جامعـة العـلـوم والتقنيـة في الفــجيرة
UNIVERSITY OF SCIENCE & TECHNOLOGY OF FUJAIRAH

USTF

General Education Program

2021-2022

General Education Program

USTF has designed the General Education Program (GEP) based on its vision and educational philosophy. It aims at providing students with a variety of competencies associated with a wide range of university requirements intended to lay the ground for their future progress and development, academically as well as professionally. The main purpose of the GEP is to enable students to attain the fundamental broad base of knowledge, skills and competencies that a university educated graduate must have whatever their specific area of their specialization.

General education courses are designed to establish strong, intellectual foundation for all specializations. These courses develop skill acquisition in oral and written communication, information technology, innovation, quantitative analysis, critical thinking as well as certain aspects in the humanities, arts and natural sciences. The GEP also seeks to develop in the students' specific competencies pertinent to enjoying autonomy and responsibility for their learning, interaction with others, pursuing self-development and deploying what they have acquired in real-life situations.

The College of Humanities and Sciences (CHS) at USTF organizes offering of the General GEP, which is a vital component of higher education. Having such a Program will make both the required and elective courses relevant, rich and appropriate. In addition, these courses feature both originality and modernity.

Program Objectives

- Provide USTF students with core knowledge, values, attitudes and skills that will help them succeed in their studies, lives and careers.
- Enhance students' capacity for teamwork and leadership that will help them successfully guide the economic, social and cultural development of the UAE.
- Graduate students who know and value their religion and culture, and who are responsible citizens, while at the same time understand, appreciate and effectively participate in the multicultural diversity of the modern world.

General Education Program Learning Outcomes

On successful completion of the general education program the student will be able to:

Knowledge:
1. **Identify** key concepts and issues in languages, religion, history, society, environmental issues, and natural resources.
2. **Describe** knowledge of basic principles in statistics, information technology, critical thinking, and innovation, together with their applications.

3. **Discuss** the reasoning of behavioral, humanities, and art theories.

Skills:

4. **Use** the skills in communication effectively in written and spoken Arabic and English languages.
5. **Analyze** issues, ideas, and events comprehensively before forming a conclusion.
6. **Demonstrate** the need for acquiring, sharing, analyzing assessment, and use of information effectively, ethically and legally.
7. **Apply** knowledge from experiences in multiple disciplines to new, complex situations and decision making.
8. **Develop** skills in critical thinking, solve problems and exploring innovative practices for understanding the impact of technology on the society.

Competence:

9. **Interpret** and present quantitative data to comprehend multiple perspectives and formulate effective actions.
10. **Set** team objectives and take responsibility for team performance to achieve future needs and shared goals.
11. **Attach** to the fast development of the modern societies, smart cities, artificial intelligence and modern technologies.
12. **Explain** the core concepts of sustainable management from local to regional to global viewpoints.

PLOs and QF *Emirates*

QF Strands (level 7)		PLOs											
		1	2	3	4	5	6	7	8	9	10	11	12
Knowledge	Specialized factual and theoretical knowledge and an understanding of the boundaries in a field of work or discipline, encompassing a broad and coherent body of knowledge and concepts, with substantive depth in the underlying principles and theoretical concepts.		✓	✓									
	An understanding of allied knowledge and theories in related fields of work or disciplines and in the case of professional disciplines including related regulations, standards, codes, and conventions.		✓	✓									
	Understanding of critical approach to the creation and compilation of a systematic and coherent body of knowledge and concepts gained from a range of source.	✓	✓	✓									
	A comprehensive understanding of critical analysis, research systems and methods and evaluative problem-solving techniques.	✓	✓	✓									
	Familiarity with sources of current and new research and knowledge with integration of concepts from outside fields.	✓	✓	✓									
Skills	Technical, creative and analytical skills appropriate to solving specialized problems using evidentiary					✓	✓	✓	✓				

	and procedural based processes in predictable and new contexts that include devising and sustaining arguments associated with a field of work or discipline.														
	Evaluating, selecting and applying appropriate methods, procedures or techniques in processes of investigation towards identified solutions.		✓	✓	✓	✓	✓							
	Evaluating and implementing appropriate research tools and strategies associated with the field of work or discipline.			✓	✓	✓	✓							
	highly developed advanced communication and information technology skills to present, explain and/or critique complex and unpredictable matters		✓	✓	✓		✓							
Aspects of Competence **1. Autonomy and Responsibility**	Can take responsibility for developing innovative and advanced approaches to evaluating and managing complex and unpredictable work procedures and processes, resources or learning.									✓	✓			
	Can manage technical, supervisory or design processes in unpredictable, unfamiliar and varying contexts.									✓	✓			
	Can work creatively and/or effectively as an individual, in team leadership, managing contexts, across technical or professional activities.									✓	✓			
	Can express an internalized, personal view, and accept responsibility to society at large and to socio-cultural norms and relationships.									✓	✓			
2. Role in Context	Can function with full autonomy in technical and supervisory contexts and adopt paraprofessional roles with little guidance.												✓	
	Can take responsibility for the setting and achievement of group or individual outcomes and for the management and supervision of the work of others or self in the case of a specialization in field of work or discipline.												✓	
	Can participate in peer relationships with qualified practitioners and lead multiple, complex groups.												✓	
	Can take responsibility for managing the professional development and direct mentoring of individuals and groups.												✓	
3. Self-Development	Can self-evaluate and take responsibility for contributing to professional practice and undertake regular professional development and/ or further learning.													✓
	Can manage learning tasks independently and professionally, in complex and sometimes unfamiliar learning contexts.													✓
	Can contribute to and observe ethical standards.													✓

