MAHIDOL UNIVERSITY

INTERNATIONAL DEMONSTRATION SCHOOL

PROGRAM OF STUDIES

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How to Use the Program of Studies

This Program of Studies gives all the information needed to help students plan their three-year course of study at MUIDS as well as prepare for university entrance. While selecting their course of study, students should ask themselves the following questions:

- Am I choosing courses that are appropriate to both my abilities and my interests?
- Am I choosing courses that will qualify me for admission to the university of my choice?
- Am I meeting all MUIDS graduation requirements?

THE UNIVERSITY EMBLEM

As the demonstration school of Mahidol University, the school uses the university emblem with the school's name: Mahidol University International Demonstration School underneath it.

The Mahidol University emblem is comprised of two circles: the inner blue circle and the outer white circle. The inner circle consists of the Royal Coat of Arms of Chakri Dynasty placed under the great crown of victory (Pra Maha Phichi Mongkut) intertwined by the Thai letter "ม", the initial letter of H.R.H. Prince Mahidol's last name.

- The great crown of victory or Phra Maha Phichi Mongkut signifies the status of the King, one of the most important Royal Regalia of Thailand.
- The Royal Coat of Arms of Chakri Dynasty consists of the discus (Chakra) and the trident (Trisula) the celestial weapons of God Narayana , signifying the Chakri King is a personification of God Narayana.
- The official color of the school is "blue", denoting a Royal bloodline.

The outer circle is white with the name of the university and the university motto written in Pali language: "Attanam upamakare", translated as the Golden rule in English: Do unto others as you would have others do unto you.

THE SCHOOL LOGO

The school uses MUIDS the abbreviation of Mahidol University International Demonstration School as its logo.

The letters "**MU**" stand for Mahidol University, suggesting that the school is an offspring of Mahidol University.

The letter "**I**" is visually presented as a young tree or a book with two birds soaring in the sky.

- The young tree is the symbol of youths or adolescents
- The book symbolizes academic excellence
- Two birds signify academic success and global competence

The yellow star represents the dot on the letter "I" which signifies "Wisdom of the Land" (MU vision)

The letter "**D**" stands for Demonstration, suggesting the emphasis on educational research and professional development of teachers

The letter "**S**" stands for secondary school

The school colors are: navy blue, sky blue, and yellow.

PHILOSOPHY

MUIDS is committed to be "Wisdom of the Land" through the application of best practices in education. With the emphasis on experiential and service learning, and social involvement, the schooling process facilitates the whole person development and inculcates a sense of responsibility to serve and make the world a better place to live in.

MISSION

MUIDS provides high quality, life-skills based education to enable students to live happily in a global society and to enter universities of their choice, in and outside Thailand.

MUIDS VISION

MUIDS will be recognized worldwide as a model international demonstration school.

EXPECTED SCHOOLWIDE LEARNER OUTCOMES

The Expected School-Wide Learner Outcomes, generated from the core values of Mahidol University and the 21st century global literacy skills, are taught at each grade level.

STRATEGIC LEARNERS

How do we learn?

We can --

- Recognize what is important to know and understand
- Reflect on our learning and how our mistakes help us to improve
- Plan how to learn without wasting time
- Use technology to do research and to work

INNOVATIVE THINKERS

What new ideas and ways of thinking are possible?

We can --

- Build on the ideas, explanations, and reasons of others
- Apply what we know to analyze, evaluate, and solve problems,
- Be creative and original
- Use technology to create high quality products

ARTICULATE COMMUNICATORS

How do we communicate with others?

We can --

- Listen, read, write, and speak for different purposes and using different methods
- Tell what we understand and how we understand to different social groups
- Use technology and media to clarify, explain, and state our ideas

MORALLY INTELLIGENT PERSONS

In what ways do we show we make the right choices?

We can --

- Show behavior that is moral, honest, and correct according to our society's rules
- Encourage honesty, justice and peace in the community
- Show we are hardworking and caring
- Use technology in ways that do no harm

ALTRUISTIC GLOBAL CITIZENS

How do we show we are good citizens of the world?

We can --

- Live a healthy lifestyle and be responsible citizens
- Respect other cultures and those who are different from us
- Show concern and responsibility for the well-being of the community
- Use technology to promote community service

LEADERS FOR THE FUTURE

What do good leaders do?

We can --

- Build teamwork and leadership to achieve common goals
- Work through our differences and accept group decisions
- Evaluate how well we work together and give one another helpful feedback
- Use technology to solve our problems and do our work together

MUIDS PROFILE

Community

MUIDS is located on the Mahidol University campus in Salaya, Thailand, about 25 km from the Bangkok city center. Salaya is within the Nakhon Pathom province which is famous for delicious food and strong ties to education, housing three of Thailand's biggest universities. MUIDS is also one kilometer from Phutthamonthon Park, a 4 km^2 Buddhist activity center. The student body is Thai, Japanese, Kuwaiti, Taiwanese, Chinese, Bahraini, and Korean.

School

In 2008, Mahidol University conducted a study to determine the possibility of creating an international demonstration school as a feeder school for the university. In 2010, a board of directors was assembled to lead the creation of MUIDS. The school officially opened its doors in the fall of 2013 and graduated its first senior class in the summer of 2016. MUIDS is accredited by the Western Association of Schools and Colleges (WASC) as well as the Thailand Ministry of Education.

Curriculum

The academic curriculum at MUIDS is the only one of its kind in Thailand. It is based on the Content Standards for California Public Schools, the Thailand Ministry of Education Content Standards for Basic Education, and the Thai Language and Culture Content Standards for International Schools from the Office of Private Education Commission. This curriculum allows MUIDS students to attend Thai university programs as well as international programs and universities abroad.

The academic program is organized on a period schedule. Classes are year-long; each period meets anywhere from one to five times a week. The students will earn a minimum of 81 credits through the Thailand Ministry of Education curriculum; 27 credits per year is the minimum course load. Students take six 60-minute periods per day, five days a week, with clubs starting during "Period 7."

GENERAL INFORMATION

The educational program of Mahidol University International Demonstration School is based on the system of education in Thailand and the United States. This *Program of Studies* is designed to give students and their parents information about the courses needed to complete the last three years of secondary level.

MUIDS System of Education

	Course of Study	Recognition
Secondary Level	**Senior High School** ☐ Grade 12 ☐ Grade 11 ☐ Grade 10	**Senior High School Diploma**

Academic Expectations

MUIDS is committed to providing a challenging college preparatory program. The curriculum is structured in the manner which will enable students to apply to Thai programs as well as international programs in highly competitive universities. MUIDS students are expected to demonstrate willingness to strive for their personal best in all they do.

To be in good academic standing, no more than one F is allowed per semester. Students who fail to meet these expectations will be placed on the Academic Watch List, Academic Probation, and/or referred to the Student Study Team.

Course Assignment

Students will be assigned to courses for the following school year in the second semester of the previous year. All students will receive their course schedules on the first day of each new semester.

Attendance and Punctuality

MUIDS offers a competitive program that is relevant and challenging. Students are expected to attend classes regularly as well as complete all course requirements in order to earn the required number of credits to graduate. Excessive absences affect student learning, may jeopardize credits, and hence the ability to graduate.

Daily attendance is recorded every class, including homeroom. Students should be on time for all classes. Parents will be contacted in the event of persistent absence or lateness. A Parent Notification of Absence (PNA) Form is available in 2 languages, both English and Thai, for parents to notify the school before or after a student absence.

A student can attend 80% of classes and still be able to earn credit. At MUIDS, the table below states the maximum number of allowed absences per course per year.

Course Credit	Absences Per Quarter	Absences Per Semester	Absences Per Year
5	9.5	18	38
4	7.5	15	30

3	5.75	11.5	23
2	3.75	7.5	15
1	2	4	8

Assessment at MUIDS

At MUIDS, assessment is an integral part of teaching and learning. It is an ongoing process of collecting evidence and making judgments as to how well students have achieved the intended learning outcomes as well as assist the teachers in evaluating the effectiveness of their teaching.

Assessments in an instructional unit include varieties of assessment techniques, providing a consistent basis for the establishment of an appropriate grade. To measure student progress and provide appropriate feedback to students on their performance, assessments should be fair and transparent, involving several types of assessment tasks, such as diagnostic, formative, summative, and authentic assessments.

Examinations

Examinations for all academic courses are held at the end of each quarter according to a special examination schedule. Students must be on time for the start of the examination. Those arriving 30 minutes late will not be allowed to take the examination. Examination marks count up to 40% of the semester grade for the course.

Students who fail to take an examination on the scheduled date will be allowed to take a make-up exam only on the following accounts:

- Sickness (hospital documents are required for medical excuse)
- On military training
- Officially representing MUIDS to attend a specific function

A request for make-up exam must be submitted together with relevant documents to the office prior to the examination.

Academic Honesty

MUIDS students may not cheat or plagiarize. Cheating is the act of misrepresenting one's knowledge. It includes, but is not limited to:

1. Using or attempting to use books, notes, study aids, calculators, computers, cell phones, or other devices during the exams.
2. Copying or attempting to copy from another person's paper, report, lab work, or other work material.
    a. This is not only "word for word" copying, but also includes the use of another person's idea or theory, and claiming it as your own.
3. Getting, in advance, information about quizzes, tests, or examinations.
4. Doing assignments or projects for another person.
5. Giving unauthorized aid to another person on quizzes, tests, or examination.
6. Using any portion of a paper or project to fulfill the requirements of more than one course, unless the student has received prior permission to do so.

Plagiarism is the act of stealing and passing off the ideas or words of another as one's own:

1. Using the ideas or production of another person without crediting the source.
2. Committing literary theft.

In the event of cheating or plagiarism the discipline will be as follows:

- For a first offense, the student will receive a zero on the assignment, with no opportunity for makeup, and the parent will be contacted.
- On the second offense, the student will receive a zero for the term, and be obligated to make up the credit through the credit recovery process.

On the third offense the student will be considered for dismissal from MUIDS, with no refund in tuition.

AP and Advanced Courses

Advanced Placement (AP) and other advanced courses allow students to challenge themselves academically. AP is a program from the College Board, a US organization that offers college-level curricula and examinations to high school students. In some colleges and universities, AP is recognized and the student is awarded college credit for achieving high scores on the exams.

In these courses students meet new challenges and also learn new skills. Students then get to go deeper into the subjects they study while getting support and hands-on experience. They are encouraged to explore new ideas and express them through rigorous discussion and debate.

To enroll in AP courses, a student may have to meet certain prerequisites. For example, a stated minimum grade earned in the subject may be required. In addition, students may be asked to demonstrate a commitment to undertake the work for a year-long course that culminates in an exam, usually in May.

University Entrance Requirements

At MUIDS, students are encouraged to discuss college planning early in high school to ensure they meet all the requirements of the universities and colleges they wish to apply. Many universities in Thailand offer both Thai and International Programs.

Universities in Thailand

In Thailand, there are two different types of programs offered: Thai Programs (instruction in Thai) and International Programs (instruction in English).

Thai Programs

These programs are open to students of all nationalities. The language of instruction is Thai. There are three ways to apply:

- Direct admission which is managed by the universities directly.
- Central University Admissions System (CUAS) which is organized by the Association of University Presidents of Thailand (AUPS).
- Consortium of Thai Medical Schools (COTMES) which is central admission for Thai medical, dentistry, and veterinary programs. For this option, students are required to complete several exams during a year.

Requirements for *direct admission* depend on each program. Some programs require students to graduate from the Science and Math track. This requires students to complete **22** credits of Science and **12** credits of Math in order to be able to apply to these programs. Students can check for more specific information for each program by talking to their counselor or checking the university's website. The interview is one of the most essential processes for direct admission.

Requirements for *central admission* are as followed:

- GPAX (6 semester GPA) – for the programs that required the Science and Math track, students need to complete **22** credits of Science and **12** credits of Math in order to be able to apply to these programs
- O-NET (5 Groups of Subjects; O-NET = Ordinary National Educational Test)
- GAT (GAT = General Aptitude Test)
- PAT (PAT = Professional Aptitude Test)
- 9 Common Subjects
- Interview

Requirements for *COTMES*:

- Science and Math track is required for students who are applying to Veterinary and Dentistry programs
- Medical aptitude test
- 7 Common Subjects score
- O-NET
- Interview

Students who are interested in applying for central admissions must enroll to take the O-NET, GAT, and PAT before submitting their application. They must submit their scores by May. What tests they should take is dependent on the faculty to which they are applying. Students should see their counselor for more information.

Students wishing to apply to Thai Programs through Central Admission and COTMES might need to graduate and receive their High School Diploma early. They must inform their counselor in order to request Early Graduation and receive detailed instructions for the Thai university admission process.

International Programs

These programs are open to students of all nationalities. The language of instruction is English. Generally, each university has its own requirements in accepting students, and there is no central admission.

Requirements for admission are as follows:

- Cumulative GPA: most colleges require a minimum GPA.
- Factors taken into consideration: supporting courses that must appear in the official transcript, standardized test results, personal statement, interview, etc.
- Students must submit SAT scores and TOEFL or IELTS scores as required by universities (unless the university offers its own standardized test, such as Chulalongkorn University and Thammasat University).
- Teacher recommendations.
- Portfolio (depending on each program's requirements).

Quota for MUIDS students

There are several quotas offered by various programs in different universities in Thailand. Students can see announcements from Student Services throughout the year.

Overseas Universities

The entrance requirements for schools overseas can be complex and varying depending on the university and the country. Because of this, it is recommended that students looking to go overseas for university should work with a counselor to determine what is needed. For more information, students should contact Student Services.

Credit Evaluation

Credits are awarded at the end of each semester for classes in which the student has received a grade of 60% or higher. Because the classes are based on a year-long calendar, each semester only awards the student half of the year's credits for each class in which they are enrolled.

Grade scale

Grade	GPA	Percent	Description
A	4.0	90-100	Consistently exhibits outstanding performance
B+	3.5	85-89	Exhibits very good performance most of the time
B	3.0	80-84	Exhibits good performance most of the time
C+	2.5	75-79	Meets requirements, satisfactory
C	2.0	70-74	Meets requirements, fair
D+	1.5	65-69	Experiencing difficulty, but making progress
D	1.0	60-64	Experiencing difficulty, needs improvement
F	0	40-59	Failing the subject
I			Incomplete

What is a credit?

