



COLLEGE OF APPLIED AND HEALTH SCIENCES

SOCI101: SOCIOLOGY 3 Credits

Sociology is a basic course to educate students about the society, social relationships and various social institutions. This course encourages to look beyond individual problems or accomplishments and to comprehend the inter connections between people and their living environment. Students learn the basic concepts and history of sociology, various cultures impacting the society, the family structure, different marriage systems, religion as a social institution, differing population scenario and deviant behaviors of individuals and groups.

PHIL 101: Introduction to Logic (Philosophy) 3 Credits

This basic course is designed to inform students: introduction to the meaning of philosophy and its cultural significance; major themes in philosophy, with examples; Western classification of philosophical eras and their neglect of Islam. Comparative historical and analytical approaches are used to stimulate the students' critical faculties. Emphasis will be given to understand the basics of logic which studies reasoning and arguments systematically, and how to formulate and evaluate natural language arguments. The goal is to provide students with the skills for producing formally valid arguments, using different methods of inference. Topics will also include sentential logic, logic of categorical statements and fallacies

ISLM 101: Islamic Civilization 3 Credits

This course aims to introduce students to the concept of civilization, and the composition and evolution factors. And introduce them to the most important political and administrative systems and economic and social development in the Islamic civilization, and aims to the statement of contributions to Islamic civilization in other civilizations, especially the European civilization, also aims to publicize the importance of the site Oman and how to interact with other previous civilizations in different eras, and the factors that allowed it to be a center of cultural divisions history.

ARAB101: اللغة العربية ومهاراتها 3 Credits

يعنى هذا المقرر بتنمية مهارات اللغة العربية: الاستماع، والتحدث، والقراءة، والكتابة؛ وذلك من خلال دراسة جملة من النصوص المنتقاة التي نركز فيها على طرح أسئلة تتعلق بكل مهارة. ويعنى هذا المقرر في مهارة الكتابة بدراسة التحرير الوظيفي، مثل: كتابة الرسالة الرسمية، وطريقة كتابة التقارير، ومعرفة الأساسيات في كتابة محضر الاجتماعات، وكتابة المقال. ويدرس الطالب كذلك بعض القواعد المساعدة في إجادة اللغة العربية، كالقواعد النحوية والإملائية

MNGT 313: Entrepreneurship 3 Credits

In this course, students learn the essential attributes of an entrepreneur and the stages one goes through in taking the seed of an idea and growing it into a successful business. But it also takes more than a good business plan and money to succeed - entrepreneurs must understand that all too often, the strengths that helped them be successful as a start -up become liabilities to overcome in order to take it to the next level. This course provides practical insights into the differences between effective leadership and



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management by exploring the concepts of Emotional Intelligence in the workplace and determining how to identify and develop human capital – the lifeblood of every business.

CHEM 101: Chemistry 1 3 Credits

This is an introductory course on the fundamentals of chemical principles. Topics include the components of matter, chemical equilibrium, chemical reaction types, gas laws, thermochemistry, quantum theory, atomic structure, electron configurations, and chemical bonding models

MATH 101: Calculus 1 3 Credits

Students of Calculus I will develop the quantitative skills needed to be successful in subsequent courses in engineering and applied sciences. These skills will enhance their ability to analyze, solve and communicate their solutions to fellow professionals using the language of mathematics. Students will continue to use the web-based course supplement to access course material and communicate with classmates and the instructor. They will enhance teamwork and leadership skills by working in groups to achieve the solutions to designate exercises

CHEM181: Chemistry I Lab 1 Credits

This is a one-semester laboratory course intended as the companion course for Chemistry 101 theory and is an introductory lab course focusing on basic principles and concepts in Chemistry. It provides the basis for further studies in physical and biological sciences, environmental sciences, various engineering disciplines, applied sciences such as food sciences and nutrition, geology and metallurgy, pharmaceuticals, interdisciplinary areas like nano science and technology etc. Topics include laboratory safety, chemical measurements, significant figures, laboratory techniques, naming and chemical formulae of compounds, chemical reactions - acid –base titrations and cation & anion analysis, stoichiometry problems, calorimetric experiments for heat of reactions etc.

