



A'Sharqiyah University

College of Engineering

Department of Civil and Construction Engineering

Diploma in Construction Management

Course Descriptions

University Requirements (12 CH)

ISLM101 Islamic Civilization (3 CH)

This course aims to introduce students to the concept of civilization, the composition and evolution factors, 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.

ENGL101 English Communication Skills I (3 CH)

This course develops students' proficiency through grammar instruction and fluency exercises. While the emphasis of the class is on speaking and listening, there are also reading and writing exercises which reinforce the grammar and vocabulary students learn. Finally, students are required to participate in discussions on a regular basis and give several presentations.

ENGL102 English Communication Skills II (3 CH)

This course further develops reading sub-skills, comprehension, and vocabulary. The texts are more demanding lexically and structurally than ENGL101 and are mainly literary. Written and oral activities require students to respond to these texts critically.

MNGT313 Entrepreneurship (3CH)

This course is an introductory course in Entrepreneurship and Innovation. The course aims to expose students to business venture and entrepreneurial activity. The students would apply knowledge and skills acquired during the course by developing and evaluating their business ideas. This course is an introductory entrepreneurship course that focuses on the vital role played by entrepreneurs and entrepreneurship in the 21st-century global economy. The process of successfully launching and growing an entrepreneurial venture by applying the entrepreneurial process is examined. The course integrates several different disciplines, ranging from sociology and psychology to economics, finance, marketing, and human resource management. It is a course that mixes theory with practice by applying principles, concepts, and frameworks to real-world situations.

College Requirements (12 CH)

MATH2001 Mathematics (4 CH)

This course focuses on some essential goals, which are: apply differentiation and integration techniques, solve ordinary simple ordinary differential equations, perform operations on matrices, define the hyperbolic functions, evaluate the probability and the normal distribution, and use series to approximate functions.

ENGR2002 Engineering Drawing (4 CH)

This course provides basic knowledge and skills of engineering drawing so that students can efficiently develop engineering plans and details. Main topics include freehand sketching, principles of orthographic projection, dimensioning, section, isometric and working drawings, 2D and 3D drawings using AutoCAD.

ENGR2003 Technical Writing and Presentation (4 CH)

The objectives of this course are to develop engineering students' abilities to improve the communication skills and specialist language knowledge of engineers; to listen to and speak about engineering-related situations; to ask and answer important engineering-related questions; and to present engineering projects in an engaging and convincing format.

Program Requirements (52 CH)

ENGR2001 Engineering Mechanics (4 CH)

This course prepares students with the basic skills of critical thinking and problem solving in mechanics. Students will be able to apply knowledge of mathematics and science, to gain a clear understanding of the basic principles of mechanics and solve a wide range of engineering problems.

CVEN2001 Construction Surveying (4 CH)

This course covers the basic measurement procedures and the use of surveying instruments. It introduces students to the principles and practices in measuring distance, elevation, and angles. Also, it includes the determination of areas and volumes, setting out of construction works, and introduction to GPS and GIS. The course has intensive fieldwork.

CVEN2002 Civil Engineering Materials (4 CH)

This course introduces students to geology and its impact on the design and construction of civil engineering constructed facilities. Students will learn about the engineering elements of rocks and geologic processes from an engineering perspective.

CNMN3007 Construction Technology I (4 CH)

This course prepares students with the knowledge and skills of construction technology so that they can be applied efficiently to the construction of domestic buildings. It helps students to learn key principles of construction technology including a description of the site, determination and description of the foundations and substructure, design and description of the structure of a domestic building of specific design, determination and description of the envelope of domestic buildings, and the methods used to construct domestic buildings.

CNMN4005 Building Information Modelling (4 CH)

The course introduces students to the innovative concepts and processes of Building Information Modelling (BIM). It gives students a practical hands-on Autodesk's BIM software (Revit Architecture) as used in professional applications and analysis of current and future trends in BIM design. The course will be focusing on the processes involved in developing a full 3D design object model, not for the purpose of visualization alone, but more importantly as a tool for understanding and documenting how a proposed building design fits together and how it will perform during use.

CNMN3002 Construction Safety (4 CH)

This course covers legislation, theory and practice relating to management of occupational safety and health in the construction industry. It examines basic elements of a safety and health program for design professionals and construction contractors including both national and international regulatory requirements.

CNMN3003 Construction Equipment (4 CH)

This course provides basic knowledge of construction equipment to students so that they can efficiently identify types and uses of construction equipment. It covers time value of money, cost estimating associated with equipment, fundamentals of earthmoving (Tractors, loaders, scrapers, excavators, trucks, haulers, and graders), soil compaction and stabilization, lifting and loading equipment, operational analysis, and equipment fleet management.

CVEN3002 Soil Mechanics (4 CH)

This course is designed to equip students with basic principles of soil mechanics and fundamentals of application in engineering practice. It covers soil composition and texture, classification, permeability and seepage, consolidation, settlement, shear strength, lateral earth pressures, fundamentals of retaining structures, shallow and deep foundations, slope stability, and sub-surface exploration.

CVEN3003 Transportation Engineering (4 CH)

This course introduces students to the discipline of transportation engineering and acts as the background for more advanced transportation courses. It includes highway planning, highway materials: soils and aggregates, asphalt binders and mixtures, geometric design of highways, surface drainage, road construction, and introduction to pavement design. The lectures are supplemented by extensive laboratory sessions.

CVEN3001 Structural Analysis and Design (4 CH)

This course enables students to be familiar with structural systems, the various elements of structural design, and the application of design codes and specifications. The course is in two parts: Part I covers the analysis of statically determinate trusses, beams and frames using classical methods such as virtual work, slope deflection, moment distribution methods, deflection calculations and influence lines in beams and trusses. Part II covers the design of reinforced concrete and steel structural elements and systems, and the use of commercial software packages for structural analysis and Design.

CNMN3006 Cost Estimating and Tendering (4 CH)

This course prepares students with the basic knowledge and skills of cost estimating so that they can be applied efficiently in managing various types of construction projects. It covers the study of the fundamentals of cost estimating which include basic skills, knowledge, and tools needed to bid and budget construction projects. Utilization of cost estimating software is introduced in lab exercises.

CNMN3008 Construction Technology II (4 CH)

This course prepares students with the knowledge and skills of construction technology so that they can be applied efficiently to construction of industrial and commercial buildings. It helps students to learn the key principles of construction technology including a description of the site, determination and description of the foundations and substructure, design and description of the structure of industrial and commercial buildings, determination and description of the envelope of industrial and commercial buildings, and a description of methods used to construct industrial and commercial buildings.

CNMN3009 Construction Site Planning and Control (4 CH)

This course provides the knowledge and skills of site management techniques to students so that they can be applied efficiently to safe construction operations. Covered topics enable students to develop and implement construction plan, identify concepts and principles of site control, describe management decisions for a given site and conditions, identify processes to manage the activities of subcontractors, identify potential construction hazards and risks, implement processes to deliver time, cost and quality objectives for a construction site, and identify and review site procedures.