At MUIDS, 1 credits is equal to 40 hours in classroom time. A 1 credit class is held one time a week for the entire year, a 2 credit class is held two times a week for the whole year, etc.

Exchange Students

Students who wish to complete a year at an exchange school are required to attend a meeting with a school counselor and their parents/guardians before leaving for exchange. In order to insure that students meet all the credit requirements of MUIDS while on exchange, students must be consulted as to which

classes to take while abroad. Refer to the Exchange Credits for Grade 10 or Exchange Credits for Grade 11 documents (appendix 6) for more information. Students may only go on exchange for grade 10 or 11.

Once a student returns from exchange, a transcript from the exchange school must be presented for a counselor to evaluate. The counselor will use the transcript to determine if the student may enter the next grade level or if they must repeat the grade. Exchange students moving to the next grade are required to complete a make-up class of Thai Language the year they return. Refer to appendix 6 to see how transcripts are evaluated.

For students who want to attend a regular (not international) Thai University, going on exchange is not recommended. If students wish to go on exchange and still want to apply to a Thai university, they will have to repeat the grade they attended while abroad.

GRADUATION REQUIREMENTS

To earn MUIDS high school diploma, students must complete 3 years of secondary school (Grade 10-12) and fulfill the following minimum requirements:

1. Minimum 81 credits with successful completion of the courses listed below.

Core Subjects	Credits	Required Electives	Credits	Recommended Electives	Credits
English	15	Computer Technology in the Modern World	3	Electives (varied depending on individuals' education plan)	>=19
Social Sciences	8	Health and Physical Education	3		
Science	9	Capstone Project	1		
Math	12	Thai Civic Duties	2		
Thai Language and Culture	6	Art/Music	3		
Total	50		12		19

2. At least a 2.0 cumulative GPA
3. Test Of English as a Foreign Language (TOEFL)
   - A minimum score of 550 on the Institutional Testing Program (ITP) or
   - 79 on the Internet Based Test (IBT) or
   - 213 on the Computer Based Test (CBT) or
   - A 6 on the IELTS
4. Meet the passing criteria for reading, analytical thinking and writing skills and desired characteristics required by the Thai Ministry of Education. The students from Grade 10 to 12 will be assessed by the MUIDS Thai Department once every semester.
5. Attend the following learner development activities, 360 hours total in 3 years. The student will receive a Pass/Fail grade and it will not be included in the GPA calculation.
   a. Counseling – This is an activity that promotes and develops learners to know about themselves and be able to think, make decision and set personal, academic, and career goals. This is done with a school counselor.
   b. Activities that help students develop personal discipline and other important skills such as being a good leader/follower, having responsibility, working with other people, problem solving, making appropriate decision, helping, sharing & caring other people, and harmony. This kind of activity can be in the form of clubs, ROTC, Sport day, etc.
   c. Community services – activities that connect what students learn in school with a sense of caring and concern to serve one's community, country, and the world. Students must contribute 60 hours total in 3 years, which counts towards the 360 total.

6. Student portfolio – a systematic collection of student work over time that reflects a student's development and progress in the achievement of Mahidol University core values, the 21st century skills and ASEAN literacy, and the MUIDS Expected Schoolwide Learning Outcomes.
7. Capstone project – a culminating experience at the end of high school. In the Capstone, students are engaged in a project that focuses on a career, interest, or idea that combines what was learned in the classroom with authentic real world perspectives. Students are asked to apply knowledge and skills learned in school to plan, execute, and present a culminating project that links one or more areas of personal interest to the school's Expected Schoolwide Learning Outcomes or ESLOs.

Changing Courses during the School Year

Students may drop and add courses once school has started only during the first week of school. Doing so requires the permission of parents, teachers of the courses, a school counselor and the School Director. The counseling office will inform the students of dates when changing courses are permitted. After this deadline, students will only be allowed to change courses under necessary circumstances. Student wishing to initiate a change of course must perform the following steps:

- Consult with the teacher of the courses and the counselor
- Submit the "Request for Schedule Change" form (See Appendix 4)

Requesting to change courses does not guarantee the request will be approved. Special circumstances may cause a course change to be denied.

Thai Language & Culture and Thai Civic Requirements

In accordance with the regulations of Thai Ministry of Education, all Thai nationals attending international schools are required to take courses in Thai language every semester as a core subject and Thai Civic Duties as a required elective. Similarly, non-Thai students are required to take Thai Language & Culture courses at least 1 period/week every semester.

TOEFL (Test of English as a Foreign Language) Requirement

Students are expected to earn a minimum score of 550 Institutional, 79 internet-based, or 213 computer-based TOEFL in order to graduate. Every April, MUIDS provides the Institutional TOEFL test for all students who still do not meet the required score.

Early Graduation

The MUIDS academic program is designed to be completed over a three-year period. However, there may be circumstances in which a student may graduate early (end of 1st semester or 3rd quarter of grade 12), such as acceptance into a university program that begins before the end of the senior year. Early graduation is a privilege, not a right; therefore it may be withdrawn if the student fails to maintain good standing in academics and behavior. The student who meets the school's criteria will be issued a Graduation Certificate Letter and a transcript upon completion of the first semester or third quarter of the Grade 12 year. A diploma will be issued after the graduation ceremony in June. This is in accordance with the Thai Ministry of Education regulations.

Eligibility Criteria for Early Graduation

- Earn a minimum of 81 MUIDS credits
- Earn a minimum GPA of 3.5
- Earn a minimum TOEFL score of 550 (213 computer-based/79 internet-based)

- Acceptable behavior and attendance
- Acceptable grades in English classes
- Acceptance from a university
- Approval of the School Director

Early Graduation Timeline

Time Line	Activity
Grade 10 (Second Semester)	Students sit for the institutional TOEFL exam.
Grade 11 (Second Semester)	Students sit for the TOEFL exam
Grade 12 (First Semester)	Students sit for the SAT exams Students submit Early Graduation Application Form and supporting documentation to counselor: - Official TOEFL and SAT score reports (for students applying for international programs) - Official letter of acceptance into a university (may be submitted later/upon receipt) The form must be signed by the student and the parent/guardian.
	Counselor accepts the application pending receipt of letter of acceptance in December or January.
Grade 12 (Nov.-Mar.)	Students submit a letter of acceptance from a university to support the Early Graduation Application.
	The counselor will review the application, academic performance, and the supporting documentation before final approval is given by the School Director.
	Early graduation, if granted, is for exit upon completion of the 1st semester or at the end of the 3rd quarter.

Credits

In addition to earning grades, all students must also earn credit towards graduation. Credit is granted only for courses taken while a student is enrolled in a high school (grades 9-12) program. At MUIDS the schedule is on a five-day rotation with classes lasting 60 minutes. Credit is calculated on the following basis:

Duration	Class Meets	MUIDS Credit Earned
1 year	Every day	5
1 year	Three days a week	3
1 year	Two days a week	2
1 year	One day a week	1
2 years	One day a week	2
3 years	One day a week	3

Credit Recovery Process

Any student who receives an F for a semester grade must attend credit recovery to make up for the missing credits. Credit recovery is held during Period 7, and may be offered during the summer. The cost is 5,000 baht per course, or 10,000 baht if the student requests tutoring. Any student who fails the credit recovery course must take the course again at a later time and pay the fee again. Credit recovery can vary depending on class needs and student needs, but is typically made up of a study guide or 8 or more sessions of tutoring, either individual or in small groups, and an exam to determine if the material has been learned. Students who successfully complete credit recovery will receive the credit in the form of a D for a semester grade in place of the F.

CURRICULUM

Curriculum Design

MUIDS curriculum is a standard-based curriculum. Subject standards are adapted mainly from three sources:

- Content Standards for California Public Schools, adopted by the California State Board of Education December 1997
- Content Standards for Basic Education, adopted by the Department of Basic of Curriculum and Instruction 2008, Thai Ministry of Education
- Thai Language and Culture Content Standards for International Schools, adopted by the Office of Private Education Commission 2009

The table below shows the differences between instruction and assessment in traditional practice and instruction and assessment at MUIDS

Traditional Instruction and Assessment	MUIDS Instruction and Assessment
Knowledge is conceived as accumulation of facts	Knowledge is transformation of facts
Topics used as organizers of instructional units	Themes, issues, problems, inquiry or project approach used as organizers of instructional units
Content focused Know what	Process driven Know why and how to find out
Mistakes are to be avoided	Mistakes are to be learned from
Students are passive/receptive learners	Students are active, generative, and reflective learners
Learn from experts	Learn from various sources Learning is situated in the real world contexts
Students answer questions set by teachers	Students set questions and search for answers (inquiry learning)

Curriculum Structure

Grade 10	2018-19				
Core Subjects	Credits	Required Electives	Credits	Recommended electives	Credits
English 10	5	Computer Technology in the Modern World	3	Elective	3
Biology	4	Physical Education	2		
Math 10	4	Health Science	1		
World History I	3	Art/Music	3		
Thai Language 10	2				
Sum Credits:	18		9		3
Total Credits	30				

Grade 11	2019-20				
Core Subjects	Credits	Required Electives	Credits	Recommended electives	Credits
English 11	5	Physical Education	2	Elective	3
Chemistry/Acc Chem	4	Capstone	1		
Physics/Acc Physics	4				
Math 11	4				
World History II	3				
Thai Social Studies	2				
Thai Language 11	2				
Sum Credits:	24		3		3
Total Credits	30				

Grade 12	2020-21				
Core Subjects	Credits	Required Electives	Credits	Recommended electives	Credits
English 12	5	Physical Education/ Health Education	3	Elective 1	3
AP Calc/Calc/Other Math	4	Earth/Space Science	3	Elective 2	3
Thai Civic Duties	2	Study Hall	2	Elective 3/Study Hall	3
Thai Language 12	2				
Sum Credits:	13		8		9
Total Credits	30				

Total Number of Credits: 90

Last modified: Dec. 11, 2018

Grade Level Placement or Promotion

Credits are also used to place students. Students who enter or who transfer from other high schools will be placed in the following grade levels according to the credits they have earned:

Entering Grade Level	Student must have earned from previous school
10	0 MUIDS credits
11	27 MUIDS credits minimum
12	54 MUIDS credits minimum

Students who enter MUIDS in the upper grades (grades 11 and 12) must be able to meet all graduation requirements by the time they graduate. Failing to do so may require an additional semester or year.

Credit Awarded upon Early Withdrawal

Any student in grades 10 to 12 withdrawing from MUIDS before the end of a semester may request to receive credits if the following requirements are fulfilled:

- Credit is granted only for completed semesters
- A written request for early withdrawal is submitted to the School Director at least one month prior to withdrawal.
- Documentation from the parent justifying early withdrawal is submitted to the School Director.
- The student has not exceeded the absence limit for a semester course.
- The student has achieved passing grades of 60% (D) or higher

Standardized Testing

Required tests:

TOEFL ITP – All students are required to receive a score of 550 in order to meet graduation requirements. The TOEFL ITP is offered every year during the months of March or April. **This TOEFL score cannot be used for university applications.**

MAP – The MAP test is given twice a year to all students, once in the fall and once in the spring. The MAP is an adaptive test that measures student's skills in reading, language usage, and mathematics. Test data is used within the school and alongside with WASC to measure student's progress in these three areas over the three years they are at MUIDS.

Optional/University Specific Tests:

SAT I/SAT II – The Scholastic Aptitude Test (SAT) is a standardized test designed for university applications and admittance. The test is scored on a scale of 1600 and tests for both English and mathematical skills. The SAT II is a suite of tests that are more specific to certain areas of study within a university, such as Molecular Biology, Chemistry, Physics, World History, and several language tests. Only some universities require SAT II scores, but almost all universities require SAT I.

ACT – The American College Test (ACT) is another standardized test designed for university applications and admittance. All USA universities and some International universities will take ACT scores instead of SAT I. It is measured on a scale of 1 to 36. The ACT covers four subject areas: English, Mathematics, Reading, and Science.

TOEFL PBT/CBT/IBT – There are three types of TOEFL exams that can be used for university applications and entrance: Paper-based Test, Computer-based Test, and Internet-based Test. The scores for any these

tests may also be used to meet the graduation requirements. The scores for these tests to meet graduation requirements are: PBT = 550, CBT = 213, or IBT = 79.

CU Testing Center – There are many tests offered by Chulalongkorn University Testing Center including both English proficiency (CU-TEP) and subject tests which are the CU Academic Aptitude Test (CU-AAT), CU Test of Aptitude in Design (CU-TAD), and CU Aptitude Test for Science (CU-ATS).

TU-GET – This is a test of English language proficiency required for Thammasat University's applications.

SMART I – Scholastic Management Aptitude Requirement Test is required for students who are applying for the Business Management program at Thammasat University in both the Thai and International programs.

O-NET – The Ordinary National Educational Test (O-NET) is required for students who choose to study in Thai language programs, including Central Admission and COTMES. Students can apply by themselves in November, or the school can apply for the students. However, if the student would like the school to apply for them, it is the student's responsibility to inform their counselors before the deadline in August. Students who fail to inform the counselors in time need to apply by themselves in November.

GAT – the General Aptitude Test is required for Central Admission. Students need to apply by themselves.

PAT – the Professional Aptitude Test is also required for Central Admission. However, it depends on each program's requirements. Students need to apply by themselves.

9 Common Subjects Test – This test is required for those students who are applying for COTMES. It is also required for some programs for direct admission.

