | 4 (4-0-8) |
| ICCS 479 | Electronic Commerce | 4 (4-0-8) |

| MINOR IN ENVIRONMENT |

As nations develop they move from economies based on natural resources to ones based on information. The value of healthy ecosystems becomes better appreciated, and governments respond to this public interest with toughening environmental regulations such as ISO 14001. Industrial, business and governmental executives should have a working knowledge of environmental science. This minor can be tailored to suit student's interests.

Course Requirements

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Required Courses **16 credits**

| | | |
|----------|--|------------------------|
| ICNS 111 | Fundamental Biology OR | 4 (4-0-8) |
| ICNS 112 | Principles of Biology | 4 (4-0-8) |
| ICNS 153 | Ecosystems and Natural Resources OR | 4 (3-2-7) 4 (4-0-8) |
| ICBI 241 | Ecology and Conservation | 4 (3-2-7) |
| ICEN 391 | Sustainable Development | 4 (4-0-8) |
| ICNS 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Elective Courses **16 credits**

| | | |
|----------|---|-----------|
| ICBI 255 | Introduction to Oceanography | 4 (3-2-7) |
| ICBI 344 | Environmental Science | 4 (4-0-8) |
| ICBI 441 | Marine Biology | 4 (3-2-7) |
| ICEN 241 | Environmental Pollution I | 4 (4-0-8) |
| ICEN 313 | Cleaner Technology | 4 (3-2-7) |
| ICEN 314 | Tropical Ecology | 4 (3-2-7) |
| ICEN 317 | Aquatic Ecology Field Course | 4 (3-2-7) |
| ICEN 318 | Aquatic Ecology | 4 (4-0-8) |
| ICEN 320 | Population and Community Ecology | 4 (3-2-7) |
| ICEN 331 | Soil, Land Use and Degradation | 4 (3-2-7) |
| ICEN 352 | Environmental and Resource Economics | 4 (4-0-8) |
| ICEN 362 | Natural Resource Conservation and Management | 4 (4-0-8) |
| ICEN 431 | Land Use and Urban Environmental Planning | 4 (4-0-8) |
| ICEN 441 | Occupational Health and Safety | 4 (3-2-7) |
| ICEN 461 | Energy Conservation and Development | 4 (3-2-7) |
| ICEN 462 | Coastal Zone and Resource Management | 4 (4-0-8) |
| ICEN 463 | Forest Management in the Field of Environment | 4 (4-0-8) |
| ICEN 464 | Water Resources Management | 4 (4-0-8) |

Other ICEN or ICBI courses may be substituted for the Minor Electives with approval of the minor program director. Students are recommended to concentrate their elective in related areas such as the marine or terrestrial environments, or management.

| MINOR IN FOOD SCIENCE AND TECHNOLOGY |

Students in this program learn the principles of modern food processing and preservation. Direct applications abound in the multibillion-dollar food industry.

Course Requirements**Required Courses** **16 credits**

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| | | |
|----------|--------------------|-----------|
| ICFS 312 | Food Chemistry I | 4 (3-2-7) |
| ICFS 313 | Food Chemistry II | 4 (3-2-7) |
| ICFS 315 | Food Processing I | 4 (3-2-7) |
| ICFS 316 | Food Processing II | 4 (3-2-7) |

Elective Courses**16 credits**

| | | |
|----------|----------------------------------|-----------|
| ICFS 322 | Fruits and Vegetables Technology | 4 (4-0-8) |
| ICFS 323 | Marine and Freshwater Products | 4 (4-0-8) |
| ICFS 325 | Dairy Products Technology | 4 (4-0-8) |
| ICFS 371 | Food Product Development | 4 (4-0-8) |
| ICFS 423 | Beverage Technology | 4 (4-0-8) |
| ICFS 424 | Fat and Oil Technology | 4 (4-0-8) |
| ICFS 425 | Cereal Science and Technology | 4 (3-2-7) |

Other ICFS courses may be substituted for Minor Electives with approval of the Food Science and Technology Program Director.

| MINOR IN PHYSICS |

A Physics minor leads to deeper understanding of the fundamental mechanisms that govern reality. It is useful for engineering and is an excellent complement for chemistry; biosciences students interested in physiology, physical therapy, and medical technology will also benefit.

