



Undergraduates in the Bachelors Degree Program are required to register for the University's General Courses during their Duration of Study. The courses are categorized as follows:

- (i) Islamic and Asian Civilization (UICI)
- (ii) Human Resources Development (UHAS)
- (iii) English Language (ULAB)
- (iv) Co-curriculum (UKQ#)
- (v) Science and Mathematics core courses (SSCE)

It is compulsory for every undergraduate to take four (4) credits each of UICI and UHAS as well as two (2) credits from an elective course (FPPSM or FTI). Students are also required to take six (6) credits of ULAB and two (2) credits of the UKQ# courses.

7.1 Centre of Islamic Study and Social Development Courses (UICI)

These courses, first introduced in the 1998/99 Academic session, are compulsory for the Bachelors Degree students of UTM. Students will have to complete these courses as one of the requirements for graduation.

List of Courses and The Codes

Code	Name of Course	Credit	Total
UICI 1012/ ULAM 1112	(Compulsory Courses as required by the Ministry of Education) Islamic and Asian Civilisation/ Malay Language for Communication (For International Student)	2	2
UICI 3##2*	(Compulsory University Elective) Elective FTI	2	2
Total no. of compulsory university credit course			4

* Elective Courses (Choose one course only)



List of elective courses (UICI)

	Code	Name of Course
(1)	UICI 3042	Islamic Institutions
(2)	UICI 3032	Islam and Current Issues

7.2 English Language Course (ULAB)

Students must accumulate six (6) credits of English Language courses during the course of their study.

Each course is taught for four (4) hours per week and the focus is on developing basic skills in reading, writing, listening and speaking using science and technology materials.

List of English Language Courses

Code	Name of Course	Credit
ULAB 1122	Academic English Skills	2
ULAB 2112	Advanced English for Academic Communication	2
ULAB 31#2	Elective from Language Academy	2

* Elective Courses (Choose one course only)

List of elective courses (ULAB)

	Codes	Name of Courses
(1)	ULAB 3112	English for Career Search
(2)	ULAB 3122	English for Workplace Communication
(3)	ULAB 3132	Reading for Specific Purposes
(4)	ULAB 3142	Writing for Specific Purposes
(5)	ULAB 3152	Effective Oral Communication Skills



7.3 Human Resource Development Courses (UHAS)

Students are required to take a total of four (4) credits of Human Resource Development Courses as listed in the following table, and another two (2) credits from the list of elective courses.

List of Courses and the Codes

Code	Name of Course	Credit	Total
	(Compulsory Courses by the Ministry of Education)		
UHAS 1172/ UHAS 1162	Dinamika Malaysia/Arts, Customs and Belieft of Malaysian (For International Student)	2	2
	(Compulsory University Elective)		
UHAS 2##2* UHAS 3##2*	Elective from the Faculty of Management and Human Resources Development.	2 2	2 2
Total Credits for University's Compulsory Courses			6

* Elective Courses (Choose one only)

List of elective courses (UHAS)

	Codes	Name of Courses
(1)	UHAS 2032	Technocrats and Development
(2)	UHAS 2042	Introduction to Industrial Sociology
(3)	UHAS 2052	Effective Communication
(4)	UHAS 2062	Introduction to Industrial Psychology
(5)	UHAS 2092	Professional Ethics
(6)	UHAS 2102	Introduction to Industrial Counseling
(7)	UHAS 2112	Indroduction to International Relations
(8)	UHAS 2122	Critical and Creative Thinking



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Implementation of the University's General Courses

Semester 1 - 2	Semester 3 - 4	Semester 5 - 6
UICI 1012 Year 1	ULAB 2112 Year 2	ULAB 31#2 Year 3
ULAB 1112 Year 1	UHAS 2##2 Year 2	UICI 3##2 Year 3
		UHAS 3##2 Year 3

7.4 Co-Curricular Courses (UKQ#)

7.4.1 Background

The co-curricular courses were first introduced as part of the University General Courses in July semester 1992/1993 Academic Session. It is compulsory for every student to take these courses as a pre-requisite for graduation.