Testing Timeline

Grade	Semester	Activity	Place
10	First	MAP	MUIDS
	Second	MAP	MUIDS
		TOEFL (ITP)	MUIDS
11	First	MAP	MUIDS
		*SAT I, SAT II, ACT	Testing Center
		*TOEFL (PBT, CBT, IBT), IELTS (academic band)	Testing Center
		*CU Tests	CU
		*TU-GET, SMART 1	TU
	Second	MAP	MUIDS
		TOEFL (ITP)	MUIDS
12	First	MAP	MUIDS
		O-NET	NIETS
		GAT/PAT (1st round)	NIETS
		9 Common Subjects	NIETS
		Medical Aptitude Test (COTMES)	COTMES
		Students submit Early Graduation Application Form or Early Graduation for Central Admission/COTMES and supporting documentation to Counselor: • Official TOEFL and SAT score reports (for students applying for international programs) • Official letter of acceptance into a university (may be submitted later upon receipt)	Student Services

		GAT/PAT, O-NET, 9 Common Subjects, etc. score reports (for COTMES and Central Admission) The form must be signed by the students and the parents.	
		Counselors accepts the application pending receipt of letter of acceptance in November or December	Student Services
	Second	MAP	MUIDS
		TOEFL (ITP)	MUIDS
		GAT/PAT (2nd round)	NIETS
		Students submit a letter of acceptance from a university to support the Early Graduation Application.	Student Services
		The counselor will review the application, academic performance, and the supporting documentation before final approval is given by the School Director.	Student Services
		Early graduation, if granted, is for exit upon completion of the 1st semester or at the end of the 3rd quarter.	Student Services

* Students can start collecting Standardized Test score for universities applications since they are in grade 11. Most of the score are valid for two years after the test date.

CO- AND EXTRA-CURRICULAR ACTIVITIES

In line with MUIDS objective of providing a holistic education, the school offers an extensive student activities program. The student activities program is designed to:

- Complement and enrich the academic program
- Provide venues for further development of the Schoolwide Learner Outcomes
- Meet the needs and interests of students that are not provided for by the curricular program

MUIDS student activities may be organized in the form of sports, clubs, community services, and projects, classified as:

1. Extra-curricular activities which are not directly linked to the academic subjects but are essential to the development of special talents, creative and technical skills, the development of services and social responsibility, and the development of leadership qualities. Examples of extra-curricular activities include but are not limited to Student Council, Model United Nations, etc.
2. Sport Programs offering diverse selection of sports to interest students and athletes. MUIDS athletes will participate in Thai school athletic tournaments as well as international school athletic tournaments within and outside the country.

All student activities must be sponsored by a teacher and approved by the administration
The school's clubs, tutoring, credit recovery, and make-up classes are held during Period 7 as well as a few other times. A complete list of clubs can be found in Appendix 2. Tutoring is offered during Period 7 at the teacher's convenience per student request. Credit recovery and make-up classes can be offered during Period 7 and after school if needed.

Week Without Walls
Every year during Quarter 4, students and teachers will spend a week of school outside of the classroom learning in a non-conventional environment. Activities included in past WWW trips included planting Mangroves and performing physics calculations at Vananava waterpark in Hua Hin. This one week trip always takes place outside the city of Bangkok. Students will earn community service and learner development hours depending on the program for that year.

Sports
As well as the numerous offerings of sport clubs, MUIDS will also host two school-wide sports days a year. MUIDS will also host sports events inviting other schools in Bangkok to compete.

BELL SCHEDULE

Regular Bell Schedule

7:30-8:25	Period 1
8:25-8:45	Homeroom (in Period 1)
8:50-9:45	Period 2
9:45-10:05	Break
10:10-11:05	Period 3
11:05-12:00	**Early Lunch**
12:05-1:00	**Period 4**
11:10-12:05	*Period 4*
12:05-1:00	*Late Lunch*
1:05-2:00	Period 5
2:05-3:00	Period 6
3:05-4:00	Period 7

Wednesday Schedule

7:15-7:55	Teacher Time
8:00-8:55	Period 1
9:00-9:55	Period 2
9:55-10:15	Break
10:20-11:15	Period 3
11:15-12:10	**Early Lunch**
12:15-1:10	**Period 4**
11:20-12:15	*Period 4*
12:15-1:10	*Late Lunch*
1:15-2:10	Period 5
2:15-3:10	Period 6
3:15-4:00	Period 7

COURSE DESCRIPTIONS

MODERN LANGUAGES DEPARTMENT

The English courses are designed to encourage an interest in various forms of quality literature and writing. The aims of the English program are to

1. Enable students to communicate effectively through the development of well-organized thought processes and by improving their oral and written composition
2. Develop students' English competence to enable them to meet the MUIDS Content Standards of English and obtain the required TOEFL and SAT English scores

Standards and Benchmarks

1.0 **Reading: Word Analysis and Vocabulary Development**

Students apply their knowledge of word origins to determine the meaning of new words encountered in reading materials and use those words correctly.

a) Distinguish between the denotative and connotative meanings of words
b) Identify and use the literal and figurative meanings of words
c) Apply knowledge of affixes to draw inferences concerning the meaning of scientific, social science, and mathematical terminology
d) Discern the meaning of analogies; i.e. analyzing specific comparisons as well as relationships and inferences

2.0 Reading: Comprehension

Students read and understand grade-level-appropriate material. They analyze the organization and development of ideas.

a) Prepare a bibliography of reference materials for a report
b) Generate relevant questions about readings
c) Synthesize the content from several sources dealing with a single issue; paraphrase the ideas to demonstrate comprehension
d) Extend ideas presented in sources through analysis, evaluation, and elaboration
e) Evaluate the credibility of an author's argument, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text
f) Compare and contrast the presentation of similar themes or topics across reading selections to explain how the authors present the theme

g) Analyze interactions between main and subordinate characters in a literary text (e.g. internal and external conflicts, motivations, relationships, influences) and explain the way those interactions affect the plot

h) Determine characters' traits by what the characters say and how they behave

i) Explain the significance and appeal of various literary devices (e.g. irony, figurative language, imagery, allegory, and symbolism)

3.0 **Writing: Strategies**

Students develop their knowledge and skills through the stages of the writing process. They write coherent and focused essays that convey a well-defined perspective and tightly reasoned argument. The writing demonstrates students' awareness of the audience and purpose.

a) Establish a thesis statement that conveys a clear focus; organize the writing to fulfill the premise of the thesis statement

b) Use precise language, action verbs, sensory details and appropriate modifiers

c) Develop the main ideas and synthesize information from multiple sources to support the main ideas

d) Integrate quotations and citations into a written text

e) Use appropriate conventions for documentation in the text, notes, and bibliography

f) Design and publish documents by using publishing software and graphic programs

g) Revise writing to improve the logic and coherence of the essay, the precision of word choice, and the tone by taking into consideration the audience, purpose, and the formality of the context

4.0 **Writing: Genres and Their Characteristics**

Students write narrative, expository, persuasive, and descriptive essays to produce texts of at least 1,000 words each. Student writing demonstrates a command of standard English.

4.1 Write biographical or autobiographical narratives or short stories

a) Relate a sequence of events and communicate the significance of the events to the audience

b) Locate scenes and incidents in specific places

c) Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the characters

d) Make effective use of descriptions of appearance, images, and sensory details

4.2 Write responses to literature

a) Demonstrate a grasp of the significant ideas of literary works

b) Support important ideas and viewpoints through accurate and detailed references to the text or to other works

c) Identify the impact of literary devices

4.3 Write expository compositions, including analytical essays and research reports

a) Provide evidence in support of a thesis and related claims, including information on all relevant perspectives

b) Convey information and ideas from primary and secondary sources accurately and coherently

c) Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs

4.4 Write persuasive compositions

a) Structure ideas and arguments in a logical manner
b) Clarify and defend positions with precise and relevant evidence, including facts, expert opinions, and quotations
c) Address readers' concerns and expectations

4.5 Write job applications and resumes

a) Provide clear and purposeful information and address the intended audience appropriately
b) Use appropriate vocabulary and tone to highlight central ideas
c) Follow a conventional style with page format, font, and spacing that contribute to the document's readability and impact

4.6 Write reports

a) Report information and convey ideas logically and correctly
b) Offer detailed and accurate specifications
c) Include definition, and examples to aid comprehension
d) Anticipate reader's problems, and potential misunderstanding

5.0 Language Conventions

Students write and speak with a command of standard English conventions

5.1 Grammar and Mechanics of Writing

a) Identify and correctly use clauses (e.g., main and subordinate), phrases (e.g., gerund, infinitive, and participial), and mechanics of punctuation (e.g., semicolons, colons, ellipses, hyphens)
b) Understand sentence construction (e.g. parallel structure, subordination, proper placement of modifiers) and proper English usage (e.g., consistency of verb tenses)
c) Produce legible work that shows accurate English usage, correct spelling, punctuation, and capitalization
d) Use direct quotations, in-text citations, and paraphrasing with appropriate citations

6.0 **Listening and Speaking**

Students formulate opinions about oral communication. They deliver focused and coherent presentations of their own that convey clear and distinct perspectives and solid reasoning. They use gestures, tone, and vocabulary tailored to the audience and purpose.

a) Formulate judgments about the ideas under discussion and support those judgments with convincing evidence
b) Organize content and use organizational language (e.g., introduction, transitions, body, and conclusion)
c) Support arguments with literary quotations, anecdotes, statistics, and references
d) Use props, visual aids, graphs, and electronic media to improve presentations
e) Choose effective verbal and nonverbal techniques (e.g., voice, gestures, eye contact) for presentation

English 10

Full year - 60 minutes every day: 5 credits

This integrated language learning course focuses primarily on selected non-fiction texts with introductions to thematic fiction reading and writing. Students will read, understand and

write samples of short stories, speeches, news articles, drama scripts, academic research reports, and poems. At the end of each unit, students are required to complete performance-based tasks based on rubrics.

English 11

Full year - 60 minutes every day: 5 credits

This course will focus on reading various forms of literature, including short stories, novels, poetry and non-fiction texts, with an emphasis on comprehension and critical analysis. Students will learn different literary devices, and will be expected to recognize them and explain their importance in the texts they have read. Additionally, students will demonstrate understanding of concepts through discussions and different presentations and projects, both individually and in groups. Students will improve their writing skills by regularly composing essays on a variety of topics, as well as keeping a journal. Students will be expected to use correct grammatical conventions, and to develop an individual style in their writing and speaking. Throughout, critical and creative thinking will be emphasized, and students will be expected to approach topics in different ways.

English 12

Full year - 60 minutes every day: 5 credits

The purpose of this class is to help students increase their confidence and proficiency in English. This class will help students improve their writing, speaking, reading, and critical thinking abilities. This will be achieved with units on drama, short stories, non-fiction, and a research project. As graduating seniors, this is their opportunity to fine-tune the skills they have acquired at MUIDS, and to prepare for life after high school. English will prepare them for university and give them an advantage in their future careers. But more importantly, English will give them the freedom to travel the world, connect with more people, and express themselves more fully.

AP English Literature and Composition

Full year-60 minutes every day: 5 credits

This is a college-level English class that serves as a replacement for the regular Grade 12 English class at MUIDS. It is equivalent to a semester-long introduction to literature course in university. The class aims to help students become better skilled readers and writers by reading fiction, drama, and poetry as well as by writing various kinds of literary analysis essays. Students will develop a wider vocabulary and an effective use of rhetoric as a result. The class is also intended to prepare students for the AP Exam at the end of the year. College credit may be earned depending on the college and program to which the student applies. Grading is on a 5-point scale.

NOTES: Fees for exam and extra resources may be required. Students apply for enrollment in the spring to begin the class in August. Enrollment is subject to academic requirements, submission of the AP agreement, and availability of seats.

Electives:

- **Mandarin 1**
  3 out of 5 Days; 3 Credits

  This is a beginner level course. The course aims to develop the four language skills: listening, speaking, reading and writing. Instruction focuses on pronunciation in the Chinese language. Students will develop approximately 150-300 vocabulary and common expressions.

- **Mandarin 2**
  3 out of 5 days; 3 Credits

  This is a basic to intermediate level course. The course aims to develop the four language skills: listening, speaking, reading and writing. Instruction focuses on interactive communication in the Chinese language. Students will develop approximately 300-500 vocabulary and common expressions through interactive communication. Students will have opportunities to practice appropriate manners and etiquette in various contexts.

  Mandarin 1 is a prerequisite to this course.

- **Mandarin 3***
  Prerequisite: Completed Mandarin II, or passed exam and interview with Mandarin Teacher
  3 out of 5 Days; 3 Credits

  This is an intermediate level course. The course aims to expand students' listening and speaking ability in handling everyday situations while developing reading and writing skills with more complex texts. Students are expected to be able to engage in basic daily conversation, read simple texts as well as write for daily needs. Accurate tones and pronunciation are expected.

SOCIAL SCIENCE DEPARTMENT

The Social Science courses are designed to develop

- Chronological and spatial thinking
- An understanding of current world issues and relating them to their historical, geographical, political, economic, and cultural contexts
- A deeper understanding of oneself and others; how one feels, thinks, acts, and reacts to certain stimuli

Standards and Benchmarks

Social Sciences 10: World History

Students in Grade Ten will study major turning points that shaped the modern world, from the late eighteenth century through the present, including the causes and courses of the two world wars. They will trace the historical roots of current world issues.

1.0 Understand and analyze causes and ideas that have shaped events in history

a) Explain how the ideology of the French Revolution and their enduring effects worldwide
b) Analyze the effects of the Industrial Revolution in England and France
c) Analyze patterns of global change in the era of New Imperialism in Southeast Asia, China, and India
d) Analyze the causes, course, and effects of World War I
e) Explain the rise of totalitarian governments (the Russian Revolution, Fascist, and Communist) after World War II
f) Analyze the causes, course, and consequences of World War II
g) Describe the internal developments in the Post World-War II world.

2.0 Use the historical method of inquiry to ask questions, evaluate primary and secondary sources, critically analyze and interpret data, and develop interpretations defended by evidence.

a) Evaluate a historical source for point of view and historical context
b) Gather and analyze historical information, including contradictory data, from a variety of primary and secondary sources, including sources located on the internet, to support or reject hypotheses
c) Construct and defend a written historical argument using relevant primary and secondary sources as evidence
d) Differentiate between facts and historical interpretations, recognizing that a historian's narrative reflects his or her judgment about the significance of particular facts

Social Sciences 11: Asian Studies: History, Culture, and Geography

Students in Grade Eleven will analyze instances of nation-building in the contemporary world in East and Southeast Asia.