BIO 101: Biology 1 3 Credits

This course provides an opportunity to explore the nature of cells from prokaryote to eukaryotes. Biology is the study of different life forms and their interconnectedness with all other life forms. It provides opportunities to learn about the processes of all living things. The study of biology forms a firm foundation for all the other related courses including Food Science, Human Nutrition, and biomedical Science etc. that are relevant to the students of the College of Applied and Health Sciences

BIOL181: Biology-I Lab 1 Credits

This course provides an opportunity to explore the nature of cells, from prokaryote to eukaryotes. Biology 1 Laboratory offers a variety of laboratory exercises on current concepts in cell and molecular biology using research-grade scientific equipment. Different teaching techniques, materials and instruments will be employed to provoke student's interest to enrich their understanding about the basic concepts and



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principles in cell and molecular biology. Numerous laboratory methods will be utilized in demonstrations and student experiments. Students will exercise critical thinking for interpreting laboratory results

ENGL101: English Communication Skills 1 3 Credits

English Communication Skills 1 is offered by the CLFS (Centre for Language and Foundation Studies) as a post-foundation course to assist students in their college studies. It covers all 4 skills in English at Intermediate level; with emphasis on oral communication (speaking).

ENGL102: English Communication Skills 11 3 Credits

English Communication Skills 2 is offered by the CLFS (Centre for Language and Foundation Studies) as a post-foundation course to assist students in their college studies. It covers all 4 skills in English at upper intermediate level (B2 CEFR); with emphasis on oral communication (speaking).

BIOL 201: Microbiology 3 Credits

Microbiology is the study of invisible, small microorganisms (characteristics, advantages and disadvantages) that form part of our world. It has numerous applications in health and disease and in the development of new technologies in the various fields of microbiology like food and industrial microbiology, immunology, medical mycology, diagnostic microbiology, etc. This course is intended to prepare students for various careers and opportunities in the different fields of microbiology.

BIOL281: Microbiology 1 lab 1 Credit

This course seeks to provide students with an understanding of important scientific concepts, laboratory techniques, an ability to think critically, and an understanding of the importance of microbiology to society in general. This course prepares students to pursue advanced and professional degrees successfully and enter the workforce with the tools to continue life-long advancement, and to contribute to our ever-expanding understanding of biological processes. Numerous laboratory methods will be utilized in demonstrations and student experiments. Students will exercise critical thinking for interpreting laboratory results

CHEM201: Organic Chemistry 3 Credits

This course introduces basic concepts of Organic Chemistry to students who have completed one semester course on Chemistry I. Organic Chemistry course deals with topics such as classification and nomenclature of organic compounds, functional groups, isomerism, structure, properties and bonding of organic molecules, chemical reactions and reaction intermediates, aromatic compounds, polymers, and biomolecules such as carbohydrates, proteins, fats, etc. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts in Organic Chemistry needed for the understanding of higher courses.

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This is a one-semester laboratory course intended as the co-requisite for Organic Chemistry 201 theory course, and is an introductory lab course focusing on basic principles and concepts in organic chemistry. In this course, students will investigate various organic reactions and a wide range of laboratory techniques and instruments. Topics include laboratory techniques, melting points, recrystallization, extraction, isolation of natural products (e.g. caffeine), distillation, test of functional groups, qualitative analysis of carbohydrates, proteins and fats, preparation of aspirin, soap, cyclohexene, cyclohexanone, benzoic acid, nitration of methyl benzoate, etc.

STAT203: BIOSTATISTIC 3 Credits

This course provides a basic knowledge in fields such as bio statistical concepts and reasoning. It functions as an important tool for describing central tendency and statistical hypothesis testing and its application to group comparisons. It helps in understanding the basics of power and sample size in various research study designs used for different purposes in public health surveys and studies. Moreover, it helps in interpretation of various data

AHND 101: Introduction to Human Nutrition 3 Credits

This course emphasizes the physiological and biochemical aspects of vitamins, minerals, fiber, energy and macronutrients. Students learn about the dietary sources, dietary recommended intakes, signs of deficiencies and toxicity of macro and micronutrients, and indicators used to assess the nutrient status for macro and micro nutrients. Students are introduced to areas currently under active research in human nutrition.

FDST 101: Introduction to Food Science 3 Credits

This course introduces students to important food science concepts and presents an introduction to the chemical, physical and microbiological nature of food and how these factors are manipulated to produce food that is safe and of high quality. This course begins with an overview of food science. It then explores key food groups and composition and the functional properties of the major food components. This course will cover the chemical and physical properties of foods and includes many tables and illustrations to enhance learning

AHND 210: Anatomy and Physiology 3 Credits

The course is designed by theory lectures & laboratory works to provide the students applied scientific disciplines with knowledge understanding organ and cellular anatomy and physiology. The knowledge is about the normal structure & function of various body organs and the mechanism of their work in correlation to their anatomical and histological structures. These will include: cells physiology and body fluid, membranes physiology, nerves and muscles, contractions of skeletal muscles, excitation contraction coupling, Neuromuscular transmission, Autonomic nervous system, Sensory nervous system,