The courses offered are managed by the Co-curricular centre. To attract the interest of students, a variety of courses are offered and they are categorized into main modules such as Sports and Character Building, Personal and Social Development, Arts and Culture, and Special Programmes.

2.2.2 Requirements for Co-curricular Course Registration

The rules are applicable for students who are studying in the full-time programmes at the University.

- (i) The total number of credits for the Bachelors Degree program is two (2).
- (ii) The maximum number of credit and course allowed per semester is one (1).
- (iii) Students who would like to take more than one (1) credit as listed in (ii) will need to obtain permission from the Co-curricular centre and will be charged additional fees.



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- (iv) The co-curricular courses are part of the University's General Courses. If a student failed in any of the courses, he/she may:
 - (a) Repeat the course.
 - (b) Substitute the course with another one but the failed course will still appear on the student's transcript and will be used in the calculation of the CGPA.

- (v) Course Registration
 - (a) Students are encouraged to register during the pre-registration period to ensure a place in the course of their choice.
 - (b) Students may take any course offered subject to its availability.
 - (c) Students are not allowed to change courses once they have registered.
 - (d) The Rules and Regulations of registration are subject to change as deemed necessary by the University.

- (vi) Credit Transfer (Credit Exemption)
 - (a) UTM graduates are eligible for Credit Transfer for all co-curricular courses they have taken in previous programme.
 - (b) Direct entry students from other institutions of higher learning will have to take at least one (1) credit of co-curricular courses.
 - (c) Credit transfer for graduates from other institutions of higher learning will only be given if the course is accredited and recognized by the Centre of Co-curriculum.
 - (d) Any core course taken in or out of UTM will not be considered although the contents are equivalent or of a higher standard.
 - (e) Application for Credit Transfer must be made during the first semester of the study. Approval from the co-curricular centre is required.

- (vii) Final Examination Week

The final examination for the co-curricular courses, if any, will be held during the last week of lecture of each semester.



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2.2.2 Implementation of Co-curricular Courses

Students are required to attend all courses as scheduled inclusive of outdoor or off campus activities such as camping, study tour, and social services. Every activity is designed to transfer the theoretical knowledge to practical applications.

- (i) Meeting Times
The meeting hour for co-curricular courses is between 2.00 pm – 7.00 pm on every Wednesday. However, there are courses that will be conducted on Saturday mornings. The time allocated for the courses are a one-hour lecture or a two-hour practical activities.
- (ii) Marking Scheme
The marking scheme usually followed by the trainers/lecturers is as follows:
- | | |
|---|-----|
| (a) Contribution and Attendance | 20% |
| (b) Assignments/practical activities | 60% |
| Types of tasks: | |
| - Portfolio | |
| - Assignment, group or individual reports | |
| - Practical evaluation at site or lab | |
| (c) Tests and Quizzes | 20% |
- (iii) Current Rules
- (a) Students are given the choice to select the activities that are of interest to them. However, the activities must be the ones offered by the co-curricular centre for that semester. Registration for the course is subject to the availability of places.
- (b) Upon registration of the course of their choice, students will not be allowed to change to another course. Students are recommended to consider their options carefully before making their decision. They are advised to refer to the timetable and the requirements of the activities before making the final decision.



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- (c) Students who register for the co-curricular course with less than 80% attendance without valid reasons accepted by the University, will be awarded zero (0) mark for the course. They need to repeat the course.
- (d) Each student is responsible to ensure that the credit requirement for the co-curricular courses is fulfilled in accordance with the University's Regulations.