1.0 Apply a spatial perspective to understand the interrelationships of people, places, and the environment

a) Describe the natural features, resources, population, and culture of East and Southeast Asia
b) Understand the impact of geography in the development of East and Southeast Asia
c) Gather data, make inferences, and draw conclusions from maps and other visual representations

2.0 Use the historical method of inquiry to ask questions, evaluate primary and secondary sources, critically analyze and interpret data, and develop interpretations defended by evidence

a) Investigate causes and effects of significant events in East and Southeast Asia history. Topics include, but not limited to, diffusion of religion, imperialism, and nationalism
b) Evaluate the influences of China and India over Southeast Asian countries from past to present; e.g. in the realms of politics, social hierarchy, religious beliefs, economics, etc.

3.0 Understand human interaction with the environment.

a) Analyze the challenges in the East and Southeast Asian countries, including their geopolitical, cultural, and economic significance and the international relationships in which they are involved
b) Explain how the uneven distribution of resources in the world has led to conflict, competition, and cooperation among nations, regions, and cultural groups

Social Science 10: World History and Geography

Full year – 60 minutes 3 in 5 days: 3 credits

This course will work not only on developing student's knowledge of their place in human history, but to place the existence of the human species within a universal perspective. The course begins by briefly exploring the origins of the universe, galaxies, and our solar system, and placing the origins of the human race into that narrative. The content of this course is divided into 4 Units: PreHistory and the Origins of the Human Species; The Neolithic Revolution and Classical Civilizations; The Medieval Period and Cultural Exchange; and The PreModern Period and Global Commerce. Throughout thecourse, certain academic skills will be emphasized through projects, essays, and groupwork. These academic skills include: interpretation of maps and graphs, proper research protocols, writing (through essays), listening and speaking (through presentations).

Social Science 11: World History & Geography II

Full year – 60 minutes 3 in 5 days: 3 credits

This course will serve as an introduction to the history of the modern world. This course is part two in a two-course sequence which will span the length of human history. It will begin where the World History and Geography I course left off, with the origin of the modern period (16th Century). The content of this course is divided into 4 Units: Origins of the Modern Age; Nationalism and the Industrial Age; Global Conflict in the Twentieth Century; and the PostCold War World. This course will build on specific academic skills which will continue to be emphasized through projects, essays, and groupwork. These academic skills include: interpretation of maps and graphs, proper research protocols, writing (through essays), listening and speaking (through presentations). Students will also expand their critical thinking and problem solving skills.

Electives:

- **Introduction to Business**
  3 days out of 5; 3 credits

  This course introduces students to the world of business. Students will develop an understanding of the functions of business, marketing, information and communication technology, human resources, production, and of the importance of ethics and social responsibility. There will also be exploration of the various forms of business ownership, as well as an examination of the role of business in the economy and society. This course builds a foundation for further studies in business and helps students develop the business knowledge and skills they will need in their everyday lives.

- **Introduction to Accounting**
  3 out of 5 days; 3 Credits

  This course will introduce students to accounting concepts and practices. They will learn about double entry bookkeeping and how to prepare financial records and statements. Students will also examine the role of accountants in the modern world. By the end of the course students will be able to understand and prepare

complete Financial Statements for a modern small business. This course cannot be repeated if it was taken in Grade 10.

- **Introduction to Economics**
  3 out of 5 days; 3 Credits

  This class will provide a sweeping approach to the major theories of economics and the use of these theories for real-world applications. This will focus on developing research, data analysis, and critical thinking skills which can be used across the curriculum. We will utilize a project-based approach where students not only learn about economics but apply their understandings to solving a range of teacher and student-generated problems. The class will also allow the students to begin developing the thinking skills necessary for a future in business, entrepreneurship, and investment. This course cannot be repeated if it was taken in Grade 10.

- **Marketing and Advertising**
  3 out of 5 days; 3 Credits

  This course will introduce students to the fundamental concepts, principles, and basic skills of marketing, sales, and business management. Instruction will focus on market types, 4 P marketing mix strategies: Product, Price, Place and Promotion, market analysis, consumer behavior, CSR, and Advertising fundamentals. The students will complete a wide variety of assignments and projects at an introductory level such as Branding Research, Packaging Design Research, Socially Responsible projects, Loyalty Programs, Business case studies, E-commerce, Posters, and Commercial Design. These assignments and projects are designed to help students master the skills and techniques of basic marketing. Other relevant references such as reading materials from current magazines and newspapers, movies, and other media will also be used throughout this course.

- **Skills for Leadership and Management**
  3 out of 5 days; 3 Credits

  This course will introduce students to the fundamentals of management, planning, organizing, leading, and controlling. The basic concepts of management for high school level will be provided in both concepts and practical terms such as knowledge management, decision making, teamwork, motivating for performances, communicating, leadership, change management, and managing technologies and innovation. This includes basic skills such as MS Word, MS Excel, PowerPoint presentations, and basic Photoshop, all of which are currently considered as important skills to work in several types of school projects and in the future.

- **Introduction to Social Psychology**

3 out of 5 days; 3 Credits
This course offers a broad introduction to social psychology, the scientific study of human social influence, and interactions based on psychological theories and concepts. We will explore the various ways people think and act that may influence people's thoughts, feelings, and behaviors. Interesting examples of lecture topics: developmental psychology, social needs, reinforcement and punishment, social learning, looking-glass self, stress, psychological disorders and their social impacts, major social institutions, interpersonal relationships, and negotiations.

- **Introduction to Political Science**
  3 out of 5 days; 3 Credits
  Introduction to Political Science will cover political theories, political ideologies, political thinkers, and contemporary political events. A majority of the class will require students to think critically about issues relating to politics, form their own opinions and arguments, and debate. The class is meant to approach the ideas of politics in a way that students can acquire skills and knowledge that can also apply to their everyday life, not just in formal politics.

- **Introduction to Finance: Valuation and Investment**
  3 out of 5 days; 3 Credits
  This course will introduce students who are interested in business, mathematics, or investing to the concepts of finance. The material covered in the course will help students understand the basics of finance and investing. It will cover different types of financial valuation and how math is applied to calculate investment or project values with an emphasis on real world applications to personal finance, corporate finance, and investment decision making. Warning: think of this course like an applied mathematics class because it will involve a lot of work with formulae and calculations. Recommend at least a grade B in Mathematics from prior year. Students who took this course in Grade 11 cannot sign up again.

- **Corporate Accounting**
  3 out of 5 days; 3 Credits
  Prerequisites: Students must have completed Introduction to Accounting

  This course will give students an understanding of current accounting concepts, standards and practices that relate to modern medium and big businesses. Students will learn how to analyze a company's financial performance and estimate the value of businesses and investments. By the end of the course students will be able to understand and prepare complete Financial Statements for Corporations and Partnerships.

- **Advanced History (AS level)**
  3 out of 5 days; 3 Credits

This AS Level History Course will help you understand the significance of historical events, the role of individuals in history and the nature of change over time. You will gain a deeper understanding of the past through political, social, economic and cultural perspectives. The engaging topics available will provide you with the knowledge and skills you require to succeed as historians.

The course also provides four themes that students explore throughout the course in order to make connections among historical developments in different times and places: Cause and consequence, change and continuity, significance and how the past has been reconstructed and presented by historians.

MATHEMATICS DEPARTMENT

The mathematics program, presenting a balanced combination of important processes and proficiencies, aims to teach students how to

a) Make sense of problems and persevere in solving them.
b) Reason abstractly and quantitatively
c) Use appropriate tools strategically.
d) Attend to precision
e) Look for and make use of structure

Standards and Benchmarks

1.0 Number and Operation

Students understand and use basic and advanced concepts of number and number systems.

- Extend the properties of exponents to rational exponents
- Use properties of rational and irrational numbers
- Reason quantitatively and use units to solve problems
- Perform arithmetic operations with complex numbers
- Represent complex numbers and their operations on the complex plane
- Use complex numbers in polynomial identities and equations
- Represent and model with vector quantities
- Perform operations on vectors
- Perform operations on matrices and use matrices in applications

2.0 Geometry and Spatial Sense

Students understand and apply geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions
- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity
- Define trigonometric ratios and solve problems involving right triangles

- Apply trigonometry to general triangles
- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles
- Translate between the geometric description and the equation for a conic section
- Use coordinates to prove simple geometric theorems algebraically
- Explain volume formulas and use them to solve problems
- Visualize relationships between two-dimensional and three-dimensional objects
- Apply geometric concepts in real-life situations

3.0 Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models
- Understand and evaluate random processes underlying statistical experiments
- Make inferences and justify conclusions from sample surveys, experiments and observational studies
- Understand independence and conditional probability and use them to interpret data
- Use the rules of probability to compute probabilities of compound events in a uniform probability model
- Calculate expected values and use them to solve problems
- Use probability to evaluate outcomes of decisions

4.0 Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Algebra

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems
- Perform arithmetic operations on polynomials
- Understand the relationship between zeros and factors of polynomials
- Use polynomial identities to solve problems
- Rewrite rational expressions
- Create equations that describe numbers or relationships
- Understand solving equations as a process of reasoning and explain the reasoning
- Solve equations and inequalities in one variable
- Solve systems of equations
- Represent and solve equations and inequalities graphically

Functions

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations
- Build a function that models a relationship between two quantities
- Build new functions from existing functions
- Construct and compare linear, quadratic, and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model
- Extend the domain of trigonometric functions using the unit circle

- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities

5.0 Calculus

a) Students demonstrate knowledge of both the formal definition and the graphical interpretation of limit of values of functions. This includes one-sided limits, infinite limits, and limits at infinity.

b) Students know the definition of convergence and divergence of a function as the domain variable either approaches a number or infinity.

b) Students demonstrate knowledge of both the formal definition and graphical interpretation of continuity of a function.

c) Students demonstrate understanding and application of the Intermediate Value Theorem and the Extreme Value Theorem.

d) Students demonstrate understanding of the formal definition of the derivative of a function at a point, and the notion of differentiability.

e) Students know the Chain Rule and its proof and applications to the calculation of the derivative of a variety of composite functions.

f) Students find the derivatives of parametrically defined functions and use implicit differentiation in a wide variety of problems coming from physics, chemistry, economics, etc.

g) Students compute derivatives of higher orders.

h) Students know and can apply Rolle's Theorem, the Mean Value Theorem, and L'Hopital's rule.

i) Students use differentiation to sketch, by hand, graphs of functions. They can identify maxima, minima, inflection points, and intervals where the function is increasing and decreasing.

j) Students know Newton's method for approximating the zeros of a function.

k) Students use differentiation to solve optimization (maximum - minimum problems) in a variety of pure and applied contexts, and to solve related rate problems in a variety of pure and applied contexts.

l) Students know the definition of the definite integral using Riemann sums. They use this definition to approximate integrals.

m) Students apply the definition of the integral to model problems in physics, economics, etc., obtaining results in terms of integrals.

n) Students demonstrate knowledge of and proof of the Fundamental Theorem of Calculus, and use it to interpret integrals as anti-derivatives.

o) Students use definite integrals in problems involving area, velocity, acceleration, volume of a solid, area of a surface of revolution, length of a curve, and work.

p) Students compute, by hand, the integrals of a wide variety of functions using techniques of integration.

q) Students know the definitions and properties of inverse trigonometric functions, and their appearance as indefinite integrals.

6.0 Business Math

a) Students use the appropriate problem-solving procedures.

b) Students add, subtract, multiply, divide, and round off whole numbers.

c) Students find averages.

d) Students check their calculations.
e) Students add, subtract, multiply, and divide fractions, decimals, and mixed numbers.
f) Students round off decimals.
g) Students change mixed numbers to improper fractions, and vice versa.
h) Students calculate the lowest common denominator of a group of unlike fractions.
i) Students use calculator to solve and check math problems.
j) Students change decimals and fractions to percentages, and vice versa.
k) Students define rate, percent, and percentage and use formulas to calculate their values.
l) Students calculate discounts, series discounts, cash discounts, and shipping charges, students calculate percentage of increase and decrease.
m) Students calculate gross pay, net pay, commissions, and overtime wages.
n) Students calculate simple interest and compound interest.
o) Students use a calculator to solve and check percentage, income, and interest problems.

Math 10

Full year - 60 minutes 4 in 5 days: 4 credits

This course is divided into a series of ideas and how those ideas are pieced together to create complex algebra and geometry. Students start with basic sets, work to linear and nonlinear equations, polynomials, coordinates geometry, and end with functions. Students are expected to learn and perform very complex algebraic and geometric reasoning. Topics are combined from both fields, with emphasis on real-world examples and logical reasoning. By the end of this course, students will be able to apply both algebraic and geometric analysis into everyday life and activities.

Math 11

Full year - 60 minutes 4 in 5 days: 4 credits

This course builds on the concepts and skills developed in the Grade 10. Students investigate radian measure and represent the trigonometric and the inverse trigonometric functions numerically and graphically, as well as solve real-world and multi-step problems, involving applications of geometry and trigonometry. Theorems in complex number, set theory, representations of patterns, sequences and series are covered to prepare students for Grade 12 and university-level mathematical logic and philosophy of mathematics. The course also introduces counting techniques such as the use of permutations and combinations, which can be applied to probability problems. The concepts of probability distributions and statistics are demonstrated to enable students to examine and use methods for organizing, analyzing and interpreting large amounts of data.

Math 12

Full year - 60 minutes 4 in 5 days: 4 credits

This course will be broken up into two semesters, with each semester focusing on a slightly different branch of mathematics. The first semester will place a great emphasis on algebra, with the second semester focusing more on geometry. These two semesters are considered inclusive, as many of the topics that will be addressed use knowledge and background from similar mathematical ideas. Students will be exposed to and expected to perform tasks that will stress the relevance of basic statistics, algebra, geometry, and logic. These items will be presented with respect to how they pertain to life and the 21st century world in which we live.