Course Requirements**Required Courses****24 credits**

| | | |
|----------|------------------------|-----------|
| ICSC 303 | Statistics | 4 (4-0-8) |
| ICMA 211 | General Mathematic I | 4 (4-0-8) |
| ICMA 215 | Calculus | 4 (4-0-8) |
| ICMA 212 | General Mathematics II | 4 (4-0-8) |
| ICNS 132 | Principles of Physics | 4 (4-0-8) |
| ICPY 211 | General Physics I | 4 (4-0-8) |
| ICPY 212 | General Physics II | 4 (4-0-8) |

Elective Courses**8 credits**

| | | |
|----------|---------------------------|-----------|
| ICPY 321 | Intermediate Mechanics | 4 (4-0-8) |
| ICPY 322 | Electricity and Magnetism | 4 (4-0-8) |
| ICPY 323 | Electrodynamics | 4 (4-0-8) |

For Non-Science Majors**| MINOR IN APPLIED MATHEMATICS |**

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

Required Courses**24 credits**

| | | |
|----------|---------------------------|-----------|
| ICNS 102 | Principles of Mathematics | 4 (4-0-8) |
| ICNS 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICMA 211 | General Mathematics I | 4 (4-0-8) |
| ICMA 212 | General Mathematics II | 4 (4-0-8) |

Elective Courses**8 credits**

| | | |
|----------|---------------------------------|-----------|
| ICMA 214 | Ordinary Differential Equations | 4 (4-0-8) |
| ICMA 215 | Calculus * | 4 (4-0-8) |
| ICMA 321 | Linear Algebra * | 4 (4-0-8) |
| ICMA 323 | Partial Differential Equations | 4 (4-0-8) |

* Strongly recommended

| MINOR IN BIOLOGICAL SCIENCE |**Required Courses****20 credits**

| | | |
|----------|--|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 112 | Principles of Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICBI 102 | Integrated Laboratory in Biological Sciences I | 2 (0-4-2) |

Elective Courses**12 credits**

| | | |
|----------|--|-----------|
| ICBI 211 | General Microbiology | 4 (3-2-7) |
| ICBI 216 | Cell Biology | 4 (4-0-8) |
| ICBI 221 | Animal Biology | 4 (3-2-7) |
| ICBI 231 | Plant Biology | 4 (3-2-7) |
| ICBI 241 | Ecology and Conservation | 4 (3-2-7) |
| ICBI 256 | Sustainable Development | 4 (4-0-8) |
| ICBI 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |
| ICBI 304 | Basic Immunology | 2 (2-0-4) |
| ICBI 308 | Molecular Biology | 4 (4-0-8) |
| ICSC 302 | Scientific Research and Presentations | 4 (4-0-8) |

| MINOR IN CHEMISTRY |**Required Courses****28 credits**

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| | | |
|----------|-------------------------|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS 121 | Principles of Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICCH 111 | General Chemistry | 4 (3-2-7) |
| ICCH 220 | Basic Organic Chemistry | 4 (3-2-7) |
| ICCH 311 | Analytical Chemistry I | 4 (3-2-7) |

Elective Courses**4 credits**

| | | |
|----------|--------------------------------|-----------|
| ICCH 444 | Environmental Chemistry | 4 (4-0-8) |
| ICCH 452 | Polymer Science and Technology | 4 (4-0-8) |

| **MINOR IN ENVIRONMENT** |**Required Courses****28 credits**

| | | |
|----------|--|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 112 | Principles of Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICEN 311 | Environmental Analysis Laboratory | 4 (2-4-6) |
| ICEN 362 | Natural Resource Conservation and Management | 4 (4-0-8) |
| ICEN 391 | Sustainable Development | 4 (4-0-8) |