2.3 Synopsis of General Courses

1.1.1 Islamic and Asian Civilization Courses

Compulsory Courses

UICI 1012 Islamic And Asian Civilization (TITAS)

The course familiarize students with the Islamic and Asian Civilization. It discusses on the science of civilization that embraces an introductory to the science of civilization, the interactions of various civilizations (Malay, China and India) Islamic Civilization contemporary issues on the islamic and Asia Civilization, Islam in Malay Civilization and its role in establishing the Malaysian civilization. At the end of the course, student will be extensively exposed to the history, principles, value and fundamental aspects of the civilizational studies in Malaysia as well as to strengthen the integrity of Malaysian as citizen of a multi-racial country which has a high tolerance towards others. Throughout the learning process, some aspects of generis skills namely team working, communication skills and ethics will be emphasized.

UICI 3042 Islamic Institutions

The course exposes students to the comprehensiveness of Islam via its distinctive institutions. It discusses on various institutions including family, social, education, economics, legislative and jurisdiction, enforcement and politics. The discussion will be focused on the concepts of family: Its internalizing and implementation, the concept of society and the social responsibility, Islamic philosophy and educational system, concepts of Islamic economics, insurance and banking, the concept and characteristics of law and legislation, the position of Islamic law in the Malaysian constitution, witness, allegation, evidence and demonstration, wilayah al-qadha', wilayah al-Hisbah and al-Mazalim, and the concepts of Islamic politics and its dominion. At the end of the course, students are able to understand the concepts and the roles of various Islamic institutions which can be an alternative solution to overcome the problem of Ummah. Students are also able to work in team and equipped with communication and problem solving skills.



UICI 3032 Islam And Current Issues

The course acquaints student with various topics on current issues and the Islamic approaches to overcome the problems and the challenges. The topic comprise discussions on globalization, clash of Eastern and Western civilizations, moral decadency, ethical issues in science and technology, economic issues, development and environmental issues, postmodernism, governance and administration, issues that challenge the credibility of Islam, as well as fundamentalism and extremism. issues pertaining to the ethic relations and ethnic chauvinism and the current challenges of Muslim people will also be discussed.

At the end of the course, student will be able to explain the Islamic views pertaining to current issues and able to provide answers and alternatives to the problems by referring to the Islamic principles. They are also able to work in team and equip themselves with communication and problem solving skills.

1.1.2 English Language Courses

Compulsory Courses

ULAB 1112 English for Academic Communication

This course prepares students for the skills needed to perform academic tasks such as extracting information from texts taken from different sources, producing academic assignments, listening to lectures, presenting ideas orally and exchanging views. It empahases on various skills such as reading academic texts, identifying main ideas, making and expanding notes into coherent writing. At the end of the course, students should be able to apply the skills in an academic setting when communicating in both oral and written discourse.



ULAB 2112 Advanced English for Academic Communication

Pre-requisite : ULAB 1112 English for Academic Communication

The course prepares students for advanced academic communication in English with emphasis on oral communication skills. Students will be assigned projects that require them to look for and extract relevant information from various sources. In the process of completing the project assigned, students will put into practice various skills developed in the earlier subject as well as skills in collecting data through interviews and questionnaire survey, integrating and presenting information (in oral and written form), time management and group interaction. The various oral activities such as presenting a proposal of the project, giving a briefing on the progress of the report and presenting the completed report are designed to build students' oral communication skills and confidence in expressing themselves, i.e. skills that are much needed in their study and career.

Elective Course

ULAB 3112 English for Career Search

Pre-requisite : ULAB 1112 English for Academic Communication

ULAB 2112 Advanced English for Academic Communication

The course exposes students to effective strategies to secure a job upon graduation. Student will be taught job-hunting skills, which include conducting a job search to gather information related to their field of work, producing a portfolio, designing and writing their curriculum vitae and job application letters as well as preparing for and attending job interviews. The activities will be geared towards reflecting upon themselves, namely on their strengths, competencies, skills and qualification for job-hunting purposes.