Calculus

Full year - 60 minutes 4 in 5 days: 4 credits

This course will begin with a pre-calculus review, and then immediately jump into an in-depth look at the ideas of limits, derivatives, and integrals, with all of these being covered with emphasis on both the abstract and concrete mathematical applications. The topics will be covered with emphasis on students being able to complete a college entrance calculus test, and will thus be run very similar to a college course. Students must understand that this class will be very fast paced and will be very rigorous. By the end of this course, students will be able to conduct many operations in calculus and be prepared to take more advanced mathematics at the collegiate level.

AP Calculus AB

Full year - 60 minutes 4 in 5 days: 4 credits

This is a college level class in Differential and Integral Calculus. It is equivalent to a first-semester introductory course of Calculus in an international university. Topics covered include limits, functions, differentiation and integration. Students will explore Calculus concepts analytically, numerically and using tools such as a graphing calculator or software. The class is also intended to prepare students for the AP Exam at the end of the year. College credit may be earned depending on the college and programs the student applies. Grading for the class is on a 5-point scale.

NOTES: Fees for exam and extra resources may be required. Students apply for enrollment in the spring to begin the class in August. Enrollment is subject to academic requirements, submission of the AP agreement and availability of seats.

Electives:

- **Statistics**
  3 out of 5 days; 3 Credits

  The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data .Students are exposed to the following conceptual themes:
  - Exploring Data :Describing patterns and departures from patterns
  - Sampling and Experimentation :Planning and conducting a study
  - Anticipating Patterns :Exploring random phenomena using probability and simulation
  - Statistical Inference :Estimating population parameters and testing hypotheses

  We will cover topics and applications that have not been covered before in regular high school math, so students will be expected and required to seek help if and when it is needed.

SCIENCE DEPARTMENT

The science program, built around laboratory-based activity, offers students the opportunity to explore about the world they live in, to develop scientific knowledge and skills in order to make personal decisions, and to make progress and solve problems in their community, country, and the world.

Standards and Benchmarks

Science as Inquiry

1. Students know how to formulate and evaluate research questions.
2. Students can design and conduct research, actively gathering and analyzing data.
3. Students use technological tools and mathematics in their own scientific investigations.
4. Students know how to revise their scientific explanations and models, using logic and evidence.
5. Students can communicate and defend the design, results, and conclusion of their investigations.

Physics

1. Students define physics, science and technology, and their relationships.
2. Students understand the nature of measurement and its relevant uncertainty due to various factors.
3. Students understand Scalar quantity (mass, volume, density, etc.), Vector quantity (force, acceleration, etc.), and understand the difference between Scalar and Vector quantities.
4. Students know Newton's laws and can apply Newton's laws to predict the motion of most objects, to solve problems that involve the variables of time, position, and velocity.
5. Students understand fluid dynamics and know the difference between Ideal and Viscous fluids and equation of Continuity.
6. Students understand that the laws of conservation of energy and momentum provide a way to predict and describe the movement of objects.
7. Students know system and surrounding, and understand the first and the second law of Thermodynamics. They can demonstrate various processes in which energy is transferred to the environment as heat.
8. Students can identify characteristic properties of waves and know how to solve problems involving wave length, frequency, and wave speed.
9. Students know that electric and magnetic phenomena are related and have many practical applications.

Chemistry

1. Students know that the periodic table displays the elements in increasing atomic number and shows how periodicity of the physical and chemical properties of the elements relates to atomic structure.
2. Students know and understand the concepts of Lewis Dot structures and Molecular Orbital Theory.
3. Students understand that biological, chemical, and physical properties of matter result from the ability of atoms to form bonds from electrostatic forces between electrons and protons and between atoms and molecules.
4. Students can explain how the conservation of atoms in chemical reactions leads to the principle of conservation of matter and demonstrate the ability to calculate the mass of products and reactants.
5. Students can apply the kinetic molecular theory to describe the motion of atoms and molecules and explain the properties of gases.

6. Students know that acids, bases, and salts are three classes of compounds that form ions in water solutions.
7. Students understand that solutions are homogeneous mixtures of two or more substances.
8. Students know Gibbs Free-Energy and can describe how energy is exchanged or transformed in chemical reactions and physical changes of matter.
9. Students know that chemical reaction rates depend on factors that influence the frequency of collision of reactant molecules.
10. Students understand that chemical equilibrium is a dynamic process at the molecular level.
11. Students know that the bonding characteristics of carbon allow the formation of many different organic molecules of varied sizes, shapes, and chemical properties and provide the biochemical basis of life.
12. Students know nuclear processes, including radioactive decay of naturally occurring and human-made isotopes, nuclear fission, and nuclear fusion.

Biology

1. Students demonstrate an understanding of the structure and function of the cell and know that the fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in the organism's cells.
2. Students demonstrate an understanding of chromosomes, genes, and the molecular basis of heredity. They can explain how mutation and reproduction lead to genetic variation in population.
3. Students can describe biological evolution.
4. Students can explain the interdependence of organisms and their interaction with the physical environment. They know that stability in an ecosystem is a balance between competing effects.
5. Students understand that the structure and function of an organism serve to acquire, transform, transport, release, and eliminate the matter and energy used to sustain the organism.
6. Students understand the behavior of animals.
7. Students can describe the diversity of structure and function in organisms.
8. Students know how the internal environment of the human body remains relatively stable despite changes in the outside environment.
9. Students know that organisms have a variety of mechanisms to combat disease.

Food Science

1. Students have adequate exposure to experimental method and are familiar with basic research methodology skills:

- Understand the concept of setting a hypothesis
- Know how to design experimental methods
- Know how to interpret results obtained in order to evaluate the hypothesis

2. Students evaluate laboratory and food safety practice:

- Incorporate safe use of lab equipment
- Integrate safe lab techniques and procedures

3. Students analyze the physical properties of matter and chemical reactions:

- Identify the physical properties of matter.

- Explain how atoms, molecules, and compounds relate to food items
- Explain how phase changes are examples of reversible physical change
- Describe how chemical changes are illustrated by chemical equations

4. Students summarize the basic properties of foods:
- Understand the purposes and functions of nutrients in food
- Explain the metabolic pathways and their chemical reactions
- Analyze relationships between food intake and body weight
- Summarize the properties and uses of water
- Identify the properties of vitamins and minerals in food
- Summarize the purpose of acids and bases in food
- Justify the use of additives in foods
- Summarize enzyme reactions in the body and in food

5. Students understand the relationship between food production and processing:
- Characteristics of different types of microorganisms
- Factors needed for growth and survival of microorganisms
- Identify nonliving conditions that can affect microbial growth on foods
- Safety rules in microbiology lab

6. Students have good background in quantitative analysis and sufficient mathematical skills to understand and utilize the relationship between matter and energy.

Environmental Science

1. Students understand how key features of the earth influence climate, weather, and the water cycle.
- Explain the factors that influence weather and climate, including the transfer of heat energy, the action of gravitational forces, and the rotation of the Earth
- Describe how weather can be influenced by global climatic patterns, such as El Nino and La Nina
- Describe how human activity can influence the water cycle in turn affecting weather and climate

2. Students understand scientific theories of how the earth's surface is formed and how those theories developed.
- Describe how ideas on the origins and the age of the earth have developed
- Explain the phenomena that occur beneath the earth's surface

3. Students understand how society uses and conserves various sources of energy.
- Explain the law of conservation of matter and energy
- Understand the transformations of energy usually produce some energy in the form of heat
- Compare chemical and nuclear reactions in terms of process and energy production
- Understand and assess the uses of nuclear fission and fusion, including the implications for society
- Assess the advantages and disadvantages of using nuclear energy
- Assess the advantages and disadvantages of alternative energy supplies including renewables such as solar, wind, geothermal and tidal

- Evaluate the impact of industrial consumption of energy has on society and the environment

4. Students understand how and why organisms are dependent on one another and their environments.

- Define the impact of immigration, emigration, birth rate, and death rate on population size
- Identify the factors that control population fluctuations in a given ecosystem leading to dynamic equilibrium
- Explain how the carrying capacity of an ecosystem may change as availability of resources changes
- Describe stages of succession leading to a climax community
- Identify behavioral, morphological, and physical responses to changes in an organism's environment
- Give examples of natural and human-initiated environmental changes that may influence levels of harmful substances
- Understand how monitoring environmental factors assists scientists in determining the health of the environment
- Understand the Gaia hypothesis and climate modeling

5. Students understand the cycling of matter and the flow and transformation of energy through systems of living things.

- Discuss sources and sinks in matter and energy cycles.
- Diagram and explain tropic levels in an ecosystem.
- Describe the laws of thermodynamics and apply the principles to an ecosystem.

6. Students understand the arguments for natural selection as scientific explanation of biological evolution.

- Explain Darwin's theory of natural selection
- Describe patterns of evolution; i.e., divergent, convergent, and coevolution
- Know that disruption of genetic equilibrium may result in evolution
- Discuss genetic modification in the context of natural populations

Health

1 out of 5 days; 1 credit

This course provides students with the knowledge and skills of health and wellness core concepts: analyzing influences, accessing information, interpersonal communication, decision-making and goal-setting skills, health-enhancing behaviors, and health and wellness advocacy skills.

There are six units of content areas: In the (1) personal health unit, students learn about physiological changes during sleep, and the importance of sleep and health examinations; In the (2) nutrition unit, students learn about what makes a healthy diet and ways to evaluate the nutritional value of food; In the (3) communicable diseases unit; students learn to reduce the risk of infection with communicable diseases and how their immune system works. In the (4) non-communicable diseases unit, students will recognize ways to manage asthma and allergies, and will choose behavior to reduce the risk of heart diseases, diabetes, and cancer; In the (5) tobacco, alcohol, and drug abuse unit; students learn about their consequences on the body, recognize the risk factors and protective factors of substance abuse, and develop effective resistance skills; In the (6) growth, development and sexual health unit, students learn the basic anatomy and physiology of the reproductive system, reproductive health, pregnancy and childbirth, birth control methods, STDs and HIV.

Students will be involved in brainstorming, lecture and discussion, case and scenarios analysis, panel discussion, buzz group, role play, demonstrations, and project presentation. They will be assessed mainly through rubric scoring of learning activities and performance tasks, as well as tests and quizzes.

Biology 10

4 out of 5 days; 4 credits

Students will gain broad knowledge on various topics in biology, including biological principles, plant and animal cell systems, genetics, evolution, micro-organisms, vertebrate and invertebrate systems. Students will incorporate laboratory techniques to complement the learning process.

Students will investigate cells, the building blocks of all living things. They will review the functions of the various organelles of a prototypical plant and animal cell. An in-depth study of the mechanisms of cellular division lead to the study of Genetics. In the Genetics unit, they will learn the mechanisms that allow genes to be passed from parent to offspring, and how the information for the specific traits carried by these genes are decoded and used to make proteins within the cell. Students will study the theory and process of evolution. Students will also study animal and plant physiology and how the different systems interact within an organism. Students will be assessed mainly through tests and quizzes, lab reports, rubric-based performance task projects, learning activities and discussions.

General Chemistry 11:

4 out of 5 days; 4 Credits

Chemistry is the basic constituent of all matter. By the end of this course students will have an idea of different fields studied in chemistry, as well as basic knowledge and hands-on experience required to apply chemistry principles to other fields of sciences, including biology and physics, as well as daily-life observations.

To aid this work laboratory practices, demonstrations, and conceptual modelling will be occasionally employed. Students will gain profound knowledge of atomic structures and the fundamental concepts of chemistry, moving on to topics involving chemical calculations (quantum chemistry and stoichiometry). Towards the latter part of the course chemical reactions will be investigated; chemical reactions would involve relationships between element and compounds while being applied to areas such as acids-bases, equilibrium, and organic chemistry.

Accelerated Chemistry 11 (Minimum B Average in Science and Math, 475 TOEFL or above):

4 out of 5 days; 4 Credits

Accelerated Chemistry 11 is an introductory combination course in general and advanced chemistry. This course deals with the application of structure and theory to the study of the fundamentals of chemistry: atoms, molecules, ions, quantums, mass relationships, chemical bonding, acids, bases, chemical equilibrium, solids, liquids, and gasses, including advanced chemistry: thermochemistry, chemical kinetics, electrochemistry, nuclear chemistry, and organic chemistry.

To aid in this work laboratory practices, demonstrations, and conceptual modeling will be occasionally employed. By completing this course the students can expect to have a solid background in advanced topics in chemistry and will be able to understand the roles of

advanced chemistry in daily life and its effects on society, especially in the fields of science, engineering, and medicine.

General Physics 11:
4 out of 5 days; 4 Credits

The course will introduce physics as the study of the conceptual laws that rule the physical world. Students will learn to predict the way objects move by understanding mechanics, a part of physics that involves motion, forces, energy, and work. The course include the study of Newton's Laws, Vibration and Waves, Electrostatics, and Electric Current. Topics in *Advanced Modern Physics* such as Atomic Nucleus and Radioactivity will be introduced if time permits. An emphasis will be placed on the development of critical thinking skills and finding connections between theory and real life situations. The learning process will prioritize the understanding of concepts in physics in which physical experimentation in the laboratory will be an integral part. Math will act as a tool to express and quantify these concepts after they are understood.

Accelerated Physics 11 (Minimum B Average in Science and Math, 475 TOEFL or above):
4 out of 5 days; 4 Credits

This course is designed to prepare students for a college program in science, engineering, and medicine at international or local Thai programs. The class covers the fundamental aspects of mechanics, waves, sound, and electricity. The students in the class will have the opportunity to acquire essential laboratory skills, which include experimental design, the testing of hypotheses, data analysis, drawing conclusions from data, and the communication of results. At the end of the year, each student will spend 3 weeks on a project of their choice in which they apply concepts related to the class on a real world problem.