Compulsory Courses Contributions to the PLOs

Program Learning Outcomes	Health and Sciences	Information and Emerging Technologies	Humanities and Society
PLO1. <u>Identify</u> key concepts and issues in languages, religion, history, society, environmental issues, and natural resources.	✓	✓	✓
PLO2. <u>Describe</u> knowledge of basic principles in statistics, information technology, critical thinking and innovation, together with their applications.		✓	✓

Program Learning Outcomes			
PLO3. <u>Discuss</u> the reasoning of behavioral, humanities, and art theories.		✓	✓
PLO4. <u>Use</u> the skills in communication effectively in written and spoken Arabic and English languages.	✓	✓	✓
PLO5. <u>Analyze</u> issues, ideas, and events comprehensively before forming a conclusion.	✓		✓
PLO6. <u>Demonstrate</u> the need for acquiring, sharing, analyzing assessment, and use of information effectively, ethically and legally.		✓	✓
PLO7. <u>Apply</u> knowledge from experiences in multiple disciplines to new, complex situations and decision making.		✓	✓
PLO8. <u>Develop</u> skills in critical thinking, solve problems, and exploring innovative practices for understanding the impact of technology on the society.		✓	✓
PLO9. <u>Interpret</u> and present quantitative data to comprehend multiple perspectives and formulate effective actions.	✓		✓
PLO10. <u>Set</u> team objectives and take responsibility for team performance to achieve future needs and shared goals.	✓		✓
PLO11. <u>Attach</u> to the fast development of the modern societies, smart cities, artificial intelligence and modern technologies.	✓	✓	✓
PLO12. <u>Explain</u> the core concepts of sustainable management from local to regional to global viewpoints.	✓		✓

Elective Courses Contributions to the PLOs

Program Learning Outcomes	Health and Sciences	Information and Emerging Technologies	Humanities and Society
PLO1. <u>Identify</u> key concepts and issues in languages, religion, history, society, environmental issues, and natural resources.	✓		✓
PLO2. <u>Describe</u> knowledge of basic principles in statistics, information technology and critical thinking and innovation, together with their applications.	✓	✓	✓
PLO3. <u>Discuss</u> the reasoning of behavioral, humanities, and art theories.	✓		✓
PLO4. <u>Use</u> the skills in communication effectively in written and spoken Arabic and English languages.		✓	✓
PLO5. <u>Analyze</u> issues, ideas, and events comprehensively before forming a conclusion.		✓	✓
PLO6. <u>Demonstrate</u> the need for acquiring, sharing, analyzing assessment, and use of information effectively, ethically and legally.	✓	✓	✓
PLO7. <u>Apply</u> knowledge from experiences in multiple disciplines to new, complex situations and decision making.		✓	✓

PLO8. Develop skills in critical thinking, solve problems and exploring innovative practices for understanding the impact of technology on the society.		✓	✓
PLO9. Interpret and present quantitative data to comprehend multiple perspectives and formulate effective actions.		✓	✓
PLO10. Set team objectives and take responsibility for team performance to achieve future needs and shared goals.	✓		✓
PLO11. Attach to the fast development of the modern societies, smart cities, artificial intelligence and modern technologies.	✓	✓	✓
PLO12. Explain the core concepts of sustainable management from local to regional to global viewpoints.	✓		✓

Offered General Education Courses

Every USTF student is required to complete 24 credit hours in courses independently of their specialization. The courses covering the following areas: Health and Sciences, Information and Emerging Technologies and Humanities and Society. The CHS is responsible for offering 15 credit hours of university compulsory courses, listed in the table below, and 9 credit hours of university electives courses to be chosen from wide variety of general education courses.