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ULAB 3122 English for Workplace Communication

*Pre-requisite : ULAB 1112 English for Academic Communication
ULAB 2112 Advanced English for Academic Communication*

The course aims to introduce and expose students to the basic principles of communication at the workplace. Students will be given opportunities to practice effective meeting and discussion skills in formal and informal communicative events and read and write appropriate workplace related documents. Students will also be exposed to situations where they learn to function as individuals and team members and interact verbally and nonverbally with appropriate language, style and gestures.

ULAB 3132 Reading for Specific Purposes

*Pre-requisite : ULAB 1112 English for Academic Communication
ULAB 2112 Advanced English for Academic Communication*

The aim of the course is to introduce students to texts of different genres and rhetorical structures, namely, literature and science-based texts. Students are taught to deal with two main areas of reading: reading for academic purposes and reading for appreciating literary texts. In reading for academic purposes, students are exposed to authentic texts drawn from journals, research articles and magazines. They are taught how to select, assess, discuss and respond critically to issues related to the texts.

They are required to extract holistic ideas of the theme and react to them in terms of expressing agreement or disagreement, stating advantages or disadvantages of the ideas stated and making inferential opinion and justification. In appreciating literary texts, students are taught to analyse some literary texts. In both reading for academic purpose and literary appreciation, the texts serve as stimulus and context for language learning.



ULAB 3142 Writing for Specific Purposes

Pre-requisite : ULAB 1112 English for Academic Communication

ULAB 2112 Advanced English for Academic Communication

The course focuses on writing for specific purposes, in particular, technical writing that students are expected to produce. Student will be introduced to elements of effective writing and techniques of gathering technical information about products, services of work related information using letters, memorandums, and e-mails for writing reports to a target audience for a specific purpose. In additions, students will be exposed to proper language usage and acceptable writing standards.

ULAB 3152 Effective Oral Communication Skills

Pre-requisite : ULAB 1112 English for Academic Communication

ULAB 2112 Advanced English for Academic Communication

The course focuses on the techniques of producing good spoken discourses which include public communication such as impromptu and public speeches, group discussion and negotiation. Aspects of sound and speech production will be introduced to improve intelligibility and communicability. Basic principles of oral communication and importance of non-verbal communication will be introduced for effective communication. Students will have substantial practice in oral communication through in-class tasks and activities. These tasks and activities will enhance students' confidence in using English for academic and professional purpose.

1.1.3 Human Resource Development Courses

Compulsory Courses

UHAS 1162 Art, Customs and Belief of Malaysian

This course is designed for first year foreign undergraduates from countries of non-Malay origins. Students will be exposed to various aspects of the Malaysian culture such as the belief system, religious festivals, customs and etiquette of different racial groups in Malaysia. They will also be introduced to Malaysian traditional music, arts and crafts.



UHAS 1172 Dinamika Malaysia

Kursus ini merangkumi pelbagai disiplin ilmu sains sosial, yang meliputi ilmu sosiologi, sains politik, sejarah dan hubungan antarabangsa. Kursus ini memberi nilai tambah kepada pelajar UTM untuk membentuk jati diri, memupuk semangat perpaduan dalam kalangan pelajar, serta melahirkan pelajar yang dinamik dan berfikiran global.

Elective Courses

UHAS 2052 Effective Communication

This course focuses on effective communication techniques. These include verbal and non verbal communication, interpersonal communication, public speaking, conflict management and problem solving.

UHAS 2092 Professional Ethics

This course consists of basic debates on ethics (morale), ethics theories, ethics awareness, ethics principles and functions, ethnics relations with professionalism, ethics problem in profession, value and structure of professional ethics, service obligation, obligation towards clients, obligation towards the profession, current issues in management, medicine engineering business.

UHAS 2122 Critical and Creative Thinking

The aims of the course is to develop students' understanding of the concept, theory and practice of critical and creative thinking. Attention is on critical and creative thinking techniques as well as obstacles of both thinking methods. Both thinking methods help students to make decisions or solve problems whether in groups or individually.