Electives:

- **Food Science 10**:
  3 in 5 days; 3 Credits

  This course explores the relationship between food science and nutrition through examination and analysis of the biochemical foundations of food. Students will summarize the basic properties of food and analyze the physical properties of matter. They will also apply basic chemistry skills to understand the reactions between food and the human metabolic system.
  In addition, students will become familiar with the scientific method and basic research skills. Students will learn the basics of working in a laboratory setting and become familiar with food safety practices. Major topic areas are an introduction to laboratory equipment, sustainable farming, basic chemistry, water, acids and bases, the digestive system, an introduction to nutrition including macronutrients and micronutrients, food safety, and microbiology.
  This course will be assessed using various methods including but not limited to in-class assignments, laboratory experiments and reports, performance tasks and projects, and quizzes and tests.

- **Environmental Science 10**:
  3 in 5 days; 3 Credits

  This course provides students with knowledge and interdisciplinary concepts: evaluating the geological contributions to changing environments, investigating the ecosystems and biodiversity that make up and affect the environment, and analyzing influences of human actions on the environment. There are four units. In the (1) geology and energy unit students learn about the rock cycle and mineral ores. Students will understand how ores have been depleted and the effect of mining these minerals on the environment. Students will also evaluate the effects of using fossil fuels on the environment and investigate alternative fuels. In the (2) ecology unit, students review concepts learned in biology. Students will expand their knowledge on the interlinking relationships of ecosystems. In the (3) biodiversity unit, students will learn about the biodiversity of the world. Students will understand the importance of biodiversity and recognize issues that occur when biodiversity is lost. Students will analyze the problems of losing keystone species and other ecological issues that can occur with elimination of biodiversity. In the (4) humans and sustainability unit, students will recognize environmental risks posed by human activity. Students will analyze the environmental effects of human activity and how to increase sustainability

  Students will be involved in brainstorming, lecture and discussion, case and scenario analysis, panel discussion, role play, demonstrations, and project presentation. They will be assessed mainly through rubric scoring of learning activities and performance tasks, as well as tests and quizzes.

  The overall goal of the environmental science course is to improve knowledge of how to understand the many facets of the environmental issues and understand the challenges of solving these problems, as well as strengthen general knowledge and critical thinking skills. The students will be able to make connections to real world applications. Students will need to perform critical thinking and problem-solving skills to successfully navigate the course.

- **Advanced Biology 11**: (**Minimum B average in Biology 10**)
  One Full Year: 60 Minutes, 3 in 5 days; 3 Credits in Science

  This advanced course provides students with the opportunity for in-depth study of the concepts and processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biochemistry, cell biology, metabolic processes, molecular genetics, and evolution. Emphasis will be placed on the achievement of detailed knowledge and the application of experimental design and the ability to read and utilize scientific journal papers. This course will be assessed through various methods including but not limited to in-class assignments, laboratory experiments and reports, performance tasks and projects, and quizzes and tests. Students will be expected to read the textbooks before each chapter and have a basic understanding of the concepts before they enter the classroom since the materials in class will dive deep into the details of the subjects studied.

  This advanced biology class has been designed based on the American AP Biology and the European IB Biology curriculum. Therefore, this class has a similar level of difficulties as those two curricula. This class therefore will be difficult and will require a

lot of work on the students' part, but will prepare you for SAT II exams and college entrance examinations.

- **Anatomy and Physiology 11**:
  3 out of 5 days; 3 Credits

  By the end of this course students will have broad idea on different organs and organ systems, and how these systems function. Students will gain background knowledge on various topics such as the skeletal system, muscular system, nervous system, respiratory system, etc. All the information from this course can be further applied in medical school. Students will incorporate laboratory techniques, demonstrations, and field trips to complement the learning process. Students will be assessed mainly through tests and quizzes, rubric-based performance task projects, in class participation and group discussions.

- **Animal Behavior 11**:
  3 out of 5 days; 3 Credits

  This course will provide students with introductory knowledge into animal behavior. This class will examine the basic behavior that have been derived from the evolution and ecology of animals. This class will use information to explain how and why animals behave in situations. The class will focus on behavior regarding important biological activities: foraging, communication, migration, predator-prey interaction, mating/parental care, and classical vs. operative training. Animal behavior is a very broad topic, so we will be focusing on certain species (mainly birds and mammals) to evaluate and explain animal behavior.

- **AP Physics 1**
  3 out of 5 days: 3 credits
  This is a college level, algebra-based course in physics. It is equivalent to a first-semester introductory course of physics in an international university. The class covers the fundamental aspects of mechanics, waves, sound and electricity. Students will explore essential science practices such as, experimental design, testing of hypothesis, data analysis, drawing conclusions from data, and communication of results. The class is also intended to prepare students for the AP Exam at the end of the year. College credit may be earned depending on the college and programs the student applies. Grading is on a 5-point scale.

  NOTES: Fees for exam and extra resources may be required. Students apply for enrollment in the spring to begin the class in August. Enrollment is subject to academic requirements, submission of the AP agreement and availability of seats.

- **Applied Sports Science 12**:
  3 out of 5 days; 3 Credits

  Sport remains one of the world's most popular pastimes and with an ever increasing level of participation in sports around Thailand more sport professionals are needed in a variety of roles. The new applied sport science elective offered by MUIDS will bridge the gap between the core and elective science modules taken in grade 10 and 11 by applying

them to sports performance. During this class students will be able to explore the links that physiology, anatomy, biomechanics, and psychology have with sports performance. The course will also explore other vital modules to the development of sports such as sports ethics, drugs in sport, coaching science, performance analysis, special populations, and fitness instruction. The student will not only be confined to the classroom throughout this yearlong elective; students will be able to take part in lab experiments and sports practical lessons. Students will not only get the chance to increase their sports performance but learn how to analyze the body's response to exercise, critically analyze sport techniques, and study the effective implementation of coaching practices. Due to sport science popularity, students who go on to study courses in medicine can also complete intercalated years in sports science to become doctors for professional sports clubs. This course is perfect for any student who wishes to pursue a Bachelor of Science degree at university and potentially work in the field of sports management, performance analysis, sports psychology, and sports medicine in the future.

- **Astronomy 12**:
  3 out of 5 days; 3 Credits

  Astronomy as a topic, both as an elective and advanced studies, finds prominent place in school curricula around the world. It is vigorously followed by most schools in the U.S, given the large number of placements in observatories, planetarium, and space mission programs. The subject of astronomy is highly interesting as it takes with it and meaningfully integrates other sciences. Astronomy as an elective unit of study will include chapters that start from the basics of astronomy including ancient astronomy to modern theories of the evolution of the Universe, life in the Universe and modern cosmology. It deals with studies of many interesting celestial bodies; from planets of the Solar System to the very distant galaxies and other exotic objects such as Pulsars and Quasars.

  This elective unit of study will have a reasonable amount of time spent on making observations and analyzing the results obtained. A starting point could be the identification of craters on the Moon and study of the Martian surface besides a study of the Galilean moons of Jupiter. The study of Astronomy as an Elective in Grade 12 will also include some field trips to museums, planetarium and observatories.

- **Integrated Science 12**:
  3 out of 5 days; 3 Credits

  This course provides students with the basic knowledge of 'everyday' science through their own experimental design. Students will be able to integrate basic science knowledge into their living skills. Besides the basic exploration on science of food, cosmetic, basic physics, basic medicine, etc., students could express their interest in other science in everyday life and research on that topic. This course is mainly focused on providing the knowledge for students to distinguish fact from 'pseudoscience'. Students will also become familiar with scientific methods, researching skills, experimental designs, and presentation skills though the hand-on experiments designed

on their own. Students will be familiar with laboratory equipment, settings, and safety. This course will be assessed mainly with in-class assignments, experimental design and planning, research methodology, laboratory experiments and practices, performance tasks, and project presentations.

THAI STUDIES

Thai studies program is designed to meet the requirements of the Thai Ministry of Education.

Thai students are required to take the following courses

- Thai language/literature course
- Thai history course
- Thai geography course

Non-Thai students are required to take the following courses

- Thai literacy course I
- Thai literacy course II
- Thai culture course

Thai Language and Literature

1. Students use listening strategies to form ideas and judgments about oral communication.
2. Students use speaking strategies to deliver polished oral presentation that reflects clarity, force, and aesthetic effect.
3. Students use reading strategies to enhance their understanding of significant works of literature, and apply what they learn from their reading to solve personal and social problems.
4. Students evaluate literary and social values of significant works of literature.
5. Students read for various purposes and cultivate their love for reading.
6. Students use writing process and strategies to compose various types of writing, demonstrating the students' control of Thai language function and usage, and their awareness of the audience and purpose.

Thai Geography and Economics

1. Students analyze geographical changes in Thailand that affect types of landforms in each region.
2. Students analyze geographical phenomena in Thailand that can cause natural disaster.
3. Students identify protective measures of natural resources and environment, roles of conservation.
4. Students understand the relationship between physical environments and culture.
5. Students understand the concepts of Sufficiency Economy and its contribution to the economic and social development of Thailand.

Thailand-Past and Present

1. Students analyze major historical events and their contribution to the development of the nation.
2. Students analyze factors that contribute to the modernization of Thailand.
3. Students study how values of the past societies have influenced current trends and helped shape Thailand.
4. Students study the fundamental elements of Thai society, the characteristics of Thai people, their beliefs and values, and how globalization has impacted on the Thai way of life in this century.
5. Students analyze factors that cause changes in Thai governance, from absolute monarchy to democracy, and analyze the importance/ the need to preserve the monarchial democratic system.

Thai Literacy

1. Students speak Thai language clearly and confidently in both academic and social settings.
2. Students comprehend spoken instructions, common expressions, and can determine main idea, draw inferences, or make predictions.
3. Students read fluently with correct pronunciation and tone. They know the meaning of key vocabulary; they can identify main idea and support details, draw inferences, and conclusion.
4. Students write simple and compound sentences, and short paragraphs to convey ideas or stories.
5. Students know parts of speech and basic syntactical structures.

Thai Culture

1. Students analyze and compare Thai way of life in different historical eras.
2. Students analyze the works of Thais and foreigners that contribute to the development of Thailand and its culture.
3. Students know the characteristics and values of Thai culture, and understand the importance of local wisdom.
4. Students analyze changes in Thai society; including social problems, causes, and solutions.
5. Students understand the importance of the Institution of the Monarchy.

Thai Language 10 (for Thai Students)

Full year – 60 minutes 2 in 5 days: 2 credits

This course focuses on the Thai language and literary works. Students are introduced to a fundamental knowledge of linguistics to enhance a deep understanding of Thai language construction. The usage of Thai is also integrated in the course. Students learn and practice various skills such as giving speeches in public, writing essays and communicating with others appropriately and respectfully.

Moreover, the course introduces Thai literary works from Sukhothai to Ayuttaya era for emphasizing students' appreciation of classical literature; in addition, Thai Language 10 provides students with the opportunity to study and analyze the language features and functions in a variety of literary works. Students think, read, speak and write critically about literature. Through literary analysis, students learn how various authors present their perspectives on social issues, and learn to appreciate the literary value of short stories, poetry, novels, and nonfiction.

Thai Language 11

Full year – 60 minutes 2 in 5 days: 2 credits

This course focuses on the study of Thai language with emphasis on reading, listening and viewing skills from multiple sources. Students are encouraged to develop critical thinking and have enhance comprehension of the relationship of language and culture. This course also provides an opportunity to use the language as a means to analyze, synthesize, evaluate, and solve problems both in academic terms and social issues. Specifically for language usage, students learn to create good questions and answers for communication purposes. Expressing ideas, giving presentations and debates are integrated in the course. Students will practice using such activities logically and effectively. Moreover, students will create an academic paper to show deep understanding.

For literature, the course introduces Thai literary works since Thonburi era to the current day; in addition, Thai Language 11 provides students with the opportunity to study and analyze the language features and functions in a variety of literary works. Especially for this course, students focus on analyzing and criticizing literature. Through literary analysis, students learn how various authors present their perspectives on social issues, and learn to appreciate literary value.

Thai Language 12

Full year – 60 minutes 2 in 5 days: 2 credits

Thai Language 12 course promotes student to use language skills that they have accumulated from previous courses to apply to given tasks. Students focus on practicing various activities such as listening for comprehension, speaking by showing opinion argument and persuasion, reading and appreciating the literary value in short stories, novels and Thai traditional poetry, and writing essays and poems by following the given format. Students learn how to analyze and evaluate the language features and functions in literature. Especially for this course, students will be prepared for their higher education, so they will practice doing Thai language examination for admission to university.

Thai Literacy for Non-native Speaker 10

Full year – 60 minutes 2 in 5 days: 2 credits

Basic Thai communication: the alphabet, tones, basic conversational skills, and grammar. Basic speaking, listening, reading, and writing skills. Thai culture is introduced to develop understanding and appreciation for different traditions and customs. Students will have opportunities to practice appropriate manners and etiquette in various contexts

Thai Literacy for Non-native Speaker 11

Full year – 60 minutes 2 in 5 days: 2 credits

Further practice through reading various writing genres. Students will practice the language of daily communication on topics relating to their everyday life. The course aims to develop language competency through spontaneous expression via extensive oral and written practice. Thai culture is an integral part of the instructional units.

Thai Literacy for Non-native Speaker 12

Full year – 60 minutes 2 in 5 days: 2 credits

This course is designed to develop non-native students' understanding. Further practice, particularly through analyses of texts from Thai literature, magazines, and newspapers, as well as audio-visual materials on subjects related to Thai culture and society. Improvement of language skills for practical work and academic usage.

Thai Social Studies 1

Full year – 60 minutes 1 in 5 days: 1 credit

This course contains two study domains (Thai Geography and Thai Economics). Students will learn about managing resource production and consumption; efficient and cost-effective utilization of limited resources available; and understanding the principles of Sufficiency Economy for leading a balanced life.

In order to study about the principles of Sufficiency Economy, the students will learn to realize the importance of the Sufficiency Economy Philosophy to the socio-economic system of the country. Other than that the students will realize the importance of the cooperative system for economic development at community and national levels which is important for analyzing economic problems of the community and propose remedies. The students will also learn about the effects of economic liberalization affecting Thai society and explain the local polities in national economic development. For Thai geography the student will learn to analyze the influence of geographical conditions causing physical problems or natural disasters in Thailand and other regions of the world. And they will learn about the changes in Thailand resulting from nature or human action. After that they learn to build awareness and participation in conservation of resources and the environment for sustainable development.