List of the university compulsory courses (15 credit hours)

Course Code	Course Name		Credit Hours
	English	**عربي**	
ISL111	Islamic Culture (For Arabs)	الثقافة الإسلامية (الطلبة العرب)	3
ISL112	Islamic Culture (For Non-Arabs)	الثقافة الإسلامية (الطلبة غير العرب)	3
EMS111	Emirates Society (Arabic)	مجتمع الإمارات (باللغة العربية)	3
EMS112	Emirates Society (English)	مجتمع الإمارات (باللغة الإنجليزية)	3
ENG111	English Communication Skills	مهارات الاتصال باللغة الإنجليزية	3
ARB111	Communication Skills in Arabic Language (For Arabs)	مهارات الاتصال باللغة العربية (للطلبة العرب)	3
ARB112	Communication Skills in Arabic Language (For Non-Arabs)	مهارات الاتصال باللغة العربية (للطلبة غير العرب)	3
IES111	Innovation, Entrepreneurship and Sustainability (Arabic)	الابتكار وريادة الأعمال والاستدامة (باللغة العربية)	3
IES112	Innovation, Entrepreneurship and Sustainability (English)	الابتكار وريادة الأعمال والاستدامة (باللغة الإنجليزية)	3

The university electives general education courses are categorized into three groups. Students are required to choose 3 university elective courses (9 credit hours) from these groups (one course of each group):

- Health and Sciences
- Information and Emerging Technologies
- Humanities and Society

Colleges can remove some electives to avoid studying almost the same scientific content in two courses with different names; one is a general education course and the other is a course in the study plan of an academic program offered by such colleges.

1. Health and Sciences (3 Cr. Hrs.)

Course Code	Course Name		Credit hours
	English	عربي	
NUT111	Fundamentals of Human Nutrition	أساسيات التغذية	3
ORH211	Oral Health	صحة الفم	3
AID111	First Aid	الإسعافات الأولية	3
RES211	Research Methodology	مناهج البحث	3
ISH111	History of Science in Islam	تاريخ العلوم عند المسلمين	3
STA111	Statistics (Arabic)	الإحصاء (باللغة العربية)	3
STA112	Statistics (English)	الإحصاء (باللغة الإنجليزية)	3
AST 211	Astronomy	الفلك	3
PHY111	General Physics	الفيزياء العامة	3
BIO111	General Biology	الأحياء العامة	3
CHM 111	General Chemistry	الكيمياء العامة	3
GEO111	General Geology	الجيولوجيا العامة	3
MTH111	Introduction to University Mathematics	مدخل إلى الرياضيات الجامعية	3

2. Information and Emerging Technologies (3 Cr. Hrs.)

Course Code	Course Name		Credit hours
	English	عربي	
INF212	Introduction to Information Systems	مدخل إلى نظم المعلومات	3
INT211	Internet Concepts	مفاهيم الإنترنت	3
SOC211	Modern Technology and Society	التكنولوجيا الحديثة والمجتمع	3
INF 211	Information Society	مجتمع المعلومات	2 Theory + 2 Practical
COM111	IT Fundamentals (Arabic)	تطبيقات في الحاسوب (باللغة العربية)	2 Theory + 2 Practical
COM111	IT Fundamentals (English)	تطبيقات في الحاسوب (باللغة الإنجليزية)	2 Theory + 2 Practical
EDT211	Educational Technology	تكنولوجيا التعليم	3
ETH111	Academic and Technological Ethics	الأخلاقيات الأكاديمية والتكنولوجية	3
ART 211	Introduction to Digital Photography	مدخل إلى التصوير الرقمي	3
GIS211	Applications of Remote Sensing and GIS	تطبيقات الاستشعار عن بُعد ونُظُم المعلومات الجغرافية	3
DEG111	Digital Marketing	التسويق الرقمي	3
CGR111	Introduction to Graphic Design	مدخل إلى التصميم الجرافيكي	3
FIR111	The Fourth Industrial Revolution	الثورة الصناعية الرابعة	3

Course Code	Course Name (English)	Course Name (عربي)	Credit hours
ARI111	Artificial Intelligence	الذكاء الاصطناعي	3

3. Humanities and Society (3 Cr. Hrs.)

Course Code	Course Name		Credit hours
	English	عربي	
ISH211	Islamic Civilization	الحضارة الإسلامية	3
THI211	Critical Thinking	التفكير الناقد	3
PSY101	Introduction to Psychology	مدخل إلى علم النفس	3
LAW100	Introduction to Law	مدخل إلى القانون	3
MGT200	Introduction to Management	مدخل إلى الإدارة	3
ARC 211	Principles of Architecture	مبادئ العمارة	3
ART100	Introduction to Art (Arabic)	مدخل إلى الفنون (باللغة العربية)	3
ART110	Introduction to Art (English)	مدخل إلى الفنون (باللغة الإنجليزية)	3
ART 112	Introduction to Aesthetics	مدخل إلى علم الجمال	3
ARB 113	The Art of Written Expression	فن التعبير الكتابي	3
ENV111	Environmental Science	علم البيئة	3
SOC 111	Introduction to Sociology	مدخل إلى علم الاجتماع	3
Der118	Introduction to Public Relations and Advertising	مدخل إلى العلاقات العامة والإعلان	3
SOC112	Communication Between Cultures	التواصل بين الحضارات	3

Laboratories

USTF has well-equipped laboratories to provide practical hands-on experience to students of all specializations. These laboratories are as follows:

- Statistics laboratories.
- English language laboratories.