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Cardiovascular system, Digestive system, Respiratory system, Reproductive system, and finally Endocrine system and Vitamins

AHND281: Human Anatomy & Physiology Lab 1 Credits

The course is designed to provide the students applied scientific disciplines with knowledge about the normal function and mechanism of various physiological and systems basis on the anatomical and histological correlation, including: cells physiology and body fluid, membranes physiology, nerves and muscles, contractions of skeletal muscles, excitation contraction coupling, Neuromuscular transmission, Autonomic nervous system, Sensory nervous system, Cardiovascular system, Digestive system, Respiratory system, Reproductive system, Endocrine system and Vitamins

AHND 262: Nutritional Biochemistry 3 Credits

The course provides basic information about nutrients along with their function in metabolism and link this information to the role of nutrition in long-term health and prevention of disease. It will provide information about the biochemical mechanisms associated with digestion and absorption of macro, micronutrients. The course will also deal with chemistry, biochemistry of both fat and water soluble vitamins, role of macro minerals and trace elements

AHND 360: Nutritional Metabolism 3 Credits

The course introduces students to introductory topics in nutritional metabolism. The following topics include: concepts of nutrients balance, flux, turnover and metabolic pools, energy metabolism at the cellular level, metabolic pathways of synthesis and degradation of lipids, carbohydrates, proteins and amino acids, macronutrient metabolism in major organs and tissues and substrate flux in long term and short term fasting

AHND 362: Nutrition through the Lifecycle 1 3 Credits

Role of diet in incidence of so-called diseases of civilization has put further emphasis on studying nutritional sciences as part of the strategy to prevent or reduce the incidence of these disorders and as a tool to decrease the burden on national economies by improving health of the communities. Maintaining a healthy nutritional status throughout life cycle is important in attaining the goal of a healthy community which is productive in terms of national economy and at the same time puts lesser burden on national exchequer

AHND 363: Nutrition through the Lifecycle 2 3 Credits

Role of diet in incidence of so-called diseases of civilization has put further emphasis on studying nutritional sciences as part of the strategy to prevent or reduce the incidence of these disorders and as a tool to decrease the burden on national economies by improving health of the communities. Maintaining a healthy nutritional status throughout life cycle is important in attaining the goal of a healthy community



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AHND 370: Nutritional Assessment 3 Credits

Nutritional assessment is an essential component of applied nutritional sciences that comprehensively studies various methods employed in assessing the nutritional status of individuals and populations. These methods include measuring dietary intakes and anthropometry, estimating biochemical markers of nutrient adequacy or deficiency and clinical examination of individuals in order to determine their nutritional health

AHND 380: Principle of Dietetics 3 Credits

The course introduces the student to the profession of dietetics. It provides an overview of the many career directions and opportunities open to dietitians both clinically and in the community.

AHND 450: Food Service Management 3 Credits

The course purpose is to introduce management theories and principles, and the effective use of resources in the design and administration of food service facilities. Design of floor plans and equipment selection for various institutional food service operations are included. Consideration is given to operating environmentally safe and efficient facilities with emphasis on sanitation and safety. Administrative and leadership responsibilities of the food service manager are emphasized

AHND 451: Quantity Foods 3 Credits

Site selection, engineering and equipment, basic food preparations, including station assignments, theory, personnel organization, service and storage; Menu design for food operations; emphasis on creating balanced menus and nutritionally proportioned; methods of establishing menu selection, truth in menu regulations and menu engineering as a marketing and merchandising tool. Dining room, school and hospitals operation; a la carte service techniques; coordination of functions and duties; dining room sanitation

AHND 452: Nutritional Epidemiology 3 Credits

The course introduces basic concepts and methods in key areas of Nutrition Epidemiology, and discusses practical considerations related to designing, analyzing, and evaluating population-based nutrition studies. Topics include: (i) alternative methods for measuring dietary intakes (foods, nutrients, non-nutrients, diet patterns, food contaminants); (ii) methods for measuring nutritional status including obesity; (iii) the use of biomarkers to measure nutritional exposures; and (iii) techniques for measuring physical activity.