UHAS 3012 Entrepreneurship and Enterprise Development

This course is designed to expose students to the concept of entrepreneurship and entrepreneurs and the skills needed to prepare a good business plan. In addition to exposing the students to the characteristics of successful entrepreneurs, various skills to successfully run and manage entrepreneurial ventures, technique of identifying, evaluating and choosing business opportunities, procedures to form a business, planning, funding and business supports available in Malaysia will also be discussed. Finally, students will be guided to prepare a business plan after they have learned the fundamentals of a good business plan (following a chosen model). In general, the focus is on instilling entrepreneurial features among the students and developing the required skills to manage a business enterprise.

UHAS 3022 Engineering Communication

The aim of this course is to develop students competency in communication related to engineers workplace. For that purpose we expose the basic skills in communication of taking students through the basic process in communication. The content of this course also include a communication skills related to technical field such as interpersonal skills for engineers, writing skills, presentation skills, instructional skills, supervisory communication for engineers, negotiation and consultation skills.

UHAS 3042 Human Development

This course aims to enables student to understand human development process from the aspect of physical, cognitive, emotional and social development. It combines the study of psychology and social skills in order to develop human potential.

UHAS 3052 Organization Leadership

Leadership is an influence process. An effort to influence others does not depend upon the power of belonging but also depend on the skill of the leader. Leaders must have the skills to influence the behavior of his followers to achieve the goals. Each individual an organization who guides their followers toward an eventual achievement of a goal is considered as a leader. Therefore, each leader or manager, no matter what position, must have leadership skills.



1.1.4 Service Courses from the Faculty of Science

SSCE 1693 Engineering Mathematics I

This is a first course in Engineering Mathematics. It covers topics including differentiation and integration which focus on hyperbolic and inverse functions. Improper integrals are also studied. Vectors and matrices including basic operations, solving related problems in 3 dimensions are discussed. In addition, vector spaces, eigenvalues and eigenvectors are introduced. Sketching of polar graphs is discussed. This course also covers complex numbers, function of complex variable, series and power series.

SSCE 1793 Differential Equations

SSCE 1693 Engineering Mathematics I

This is an introductory course on differential equations. Topics include first order ordinary differential equations (ODEs), linear second order ODEs with constant coefficients up to fourth order, the Laplace transform and its inverse, Fourier series, and partial differential equation (PDEs). Students will learn how to classify and solve first order ODEs, use the techniques of undetermined coefficients, variation of parameters and the Laplace transform to solve ODEs with specified initial and boundary conditions, and use the technique of separation of variables to solve wave equation.

SSCE 1993 Engineering Mathematics II

SSCE 1693 Engineering Mathematics I

This course is about multivariable calculus of real and vector-valued functions. The basic theory of partial derivatives and multiple integrals of real function with their application are discussed. This theory is extended to vector valued functions to describe motion in space, directional derivatives, gradient, divergence and curl, line integrals, surface integrals and volume integral. Related theorems, namely Green's Theorem, Stokes' Theorem and Gauss Divergence Theorem and their applications are discussed.



SSCE 2193 Engineering Statistics

SSCE 1793 Differential Equations

SSCE 1993 Engineering Mathematic II

This course begins with basic statistics, elementary probability theory and properties of probability distributions. Introduction to sampling distribution, point and interval estimation of parameters and hypothesis testing are also covered. Simple linear regression and one-way analysis of variance are also taught in this course. Students are taught on how to use and incorporate statistical tools and software for solving engineering statistics problem through a group assignment.

SSCE 2393 Numerical Methods

This courses discusses problem solving using numerical methods that involve no-linear equations, systems of linear equations, interpolation and curve fitting, numerical differentiation and numerical integration, eigenvalue problems, ordinary differential equations and partial differential equations.