The faculty members of the CHS are using the MOODLE Learning Management System (LMS) and Online Learning System (OLS) to enhance the learning process by giving students the opportunity, of accessing the teaching materials while they are away from the University using the internet.

Intensive English Program

The Intensive English Program (IEP) has two strands: TOEFL and IELTS. The student is free to choose either of them. Each of which has two levels: Advanced or Intermediate. Students whose score is between 480 and 499 on TOEFL or Band 4.5 on IELTS are eligible to register in the Advanced Level. Students whose score is between 450 and 479 on TOEFL, or Band 4 on IELTS are eligible to register in the Intermediate Level. The table below summarizes this information:

IEP Organization

Level	TOEFL		IELTS
	Paper-Based	Internet-Based	
Advanced (AD)	480-499	54-60	Band 4.5
Intermediate (INT)	450-479	45-53	Band 4.0

IEP Structure

Level	Organization	Other Courses

Advanced	Contact teaching hours: 6 + 3 for Independent Learning in the English Lab.	Up to 3 additional courses from the General Education Courses
Intermediate	Contact teaching hours: 12 + 3 Independent learning in the English Lab	2 additional courses from the General Education Courses

The Advanced Level Program consists of 9 contact hours per week for 15 weeks. It is suitable to students whose English Proficiency is close to the minimum required level to be admitted in an USTF Program taught in English. It covers the following components:

1. **Listening:** The central object of the listening components is to enhance and develop student competence to enable him/her to understand the English language in both academic and social settings. At the beginning of the listening component, emphasis is given to skills such as understanding conversation, identifying main and detailed ideas, and interacting with other students and lecturers in social settings. Later, more emphasis will be placed on comprehending conversations and talks, taking lecture notes and being aware of the structure of a lecture.

2. **Speaking:** The objective of the speaking component is to enable students to communicate in English appropriately, fluently and successfully in both academic and social settings where they are required to ask and answer questions, agree or disagree, express their opinions clearly with supporting evidence, give presentations and take part in short debates and discussions.

3. **Reading:** The main objective of the reading component is to enable students to become good readers, by developing in them reading skills such as text comprehension, appropriate speed, reading with a purpose, skimming and scanning. To achieve these goals, students will be exposed to a diverse range of text forms and genres.

4. **Writing:** Since writing is viewed as a process, it is imperative that students acquire and develop the different steps of the writing process: generating ideas; organizing ideas; editing and revising. Emphasis is also given to grammatical accuracy, lexical appropriateness, fluency and coherence.

5. **Vocabulary:** Rather than being developed in isolation, vocabulary is integrated into all skills. The main aim of the vocabulary component is to expand and enrich the students' vocabulary repertoire and enable them to acquire academic vocabulary pertinent to their university studies.

6. **Grammar:** Like vocabulary, grammar is not developed in isolation, and is also integrated into the four skills of listening, speaking, reading and writing. The aim of this component is to enable students to acquire both the rules of usage (accuracy) and at the same time to acquire the rules of use (appropriateness) in both spoken and written discourse.

7. **Test-taking strategies:** In addition to the components listed above, test-taking strategies are an essential element and are incorporated into the program.

Courses of the TOEFL programs

Course Code	Seq.	Course Name	Weekly Hours
TOE111	2	TOEFL AD/ Grammar and Test Practice	3
TOE112	2	TOEFL AD/ Independent Learning	3
TOE113	2	TOEFL AD/ Listening, Speaking and Reading	3

TOE114	2	TOEFL INT/ Grammar	3
TOE115	2	TOEFL INT/ Independent Learning	3
TOE116	2	TOEFL INT/ Listening and Speaking	3
TOE117	2	TOEFL INT/ Reading	3
TOE118	2	TOEFL INT/ Test Practice	3

Courses of the IELTS programs

ourse	Seq.	Course Name	Weekly Hours
TEL111	3	IELTS AD/ Independent Learning	3
TEL112	3	IELTS AD/ Listening and Speaking	3
TEL113	3	IELTS AD/ Reading and Writing	3
TEL114	3	IELTS INT/ Independent Learning	3
TEL115	3	IELTS INT/ Listening	3
TEL116	3	IELTS INT/ Speaking	3
TEL117	3	IELTS INT/ Reading	3
TEL118	3	IELTS INT/ Writing	3

Students exit the IEP successfully if they achieve one of the following:

TOEFL			IELTS
Paper-Based	**Computer-Based**	**Internet-Based**	**Band**
500	173	61	5

General Education Program Courses Description

Compulsory Courses (15 Cr. Hrs.)