Elective Courses**4 credits**

| | | |
|----------|----------------------------------|-----------|
| ICEN 466 | Environmental Management Systems | 4 (4-0-8) |
| ICEN 468 | Environmental Management Policy | 4 (4-0-8) |

| **MINOR IN FOOD SCIENCE AND TECHNOLOGY** |**Required Courses****28 credits**

| | | |
|----------|-------------------------|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 112 | Principles of Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| ICNS 211 | The Science of Food | 4 (4-0-8) |
| ICFS 315 | Food Processing I | 4 (3-2-7) |
| ICFS 316 | Food Processing II | 4 (3-2-7) |

Elective Courses**4 credits**

| | | |
|----------|-----------------------------|-----------|
| ICFS 331 | Food Hygiene and Sanitation | 4 (4-0-8) |
| ICFS 431 | Food Microbiology | 4 (3-2-7) |

MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

| **MINOR IN PHYSICS** |**Required Courses** **24 credits**

| | | |
|----------|-------------------------|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Principles of Physics | 4 (4-0-8) |
| ICPY 211 | General Physics I | 4 (4-0-8) |
| ICPY 212 | General Physics II | 4 (4-0-8) |

Elective Courses **8 credits**

| | | |
|----------|---------------------------|-----------|
| ICPY 321 | Intermediate Mechanics | 4 (4-0-8) |
| ICPY 322 | Electricity and Magnetism | 4 (4-0-8) |
| ICPY 323 | Electrodynamics | 4 (4-0-8) |

| **MINOR IN COMPUTER SCIENCE** |**Required Courses** **24 credits**

| | | |
|----------|--|-----------|
| ICNS 102 | Principles of Mathematics or equivalent (ICNS 101 and ICNS 103) | 4 (4-0-8) |
| ICSC 303 | Statistics | 4 (4-0-8) |
| ICNS 141 | Computer Essentials | 4 (3-2-7) |
| ICCS 201 | Computer Programming I | 4 (3-2-7) |
| ICCS 321 | Data Structures and Algorithm Analysis | 4 (4-0-8) |
| ICCS 323 | Computer Data Communication | 4 (4-0-8) |

Elective Courses **8 credits**

| | | |
|----------|--|-----------|
| ICCS 315 | Operating Systems | 4 (4-0-8) |
| ICCS 366 | Management Information System | 4 (4-0-8) |
| ICCS 365 | Information System Analysis and Design * | 4 (4-0-8) |
| ICCS 411 | Database Management Systems * | 4 (4-0-8) |

* Strongly recommended

| **MINOR IN INTEGRATED SCIENCE** |**Required Courses** **24 credits**

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| | | |
|----------|---|-----------|
| ICNS 103 | Fundamental Mathematics | 4 (4-0-8) |
| ICNS 111 | Fundamental Biology | 4 (4-0-8) |
| ICNS 121 | Fundamental Chemistry | 4 (4-0-8) |
| ICNS 131 | Fundamental Physics | 4 (4-0-8) |
| | ▪ Choose one from Ecology Cluster | |
| ICNS 151 | Basic Ecology | 4 (3-2-7) |
| ICNS 153 | Ecosystems and Natural Resources | 4 (3-2-7) |
| | ▪ Choose one from Environmental Science Cluster | |
| ICNS 253 | Environmental Science | 4 (4-0-8) |
| ICNS 256 | Sustainable Development | 4 (4-0-8) |
| ICNS 257 | Environmental Issues: Past, Present and Future | 4 (4-0-8) |

Elective Courses**8 credits**

| | | |
|----------|---------------------|-----------|
| ICNS 211 | The Science of Food | 4 (4-0-8) |
| ICNS 252 | Marine Biology | 4 (3-2-7) |
| ICNS 254 | Pollution Biology | 4 (3-2-7) |

N.B. Elective Substitutions: If students meet the prerequisites or have permission of the instructor any other science major course, except in **Mathematics and Computer Science**, may be substituted for the two electives.

The substitutions must be approved by the Integrated Science Minor Coordinator.