Thai Social Studies 2

Full year – 60 minutes 1 in 5 days: 1 credit

This course contains two study domains (Thai History and Buddhism). Students will learn about the meaning and the significance of historical ties and periods; and the ability to use historical methodology for systematic analysis of various events. Especially they will learn awareness about the importance of historical times and periods affecting the development of Thailand.

In order to understand the development of Thailand from the past to the present; students realize the importance of relationships and continuous changes of events, and the ability to analyze their effects. Furthermore, the students will learn about the historical development of Thailand as a nation, culture, Thai wisdom, and cherishing pride in and preservation of Thai nationalism. So they will learn to know about the period in Thai history and the history of all Thai states before they became the Kingdom of Thailand. In order to analyze the important issues of Thai history and Thai monarchy to the Thai nation, they will analyze the factors conducive to creation of Thai wisdom and Thai culture that affect present Thai society. After that they learn about Buddhism in Thai society, and also gain knowledge of the Masters and the moral principles of Buddhism. The students will learn to analyze Indian society and religious beliefs before the period of the Buddha. In Buddhism the students will learn to analyze the Buddha as a human being with high self-training in enlightenment, founding and teaching methods and they will learn to practice the Middle Path in Buddhism. Finally they learn to analyze the democratic characteristics in Buddhism and in the Buddhist principles. At the end of this course they will learn to use the cause-and-effect and problem-solving methods.

Thai Civics

Full year – 60 minutes 2 in 5 days: 2 credits

This course will study the duties of Thai citizens to respond to Thai culture and enjoy peaceful coexistence in Thai society and the world community. The students will learn to analyze the laws relating to themselves, their families, the nation and the world community, in order to analyze the importance of social structure and social change. The students will participate in encouraging others to conduct themselves to be a good citizens of the nation and the world community. As a Thai citizen, the students will learn to conserve Thai culture and make it known. In addition to be a Thai citizen, the students will learn to solve problems about human rights in Thailand. For living in Thai society the students will learn about the political and administrative of systems the present society; adherence to, faith in, and upholding of the democratic form of government under a constitutional monarchy. As a world citizen, the students will learn to analyze the world from other points of view, with critical thinking not only from their eyes but also in other people's

eyes too. The students will learn to live peacefully together in a culturally diverse society such as the world today. And they will know how to manage conflict peacefully.

PHYSICAL EDUCATION DEPARTMENT

The program is designed to be activity-oriented, informative and enjoyable. Students will be exposed to many different challenges in a variety of physical activities. The ultimate goal is for students to use physical education to develop a healthy lifestyle physically, mentally, and socially.

Standards and Benchmarks

Physical Education

1. Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.
2. Students demonstrate knowledge of movement concepts, principles, and strategies that apply the learning in the performance of physical activities.
3. Students assess and maintain a level of physical fitness.
4. Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.
5. Students demonstrate and utilize knowledge of rules and regulations, develop strategies, teamwork, sportsmanship, and leadership needed to play sports.

Health Education

1. Students comprehend concepts related to health promotion and disease prevention to enhance health.
2. Students analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
3. Students use goal-setting skills and practice health-enhancing behaviors to reduce health risks.
4. Students understand the danger of alcohol, cigarette, and addictive drugs, and demonstrate the ability to use decision-making skills to reduce health risks.
5. Students advocate for personal, family, and community health

Physical Education

Full Year - 60 minutes 2 in 5 days: 2 credits

This course offers a variety of physical activities to meet the needs and interests of the age group of both boys and girls. The emphasis is on regular participation. Students will learn movement skills and principles, ways to improve personal fitness and physical competence, and safety and injury prevention. These fundamental skills can be applied to individual and team sports. The course offers swimming, soccer, volleyball, basketball, table-tennis, and badminton.

The main goal of the course is for students to understand that physical activity, exercise and sport provide opportunities for recreation, enjoyment, challenge, character development, self-expression and social interaction. The focus of the course is the continued development of a healthy lifestyle through personal fitness activities and lifetime sports. Physical Fitness Test is given each semester.

ROTC Program

Three Full Year – half day a week: No credit

The program, endorsed by the Territorial Defense Department, develops leadership qualities, military, discipline, responsibility, and physical endurance and promotes patriotism. Students who successfully complete three years of ROTC will be waived from conscription when they reach the age of 21.

Requirements: Thai citizen, must be in at least 10th grade, no age limit
Duration: Three years
Prerequisite: Must pass a physical fitness test
Cost: 500 baht per year; students must purchase uniforms

First Year: Basic training, drilling, marksmanship, history of tactics and warfare
Second Year: Advanced training, drilling, marksmanship, history of combat tactics and warfare, parachuting
Third Year: Field training and exercises, completion of boot camp (5 days) held sometime in February. Students who successfully complete the third year of ROTC will be awarded the rank of Master Sergeant

Students may enter the First Year of the ROTC Program in 11th or 12th Grade and continue in their university years. For students continuing into the Fourth and Fifth year of ROTC training, successful completion of the requirements will result in the ranking of Acting Second Lieutenant.

INFORMATION TECHNOLOGY DEPARTMENT

The aim of the program is for students to use technology in real life in an ethical way:

- To learn, research, and work
- To solve problems and complete tasks with creative thinking
- To create a range of practical, artistic, and intellectual products of high quality
- To share ideas and communicate with others

Standards and Benchmarks

1. **Computer Technology**
   a) Students explain the structures of computing and information technology
   b) Students apply computing and information in performing their studies, and create multimedia content for their presentations
   c) Students demonstrate an awareness of ethical and social implications in using communication and social media technology

2. **Problem Solving and Critical Thinking**
   a) Students explain the concepts of computer algorithm, and logic in programming
   b) Students demonstrate an awareness of various problems related to the introduced concepts and are able to apply appropriate basic problem-solving skills (e.g. divide and conquer, reduction, and trial-and-error
   c) Students analyze problems related to the learning concepts, and suggest solutions for those problems
   d) Students implement program using basic computer programming of loops, conditional statements, and subroutines via virtual programming such as Kodu or ALICE, and/or traditional programming languages such as Java
   e) Students create animation and simple computer game via Scratch, Kodu or ALICE

3. **Multimedia Technology**
   a) Students create, retrieve, organize, manipulate, evaluate, and communicate information, using computing technology and electronic media
   b) Students develop an interactive media for multimedia purposes which includes:
      - operating a digital camera
      - using imaging software to improve photos and create special effects
      - using imaging software to create simple animations
      - using imaging software to manipulate video images
      - producing multimedia images
   c) Students apply legal and ethical standards in creating digital content such as digital images

Computer Technology in the Modern World 10

Full year–60 minutes 3 in 5 days: 3 credits

This course will expose students to interdisciplinary nature of computer science in the modern world. The course content includes an overview of current computer technology, its application in various disciplines for both professional and personal activities. Students will learn how to use computational thinking for problem solving, understand different levels of complexity in problem solving, and develop skills in selecting and using tools efficiently. Finally, they will acquire communication skills; e.g. how to

communicate appropriately in their team and in their presentation. Students will develop an awareness of the ethical and social implications of their work.

Electives:

- **Internet of Robotic Things (IoRT)**
  3 out of 5 days; 3 credits

  In this course you will design and develop fun and practical IoT devices while learning programming (Python) and basic robotics/electronics. This course deals with the new emerging technologies of IoT (Internet of Things). By 2020, there will be 50 billion connected devices communicating through the Internet. Devices can range from internet-connected coffee makers, cars, or sensors on drones. You will learn how to connect the Raspberry Pi (very small computer) with other devices (sensors, motors, LCD screens etc.) in the real world.

- **Game Development**
  3 out of 5 days; 3 credits

  This course will provide the opportunity to design and code video games. Students will be introduced to interactive media design, project planning, prototyping and game programming. They will explore a wide range of interdisciplinary concepts in both art and science that are necessary to produce a commercially successful game. The course will follow a project-based approach towards learning.

- **Advanced Computer Science**
  3 out of 5 days; 3 credits
  Prerequisites: A or a letter from the instructor.

  This course goes beyond merely learning how to use applications like word processing, spread sheets, and internet browsers. It uses the Java language and focuses on the basic principles needed to design and build applications. It's a college level course. If they pass this course they may receive college credit for one semester of computer science.

FINE ARTS DEPARTMENT

The aims of the department are to:

- Motivate and encourage each student to think and work in an individualistic, imaginative, and constructive manner
- Enhance students' understanding of the importance of arts and their application in number of careers; namely, advertising, designing, media consultant, and teaching.

Standards and Benchmarks

Visual Arts (Drawing and Painting)

1. Students analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.
2. Students analyze the material used by a given artist and describe how its use influences the meaning of the work.
3. Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.
4. Students identify and describe trends in the visual arts and discuss how the issues of time, place, and cultural influences are reflected in selected works of art.

Performance Arts (Drama)

1. Students make acting choices, using script analysis, character research, reflection, and revision through the rehearsal process.
2. Students write dialogues and scenes, applying basic dramatic structure: exposition, complication, conflict, crises, climax, and resolution.
3. Students analyze how a specific actor used drama to convey meaning in his/her performance.
4. Students describe the ways in which drama reflects and influences their culture.
5. Performance skills include improvisation, role-play, voice training, and acting techniques.

Performance Arts (Band)

1. Students perform on instruments, alone and with others, a characteristic tone that blends with the ensemble.
2. Students demonstrate through performance basic elements of playing technique.
3. Students recognize, demonstrate, and describe basic musical terms and symbols.
4. Students recognize and perform basic rhythmic patterns.
5. Students demonstrate accurate performance on appropriately assigned part of an ensemble.
6. Students demonstrate proper instrument care and maintenance.

Electives

- **Orchestra (Period 7)**

  3 out of 5 days; 3 Credits

  Orchestra is offered to any student that desires to develop skills on orchestra instruments such as violin, viola, cello, or double bass. Educational emphasis is placed on the advancement of instrumental technique, development of music reading and comprehension skills, independent musicianship, style, and a deeper understanding of small group ensemble music, and orchestral literature. Literature will contain both classical and popular music. Students will perform both in small group ensemble projects and as a large group. Students may repeat this course in 11th and 12th Grade.

- **Design 1: Introduction to Advertising & Architecture Design**

  Introduction to Design 1 is unlike the usual fine arts course (which focuses on techniques and aesthetics). This course intends to look into the definition of design in areas that use art to communicate with an impact, such as in advertising, architecture and the rhetoric propaganda movement. Emphasis is placed on the process of investigation and development rather than product. This course may not be repeated.

- **Design 2: Introduction to Film Production & Industrial Design**

  Design 2 is an extension of Introduction to Design where the theory and workflow skills of advertising and architecture pave a path towards hands on experiences in character design (for film, games, and toys) and industrial design. Commercial media and filming will be explored to create short TV commercials with emphasis on the process of film production- namely, pre-production, production and post-production. An introduction to lighting techniques and food/product photography is also intended. Design 1 is recommended as a prerequisite, but not required.

- **Sculpture 1**

  This course offers an opportunity for students to explore 3-Dimensional composition, creating sculptures (industrial and anatomical). This course is designed for students interested in design as a career and should can be used to develop a professional portfolio. Basic anatomical sculpture foundations are to be mastered in Design one order to apply it to character and industrial design. This course will also explore mold-making and casting. This course may not be repeated.

Appendix 1 – Recommended Electives by University Major

Recommended Electives

University Major

	Science	Engineering	Medicine	Business	Computer Technology	Architecture	Graphic Design	Liberal Arts	Social Sciences
Grade 10	Environmental Science Food Science	Environmental Science Food Science Art of Design I	Environmental Science Food Science Animal Behavior	Introduction to Economics Mandarin I Japanese I Business, Technology, and Innovation	Environmental Science Food Science Japanese I	Art of Design I Environmental Science Introduction to Economics	Art of Design I Journalism and Photography Japanese I	Introduction to Theater Art of Design I Mandarin I Japanese I Journalism and Photography	Introduction to Economics Introduction to Theater Journalism and Photography Mandarin I Japanese I
Grade 11	Advanced Biology Anatomy & Physiology Animal Behavior Zoology Introducation to Nutrition Statistics Skills for Life *(Advanced Chemistry and/or AP Physics 1 in place of core science classes)*	Game Development Website Design Statistics Business, Technology, and Innovation Skills for Life Art of Design I/II *(Advanced Chemistry and/or AP Physics 1 in place of core science classes)*	Advanced Biology Anatomy & Physiology Animal Behavior Zoology Introducation to Nutrition Statistics Skills for Life Introduction to Psychology *(Advanced Chemistry and/or AP Physics 1 in place of core science classes)*	Introduction to Economics Mandarin I/II Japanese I/II Introduction to Accounting Introduction to Management Marketing & Advertising Business, Technology, and Innovation Introduction to Political Science and Law Skills for Life	Game Development Website Design Statistics Japanese I/II Skills for Life Art of Design I/II *(Advanced Chemistry and/or AP Physics 1 in place of core science classes)*	Art of Design I/II Statistics Introduction to Economics Business, Technology, and Innovation Skills for Life	Game Development Website Design Art of Design I/II Business, Technology and Innovation Skills for Life	Art of Design I/II Introduction to Theater Mandarin I/II Japanese I/II Global Conflict in Modern History Introduction to Psychology Introduction to Political Science & Law Skills for Life	Introduction to Psychology Introduction to Political Science & Law Global Conflict in Modern History Statistics Mandarin I/II Japanese I/II Skills for Life
Grade 12	Advanced Biology Anatomy & Physiology Animal Behavior Zoology Introducation to Nutrition Statistics Skills for Life Introduction to Modern Electronics AP Physics 1 Advanced Chemistry Linear Algebra	Game Development Website Design Statistics Business, Technology, and Innovation Skills for Life Art of Design I/II AP Computer Science AP Physics 1 Advanced Chemistry Linear Algebra Introduction to Modern Electronics	Advanced Biology Anatomy & Physiology Animal Behavior Zoology Introducation to Nutrition Statistics Skills for Life Introduction to Psychology AP Physics 1 Advanced Chemistry Linear Algebra	Mandarin I/II Japanese I/II Introduction to Accounting Introduction to Management Marketing & Advertising Business, Technology, and Innovation Introduction to Political Science and Law Skills for Life Global Conflict in Modern History	Game Development Website Design Statistics Japanese I/II Skills for Life Art of Design I/II AP Computer Science Linear Algebra Introduction to Modern Electronics AP Physics 1 Advanced Chemistry AP Digital Photography	Art of Design I/II Statistics Introduction to Economics Business, Technology, and Innovation Skills for Life Art of Design I/II Skills for Life AP Digital Photography Linear Algebra AP Physics 1 Advanced Chemistry	Game Development Website Design Art of Design I/II Business, Technology, and Innovation Skills for Life Art of Design I/II Skills for Life AP Computer Science AP Digital Photography Linear Algebra Introduction to Modern Electronics	Art of Design I/II Introduction to Theater Mandarin I/II Japanese I/II Global Conflict in Modern History Introduction to Psychology Introduction to Political Science & Law Skills for Life	Introduction to Psychology Introduction to Political Science & Law Global Conflict in Modern History Statistics Mandarin I/II Japanese I/II Skills for Life

Appendix 2 – List of Period 7 Extra-Curricular Activities

The following is a list of activities offered by various departments at MUIDS. It is by no means exhaustive, and new offerings are made each year as new teachers bring their passions and interests to the school. Student Services has a list that is updated regularly.