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AHND 460: Meal Planning 2 Credits

This course aims to introduce the nutritional composition and characteristics of foods, principles, and guidelines for diet planning, diet-planning guides with emphasis on food group plans and exchange lists, the application of diet-planning guides in meal planning and methods of diet quality evaluation

AHND495: Internship 14 Credits

The course provides an interdisciplinary practicum that equips dietetic interns with competencies in different nutrition fields. Under the supervision of professional preceptors, the dietetic interns conduct training rotating through different clinical, and community nutrition/public health and food service management departments. As per ACEND requirement, the dietetic Internship will allow students to participate in a 920 hour (23 weeks) supervised work experience. The primary locations will be in hospitals, primary health care centers or other health care facilities as per the MoU signed by ASU with Ministry of Health. Since the University does not have an affiliated teaching hospital, the number of students and their distribution among host institutions would depend on the capacity and permissions given by the ministry. The entire internship program would be supervised jointly by the host facility and a teaching dietitian from the University working under Internship coordinator. The students would be able to get hands on experience in medical nutrition therapy and nutrition care process including variety of diseased conditions, diet calculations, and preparation of therapeutic diets. The students will also get an opportunity to work with dietitians in nutritional assessment, dietary intervention protocols and counselling techniques. Moreover, the students will spend time at a combination of places under this category, such as at a community health center, department of public health, and a local food pantry.

AHND 483: Nutraceutical 2 Credits

Nutraceuticals are concentrated forms of the food bioactives intended to be consumed as supplements in the form of tablets, capsules or liquid concentrates. Consumer awareness and interest in the relationship between diet and health has increased substantially and health is now a major driver for market positioning of foods. The course covers the issues and challenges in the development, evidence testing, marketing and changing regulations controlling functional foods and nutraceuticals. It will prepare students to assist industry with exploiting this growing

AHND 485: Medical Nutrition Therapy 1 3 Credits

The course provides detailed information on the role of nutrition in treatment of disease. This course covers conditions most seen in dietetic clinics; obesity, diabetes, dyslipidemia, heart disease, anemia and osteoporosis. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease. Introductory lectures on pharmacology will be delivered at the beginning of the course.



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AHND 486: Medical Nutrition Therapy 2 3 Credits

This is the second course in medical nutrition therapy following Medical Nutrition Therapy I. The course introduces students to the etiology of nutrition related diseases of the digestive system, Liver and pancreas, renal system, oncology and metabolic stress and nutrition support. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease.

AHND 480: Community Nutrition 3 Credits

The study of social, economical and environmental impact on the nutritional status off the community. Nutrition epidemiology. Methods of nutritional surveyss. Nutrition surveilance systems. Preventive and control measures for community nutritional problems. Combating chronic problems related to diet. Nutritional and chronic disease in Arab countries with emphasis on GCC. Development of science-based and food-based dietary guidance. The role of food industry in community nutrition. Food distribution systems

AHND 490: Nutrition Seminar 1 Credits

Students will be required to present a seminar in selected topics in human nutrition and dietetics. Topics will be selected in areas that are currently under active research. Seminars are presented by students, faculty and invited speakers.

AHND 488: Nutrition Education and Diet Counseling 3 Credits

Application of counseling and learning theories with individuals and groups in clinical and community settings. Includes discussion and practice in interviewing, counseling, dietary assessment methodology, learning activities, evaluation and documentation. This class is designed to expose you to principles in nutrition counseling.

AHND 492: Sport Nutrition 3 Credits

Basic theory related to nutritional requirements for all levels of athletic performance. Application of sports nutrition concepts for recreational to elite level athletes. Nutritional parameters of athletic performance including intervention planning, energy production, the energy nutrients, vitamins and minerals, principles of balanced diets, timing and composition of intakes, hydration, weight management strategies, and nutritional needs for special situations.

AHND 494: International Food Situation 3 Credits

This course will describe food systems sustainability and food security, from production to consumption, from local to global scales. Specific themes covered in the course include technological and genetic change in food production, resource depletion and wider environmental impacts of the industrial food system,



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and policy, market-oriented, and civil society initiatives to bring about change in the food system, including organic production and localizing food systems.

AHND 472: Cultural Aspects of Diet 3 Credits

Today's social life encompasses people from diverse countries and origin. Therefore, it is important to understand the cultural differences in order to provide the best care to your social network regardless of race, origin, gender, age, religion, sexual orientation, social class, economic situation, and/or disability

AHND 482: Emerging Issues in Food Science and Nutrition 2 Credits

In today's modern world, the most reliable guide to predicting future developments in health is a careful examination of current trends in society and progress in research. Emerging health issues are those that pose either a threat or relief from threat to the overall health of the population. This subject explores emerging issues that concern public health today.

AHND 491: Health Program Design and Implementation 3 Credits

The students will be familiarized with the concepts and methodology required for program planning and evaluation in community setting. Students will get knowledge and skills required to develop program and essential elements required for planning, implementation, and evaluation of program. They will learn about identifying funding sources and write grant proposal for program.

AHND 493: Maternal and Child Health 3 Credits

This course is an introduction to the historical perspective of maternal and child health, and to maternal and child health career opportunities. This course is designed to provide students with the necessary information and resources to develop a clear understanding of maternal and child health.