Islamic Culture (For Arabs): ISL111 (3 Cr. Hrs.)

This course aims at providing students with knowledge about culture, Islamic faith and beliefs, sources of legislation and characteristics of Islam. It will also deal with some contemporary issues from an Islamic perspective such as human rights, women status, globalization and environment.

Islamic Culture (For Non-Arabs): ISL112 (3 Cr. Hrs.)

This course aims to develop the student's understanding of the Islamic culture and thought. It familiarizes students with the Islamic vocabulary, concepts and values as well with a clear and detailed background on the religion of Islam. This course discusses the concept of culture, introduction to Islam, Islamic faith and beliefs, sources of legislation and characteristics of Islam, and deals with some contemporary topics such as the concept of human rights in Islam, woman status, globalization and environment.

Emirates Society: EMS111 (3 Cr. Hrs.)

This course covers topics related to the nature of UAE society before and after the discovery of oil, and its effect on the political, geographical, cultural, social and educational aspects of national life.

English Communication Skills: ENG111 (3 Cr. Hrs.)

This course aims to satisfy students' immediate needs in the communication in English language in both their academic environment and their future needs as professionals. It covers, among other things: the concept of human communication and its problems; communication and culture; telephoning; interview skills; conducting and participating in meetings; note-taking;

presentation skills; knowing audience; developing a positive public image; writing for the web. The course is practically oriented to ensure interactivity by the students playing a very active and constructive role.

Communication Skills in Arabic Language (For Arabs): ARB111 (3 Cr. Hrs.)

The course discusses fundamentals of communication in Arabic regarding its significance, components and goals. The course aims at developing the skills of listening, speaking, reading and writing which students need for their professional and social life. Throughout the course, participants discuss and analyze a variety of literary and scientific texts.

Communication Skills in Arabic Language (For Non-Arabs): ARB112 (3 Cr. Hrs.)

This course aims at providing non-Arab students with communication skills in the Arabic language. It focuses on the following skills: reading, writing, speaking and listening. It also aims at encouraging students to communicate in Arabic in their environment, university and society.

Innovation, Entrepreneurship and Sustainability: IES111 (3 Cr. Hrs.)

This course is developed for the UAE based on decades of practices and experiences of teaching innovation and entrepreneurship at Stanford University that has fueled innovation and high growth in Silicon Valley in California, USA. The goal of the course is to equip the next generation of leaders in the UAE with an innovative and entrepreneurial mindset and its related core skills. The sustainability part of the course is designed to analyze air pollution, the carbon cycle, water and energy and their role in a sustainable future.

Elective Courses (9 Cr. Hrs.)

1. Health and Sciences Group (3 Cr. Hrs.)

Fundamentals of Human Nutrition: NUT111 (3 Cr. Hrs.)

This course discusses the fundamental principles of human nutrition and their application to food selection. Emphasis is placed upon the essential nutrients and their vital importance as well as the recommended dietary allowances and other dietary guidelines, which promote health maintenance and disease prevention. Moreover, it answers the questions how Nutrition can adjust the lifestyle based on what is learned.

Oral Health: ORH211 (3 Cr. Hrs.)

This course defines the responsibilities of the individual within community dental health education with emphasis on the etiology of dental disease, methods for prevention and principles of nutrition in relation to oral health and preventive dentistry.

First Aid: AID111 (3 Cr. Hrs.)

This course aims to teach the skills and knowledge critical to saving life and minimizing the severity of injury or sudden illness. Safety awareness and accident prevention are emphasized.

Research Methodology: RES211 (3 Cr. Hrs.)

The course provides students with some basic tools of research methods in different fields. It covers the research process including formulating research questions, sampling and surveying, measurement (scaling), data organization, data analysis, methods of extracting knowledge from the readable materials, searching for relevant references and writing research reports.

History of Science in Islam: ISH111 (3 Cr. Hrs.)

The course consists of four units. The first elaborates on introductory aspects related to history of science in general and the science in the context of Islamic Culture in particular. This unit

includes nature of human knowledge, the term science and scientific method, significance of the recent concern of studying history of science, scientific achievements of ancient nations and the cultural context of the scientific accomplishments of the intellectuals of the Islamic Culture. The second unit is devoted to the achievements of the scientists of this culture in medical sciences and prominent figures in these fields. The third unit concentrates on the field of natural sciences, mathematics and prominent figures in these fields in the context of the Islamic Culture. The fourth unit discuss the agricultural endeavors in the Islamic culture in addition to the impact of this culture on the scientific progress in Europe.