Department	Club
Physical Education	Football Club Football club is where students who are interested in playing football both competitively and casually meet up to train, play, and compete in football. Basketball Club This club is for students who share a passion for basketball and want to practice and play competitively. Table Tennis Club Table Tennis Club is for those students who like to have a bit of fun and relax with friends. Badminton This club is for students to learn and practice new skills in the game. Volleyball In this club students learn new skills while learning the rules of the game. Sports Program The sports program provides students with the opportunity to develop their athletic abilities and a positive attitude towards competition and sportsmanship. A strong emphasis is placed on the cultivation of important life skills, including cooperation, planning, perseverance and duration. Students will play many games during the course of a season, competing locally and overseas.
English	Journalism Club The Journalism Club is responsible for publishing the MUIDS school newspaper. Club members will learn about the fundamentals of the journalism process which includes planning, writing, and editing. Members will participate in the publishing process and create an original student publication. Debate Team The Debate Team studies the elements of formal debate and participates in inter-school competitions, mainly in Bangkok. In the 2016-2017 school year (there first year of existence) they took home first place in one of their first competitions.
Mathematics	Math Club The Math Club is for students who have a keen interest in mathematics. Members will discuss math problems and learn about interesting topics beyond what is taught in the classroom. The topics may include puzzles, proofs, and practical math applications.
Multi-Media	E-Sports Login and play the greatest and fun-nest games on the web.
Science	Environment Club The Environment Club is for students who have a keen interest in environmental issues, sustainability, and raising eco awareness. This club may participate in

	cleanup trips, awareness campaigns, and taking action to protect, conserve, and improve the environment. Science Club The aim of the Science Club is to stimulate interest and curiosity in science. The club provides opportunities for students to exchange ideas, find answers to scientific questions, and clarify misconceptions. Students of the club will further explore their science projects through participation in mini hands-on activities, group discussion, and reflection. In addition, the club will invite experts and lecturers from various MU faculties to give seminars to MUIDS students.
Social Sciences	Model UN The MUIDS Model United Nations (MUN) club engages in an authentic simulation of the United Nations system by learning about the UN system, the skills of debate, compromise, conflict resolution and negotiation. MUN team members have fun learning about the workings of world diplomacy through the lens of current events. Students who are interested in politics, government, and international affairs are encouraged to apply. *Adapted from http://www.unausa.org*. Junior Achievement JA is a club for students who are interested in business. The purpose of this club is to teach students the process of business, develop student's leadership skills, learn about money management, and encourage the development of individual projects to improve the community.
Student Activities & Community Service	Student Council The aim of this extra-curricular activity is to help students • Develop MU core values by involving in the affairs of school through a representative structure of a student council. • Learn democratic principles. • Acquire leadership and group skills. • Improve communication and problem solving skills.
Visual and Performance Arts	Yearbook Club The yearbook club provides students an opportunity to create and publish a chronology of the school year. Members of the yearbook club will be tasked with designing the yearbook layout, searching for school pictures, and working with faculty and students to plan the MUIDS Yearbook. Student who have a strong interest and skills in publishing, organizing pictures, and teamwork are encouraged to join.
Miscellaneous	Chess Club Hearthstone Club

Appendix 3– Capstone Project Form

Mahidol University International Demonstration School (MUIDS)

Capstone Project Form

Date:		
Student Name:	Homeroom:	Grade:
Advisor Name:	Room:	
Capstone Project Title:		
Capstone Project Type: ☐ Internship ☐ Externship ☐ Work-Based Learning ☐ Service Learning ☐ Community Service ☐ Other If other, please explain:		
Capstone Proposal Description:		

Capstone Team Members

Title	Name	Email	Signature
Chair			
Team Member 1			
Team Member 2			
Team Member 3			
Team Member 4			

Advisor Date Registrar Date

Attach any other supporting documents to this form.

MAHIDOL UNIVERSITY
INTERNATIONAL DEMONSTRATION SCHOOL

Change of Course Form

A. Identification

Student Name:_____ Date:_____

Current Grade Level (check one)

☐ Grade 10

☐ Grade 11

☐ Grade 12

I would like to change my course(s) from _____

to _____

B. Written Request

In order to change course(s), the student must submit at least a ½ page paper to the counselor explaining why he/she has decided to change course(s) and why it would be of benefit to change majors.

C. Student Signature

This is my course selection. I understand that this change may affect my education plan and that I cannot change course(s) again until the following academic year.

Student Signature:_____

D. Parent or Guardian Approval

I/We agree that this is my/our child's course selection. I/We understand that this change may affect my child's education plan and that he/she cannot change course(s) until the following academic year.

_____ Father/Guardian Signature

_____ Name in block letters

_____ Mother/Guardian Signature

_____Name in block letters

Appendix 5 – Application for Early Graduation Forms

Mahidol University International Demonstration School

MUIDS World Class Education - Wisdom of the Land

Application for Early Graduation

Application for Early Graduation

Directions to student: Complete this application in the first semester of grade 12

Name: _____ Date: _____

Homeroom Teacher: _____ ID: _____

TOEFL Score: _____ Date of TOEFL: _____ SAT Score: _____ Date of SAT: _____

I am applying for early graduation because I have been accepted into a university. I understand that this application for early graduation depends on my academic and behavioral performance in school. I understand that permission for early graduation may be revoked if my grades and/or behavior slip unacceptably.

_____ Student's Signature

In support of this application I have attached the required documentation:

□ TOEFL score report > 550

□ Acceptance letter from a university (may be submitted later upon receipt)

□ SAT score report (If you have taken the SAT)

□ other please specify_____

B. Parental Permission

I/We support my/our child's application for early graduation. I/we understand that this application for early graduation depends on his/her academic and behavioral performance in school. I/We understand that permission for early graduation may be revoked if his/her grades and/or behavior are unacceptable. I/We understand that the decision of the MUIDS administration is final.

_____ Parent/Guardian's signature

_____ Name in Block Letters

For Office Use Only:

Graduation Requirements

□ Student's GPA _____(Minimum 3.5) □ Student Portfolio

□ Documentation is complete □ Community Service

□ Date of intended graduation _____ □ Capstone Project

□ TOEFL Report □ University Acceptance Letter

Mahidol University International Demonstration School

MUIDS World Class Education - Wisdom of the Land

Application for Early Graduation
Central Admissions

Application for Early Graduation

Directions to student: Complete this application in the first semester of grade 12

Name: _____ Date: _____

Homeroom Teacher: _____ ID: _____

TOEFL Score: _____ Date of TOEFL: _____

I am applying for early graduation because I would like to apply for the Central University Admissions System. I understand that this application for early graduation depends on my academic and behavioral performance in school. I understand that permission for early graduation may be revoked if my grades and/or behavior slip unacceptably.

_____ Student's Signature

In support of this application I have attached the required documentation:

□ TOEFL score report > 550
□ O-NET score reports
□ GAT/PAT score reports
□ other please specify_____

B. Parental Permission

I/We support my/our child's application for early graduation. I/we understand that this application for early graduation depends on his/her academic and behavioral performance in school. I/We understand that permission for early graduation may be revoked if his/her grades and/or behavior are unacceptable. I/We understand that the decision of the MUIDS administration is final.

_____ Parent/Guardian's signature

_____ Name in Block Letters

For Office Use Only:

Graduation Requirements

□ Student's GPA _____(Minimum 2.0) □ Student Portfolio
□ Documentation is complete □ Community Service
□ Date of intended graduation _____ □ Capstone Project
□ TOEFL Report

A. Application and Documentation

Name: _____ Date: _____

Mahidol University International Demonstration School

MUIDS World Class Education - Wisdom of the Land

Application for Early Graduation
(COTMES)

Application for Early Graduation

Directions to student: Complete this application in the first semester of grade 12

Name: _____ Date: _____

Homeroom Teacher: _____ID: _____

TOEFL Score: _____ Date of TOEFL: _____ O-NET Score: _____

I am applying for early graduation because I have been accepted into a university. I understand that this application for early graduation depends on my academic and behavioral performance in school. I understand that permission for early graduation may be revoked if my grades and/or behavior slip unacceptably.

_____ Student's Signature

In support of this application I have attached the required documentation:

□ TOEFL score report > 550

□ Acceptance letter from a university (may be submitted later upon receipt)

□ O-NET score reports

□ other please specify_____

B. Parental Permission

I/We support my/our child's application for early graduation. I/we understand that this application for early graduation depends on his/her academic and behavioral performance in school. I/We understand that permission for early graduation may be revoked if his/her grades and/or behavior are unacceptable. I/We understand that the decision of the MUIDS administration is final.

_____Parent/Guardian's signature

_____ Name in Block Letters

For Office Use Only:

Graduation Requirements

□ Student's GPA _____(Minimum 3.5) □ Student Portfolio

□ Documentation is complete □ Community Service

□ Date of intended graduation _____ □ Capstone Project

□ TOEFL Report □ University Acceptance Letter

Mahidol University International Demonstration School

MUIDS World Class Education - Wisdom of the Land

February 24, 2016

To: Parents and Student who are interested in International Exchange Programs

Subject: Exchange Credits for Grade 10 Abroad

This letter is to provide you information regarding how your credits and grades will work with MUIDS transcripts after you arrive in Thailand from your exchange program abroad. Below are the details of the MUIDS exchange policies:

1. The student must submit a letter from the exchange agency indicating the period of leaving time.
2. All transcripts and grades will need to be evaluated by a counselor to determine the class equivalencies between MUIDS and the abroad institution.
3. To receive academic credit, all classes from the abroad institution must be passed with at least a grade of C or 70%.
4. In regards to the grade level, students must fulfill the Core Requirements of MUIDS of the grade they went on exchange with at least a grade of C or 70% with the exception of Thai Language. These course include the following:
    a. English 10
    b. Math 10
    c. World History 10
    d. Biology 10
5. Any classes that are taken at the abroad institution and do not have a MUIDS course equivalent will be accepted as an elective.
6. MUIDS will assume the successful completion of the grade taken abroad and will enroll the student in the appropriate grade once they resume at MUIDS. However, MUIDS assumes no responsibility for the courses, transcripts, and grades that were taken while abroad. Student and parents must coordinate with the exchange school should questions come up regarding their academic record for that particular grade level for their college applications. While many international and abroad university programs may accept high school classes taken abroad, it will depend on the institution and their course requirements. Students who are interested in applying for the regular Thai university program must complete all required MUIDS courses to qualify for the Thai program.
7. The date of graduation will be determined on the fulfillment of the core and required elective courses.

Please use the preceding information to help you to plan and determine the next step for you. If you have any questions regarding the exchange policy please feel free to contact me at randy.vir@mahidol.edu or +66 02-408-8555 ex. 133.

Best Regards,

Randy Virden
School Counselor

Parent Signature _____ Student Signature _____

February 24, 2016

To: Parents and Student who are interested in International Exchange Programs

Subject: Exchange Credits for Grade 11 Abroad

This letter is to provide you information regarding how your credits and grades will work with MUIDS transcripts after you arrive in Thailand from your exchange program abroad. Below are the details of the MUIDS exchange policies:

8. The student must submit a letter from the exchange agency indicating the period of leaving time.
9. All transcripts and grades will need to be evaluated by a counselor to determine the class equivalencies between MUIDS and the abroad institution.
10. To receive academic credit, all classes from the abroad institution must be passed with at least a grade of C or 70%.
11. In regards to the grade level, students must fulfill the Core Requirements of MUIDS of the grade they went on exchange with at least a grade of C or 70% with the exception of Thai Language. These course include the following:
    a. English 11
    b. Math 11
    c. Asian Studies and Economics (or any Social Studies class other than World History)
    d. Chemistry
    e. Physics
12. Any classes that are taken at the abroad institution and do not have a MUIDS course equivalent will be accepted as an elective.
13. MUIDS will assume the successful completion of the grade taken abroad and will enroll the student in the appropriate grade once they resume at MUIDS. However, MUIDS assumes no responsibility for the courses, transcripts, and grades that were taken while abroad. Student and parents must coordinate with the exchange school should questions come up regarding their academic record for that particular grade level for their college applications.
14. While many international and abroad university programs may accept high school classes taken abroad, it will depend on the institution and their course requirements. Students who are interested in applying for the regular Thai university program must complete all required MUIDS courses to qualify for the Thai program.
15. The date of graduation will be determined on the fulfillment of the core and required elective courses.

Please use the preceding information to help you to plan and determine the next steps for you. If you have any questions regarding the exchange policy please feel free to contact me at randy.vir@mahidol.edu or +66 02-408-8555 ex. 133.

Best Regards,

Randy Virden
School Counselor

Parent Signature

Student Signature