Statistics: STA111 (3 Cr. Hrs.)

This course is designed for students who need to gain skills in the basic statistics knowledge. It covers the essential statistical topics that students are expected to know. It is a basic course where essential material in statistics is covered. The first part of the course deals with data tabulation and calculation of descriptive measures. The second part covers basic concepts of probability, probability laws of addition and multiplication and bays' law. The third part covers some discrete and continuous distribution, where the emphasis is on the Standard Normal Distribution. The fourth part covers the linear regression analysis and correlation.

Astronomy: AST211 (3 Cr. Hrs.)

This course clarifies the significance of astronomy, which aims at understanding mysteries of the universe. The course starts with historical context of astronomy and continues to explore later developments. The course explains the determination of coordinates of the astronomical planetarium and identification of the asteroid's astrocytes. The course tries to direct our understanding to the ocean (the ground) and beyond (the Solar System and others), and the study of the moon and its relationship to the land. The course describes how calendars are calculated and the phenomena related to its movement (tides, eclipses) are determined. The course also involves determination of prayer timings and geographical trends in the nature with the use astronomical devices, which are used for such purposes, and includes a study of the life of giant stars, nebulae, black holes and white dwarfs.

General Physics: PHY111 (3 Cr. Hrs.)

This course is designed for students who need to gain knowledge about the applications of physics in everyday life. It also focuses on how to use logic and similarities to make difficult problems even simpler before we use mathematics. The course includes a statement of physical rules that govern the means of modern technology (television, radio, microwaves, mobile phones, computers and Global Positioning Systems. It also shows how to get electricity and how to use it, heat physics, food, and motion.

General Biology: BIO111 (3 Cr. Hrs.)

This course provides students with general knowledge in biology. The students are provided with a basic knowledge of chemistry of living materials, the cell structure, types and functions. The students are also provided with good knowledge concerning cell division, general embryology and genetics. A basic knowledge about the morphological features of the tissues and recognize their roles in forming organs and organisms integrates the above information. The students are also provided with brief knowledge concerning human health and common diseases.

General Chemistry: CHM111 (3 Cr. Hrs.)

The course aims to provide students with the basic knowledge of chemical principles needed for the daily life. It deals with the development of life on Earth from its origins (Chemistry of life and Cells) and the characteristics of living things.

General Geology: GEO111 (3 Cr. Hrs.)

A Science includes both theoretical and laboratory components. The course is directed towards anyone who has an interest in earth science. The course involves a survey of all major topics of physical geology, including mineralogy, petrology, crystal chemistry, geologic time, surface processes, volcanic activity, rock deformation, mountain Building and plate tectonics. Field excursions supplement the lecture and laboratory material.

Principles of Mathematics: MTH111 (3 Cr. Hrs.)

This course deals with algebraic equations of degree 1 and 2. It also covers elementary ideas of plane geometry: cartesian coordinates system, equations of line and circles. Linear inequalities and systems of inequalities are also introduced. Basic notions of real functions such as limits, continuity and differentiability are studied along with simple applications. Basic knowledge about matrices and their algebra is also provided.

2. Information and Emerging Technologies Group (3 Cr. Hrs.)

Introduction to Information Systems INF212: (3 Cr. Hrs.)

The purpose of this course is to introduce the topic of information systems and how organizations use it to support a variety of tasks ranging from basic day to day activities to creating competitive edge in the marketplace. It will focus on topics such as business process re-engineering, collaborative computing, electronic commerce, the impacts of information systems upon organizations and society, ethical use of information systems, types of information systems and how to analyze and design information systems.

Internet Concepts INT211: (3 Cr. Hrs.)

This course is designed as an introduction to the Internet and world wide web. It starts by introducing the history of the Internet and includes the use of Internet applications and the basics of web page and web site production, and continues with matters such as Internet security, cookies and viruses.

Modern Technology and Society: SOC211 (3 Cr. Hrs.)

The course starts with defining key terms such as: science, engineering and technology then it deals with the history of technological developments that changed society, philosophical theories of interaction, ethical and legal issues pertinent to the use of modern technology and entrepreneurship in modern technology. In addition, the course describes the roles modern technology play in shaping the lifestyle of individuals and society, the economy and health. Other issues such as: the impact of modern technology on the environment, how individuals interact with technology and immerging and future technologies with their possible effects are also discussed.

Information Society: INF211 (3 Cr. Hrs.)

The course focuses on the information revolution in all fields around the world. It concentrates on the characteristics of the information society, its consequences, challenges and future

implications on Arab society under the information revolution and the international information market map.

IT Fundamentals: COM111 (3 Cr. Hrs.)

With the explosion of computer technology, knowledge of computing applications as tools for all disciplines has become a necessary asset. This course is an introduction to the most common software applications and includes hands-on use of microcomputers and some of the major commercial software. These software packages include typical feature such as word processing, spreadsheets, presentations, and other features found in current software packages. On course completion, students will exhibit proficiency with software applications and demonstrate knowledge of computer concepts and components.

Educational Technology: EDT211 (3 Cr. Hrs.)

This introductory course surveys the field of educational technology through the historical development of educational technologies, an overview of modern classroom applications and an examination of trends and issues surrounding the use of technology for teaching and learning.

Academic and Technological Ethics: ETH111 (3 Cr. Hrs.)

The course is concerned about ethical issues related to the misuse of scientific and technological advances, miscommunication of scientific research results, the ethical aspects related to the actual practice of scientists in their scientific endeavors and the lack of ethics in all facets of academic character at all levels of educational standing. The course starts with clarifying the relevance of discussing ethical issues in the present age. Then, it discusses examples of misbehaving by students and instructors in educational institutes at all levels. The course further discusses examples of the random growth of modern technology without paying attention to ethical standards and finally sheds some light on the miscommunication and fraud in research results among scientists. Stress is made on case studies related to aspects mentioned above.

Introduction to Digital Photography: ART211 (3 Cr. Hrs.)

Introduction to the history of fine art photography; color correction; scan and prepare images for printing; adjust contrast and tonality. Review of all relevant tools found in Adobe Photoshop software. Understand managing image files, saving, opening, uploadin and posting. Electronic images… their scaling and use: imaging for the Internet. Gain proficiency with image editing for maximum image impact. File size and print size... how to use layers, adjustment layers and resize images.

Applications of Remote Sensing and GIS: GIS211 (3 Cr. Hrs.)

This course introduces students to the basic elements of spatial sciences, including global positioning system (GPS), remote sensing (RS) and geographic information system (GIS). Students are taught how to locate themselves and determine their direction with a GPS. Students will study data collection, acquisition and processing in a much wider way than the visible spectrum, including: infrared (IR), ultraviolet (UV) and microwave zones of the electromagnetic spectrum in the remote sensing (RS). Finally, students will learn how to capture, store, retrieve, display and interpret data through GIS; identify the art of image interpretation and enhancement.

Digital Marketing DEG111: (3 Cr. Hrs.)

This course is designed to expose the student to the myriad of ways in which basic business functions can be enhanced through information technology. The primary areas of emphasis will

be marketing and the many elements comprising the internet. These elements include such issues as website design, web and data analytics, search engine optimization, social media marketing, and the implementation of the marketing mix within the digital medium.

Computer Graphics: CGR111 (3 Cr. Hrs.)

This course presents the basic principles and techniques for computer graphics on modern graphics hardware. Students will gain experience in interactive computer graphics. Topics include: two-dimensional (2D) viewing, three-dimensional (3D) viewing, perspective, lighting and geometry. This course will introduce students to all aspects of computer graphics including hardware, software and applications. Students will gain experience using a graphics application programming for completing several programming projects.

The Fourth Industrial Revolution: FIR111 (3 Cr. Hrs.)

This course illustrates that the fourth industrial revolution is very much driven by intelligence in powering decision-making and processes. This course is designed to offer students an introduction to fourth industrial revolution and provides a coverage of key fourth industrial revolution technologies and trends; the changes it will generate and the benefits of its application; the different provided opportunities and posed challenges; and how organizations can reap the fourth industrial revolution benefits.

Artificial Intelligence: ARI111 (3 Cr. Hrs.)

This course shows artificial intelligence can make computers learn, plan and solve problems autonomously. The main course topics include problem solving, reasoning, planning, natural language understanding, computer vision, automatic programming and machine learning. Methods for problem solving are useful both for reasoning and planning. Both natural language understanding and computer vision can be solved using methods developed in the field of pattern recognition. This course focus on the fundamental knowledge for understanding artificial intelligence. It will also introduce some basic search algorithms for problem solving; knowledge representation and reasoning; pattern recognition; fuzzy logic; and neural networks.

3. Humanities and Society Group (3 Cr. Hrs.)

Islamic Civilization: ISH211 (3 Cr. Hrs.)

Like other great civilizations, Islamic Civilization has great impact on humanity. Therefore, the course designed carefully for students to acquire its basic concepts. Then, the course highlights the spiritual, roles, physical and cultural bases of the Islamic Civilization. Moreover, the course sheds lights on its important achievements of Islamic Civilization in the various fields such as medicines, arts and literature. Finally, the Islamic Civilization course concludes with how civilizations contribute to the enrichment of each other.

Critical Thinking: TH1211 (3 Cr. Hrs.)

Critical thinking studies a process which is indispensable to all educated persons - the process by which human develops and supports his beliefs and evaluate the strength of arguments made by others in real-life situations. It includes practice in inductive and deductive reasoning, argument structure and identification, validity and strength of arguments, presentation of arguments in oral and written form, and analysis of the use of language to influence thought. The course also applies the reasoning process to other fields such as business, science, law, social science, ethics, and arts.

Introduction to Psychology: PSY101 (3 Cr. Hrs.)

This course deals with clarifying the concept of psychology as a science and identifying its various fields. The course also deals with the principles and laws that govern different behavioral phenomena. The course presents the basic research methods used in psychology and clarifies its relationship with other sciences. The course also deals with a general idea of some psychology theories explaining human behavior, as well as some important concepts in psychology such as human behavior, motives and emotions, feeling and perception, memory, intelligence and psychological disorder, and a set of applied models for interpreting human behavior in light of these concepts.

Introduction to Law: LAW100 (3 Cr. Hrs.)

The course deals with the study of the general theory of law in terms of: the definition of law, the characteristics of the legal rule, its relationship to other social rules, branches of law, its official and interpretative sources, the scope of application of the law in terms of place and time, and the interpretation of the law.

The course also deals with the study of the general theory of the right in terms of: the definition of a right, its relevance to the law, the types and divisions of rights, the persons of the right (the natural person - the legal person), the place of the right, the means of protecting it, its sources, its use, its proof, and the methods of its termination.

Introduction to Management MGT200: (3 Cr. Hrs.)

This course introduces the student to the four fundamental managerial functions i.e. planning, organizing, leading and controlling to teach them how to perform as an efficient and effective manager. The challenges faced by the contemporary managers in dealing with today's changing business environment are discussed in detail in terms of different managerial roles and desired skills. This course will effectively prepare the students to undertake more advanced and specialized courses within the management discipline. The course provides a holistic view of management studies, and arouses their further interest in pursuing this discipline.

The Principles of Architecture and Art: ARC211 (3 Cr. Hrs.)

The course introduces the student to the world of architecture and art through a series of lectures which highlight this subject by exploring visual presentations, videos, and slideshows. In addition, the course gives the student the chance to practice what he has visualized by creating drawings, pictures, and other media outcomes as required.

Introduction to Art: ART111 (3 Cr. Hrs.)

This course introduces art from prehistoric times to the present. It introduces the understanding and enjoyment of art. While examining the role that the visual arts have played in the development of the human cultures, the student is exposed to a wide variety of artistic media through the study of painting, architecture, design, photography and the decorative arts.

Introduction to Aesthetics: ART112 (3 Cr. Hrs.)

The aim of the course is to allow students to research and study the philosophy of aesthetics, discussing the problem of aesthetics concerns, the theory of beauty and the theory of arts. This course will enable students to develop knowledge for human life and culture, which would help them to utilize the aspects of aesthetics value in their professional practices and communication behavior.

The Art of Written Expression: ARB113 (3 Cr. Hrs.)

The course analyzes writing practices within and across disciplines, recognizing the role writing plays in consolidating knowledge in a retrievable form which is easily accessible within each

academic specialization. This course highlights the processes, practices and application of written expression in various academic fields. Students can develop a critical understanding of important discourses within their area of study.

Environmental Sciences: ENV111 (3 Cr. Hrs.)

This course introduces students to the basic elements of environment; atmosphere, hydrosphere and lithosphere, their interaction and impact of human activities. Topics such as air quality, water resources, fossil and renewable energy sources, environmental pollution and environmental protection are highlighted. Special emphases are given to the United Arab Emirates and Arabian Gulf Region.

Introduction to Sociology: SSW151 (3 Cr. Hrs.)

The course deals with the emergence and development of sociology, introducing sociology and its fields, and the first founding pioneers of sociology such as Ibn Khaldun, August Comte, Durkheim, Karl Marx, and Max Weber. The relationship between sociology and other sciences. The course also deals with the social processes occurring as a result of social relations such as cooperation, conflict, integration, competition, and consensus. The course also seeks to clarify the classical theoretical and methodological trends in sociology. The course also explains the topics of social class, social hierarchy, social mobility, and social systems. The social component of the social structure, such as economic, political, and religious systems.

Introduction to Public Relations and Advertising: DER118 (3 Cr. Hrs.)

This course introduces public relations in terms of its concept, history, functions and means of work, as well as the masses of public relations, their activities in various fields, and their role and means in developing institutions. The course introduces the concept of advertising, its types, objectives, functions and various means, the stages of the influence of advertising on consumer behavior, and the persuasive strings in the advertising message.

Communication Between Cultures: SOC112 (3 Cr. Hrs.)

This course helps students develop practical skills for improving their communication with other cultures. The course teaches students the different levels of communication such as verbal and nonverbal communication and how to use them effectively in their daily life. The course enables the students to communicate successfully with people from different cultures.