هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title: Architectural Surveying (المسح المعماري)
Course Code: DES 783
Program: Interior Design Program
Department: Architecture Department
College: College of Engineering and Information Technology
Institution: Onaizah Private Colleges
Version: Third Version
Last Revision Date: 2025-05-20

Previous Course Specification
https://drive.google.com/file/d/1B5QacQL6eLRUMMPaJ1betNyoS9Banigb/view

Table of Contents:

A. General information about the course:

Course Identification	
1. Credit hours:	2 Credit Hours
2. Course type a. University ☐ College ☐ Department ☒ Track ☐ Others ☐ b. Required ☐ Elective ☒	
3. Level/year at which this course is offered:	Seventh Level / Fourth Year
4. Course general Description This course introduces students to the principles and techniques of architectural surveying as a foundational tool in interior design, with an emphasis on the accurate measurement, documentation, and representation of existing interior and architectural spaces. Students will develop practical skills in conducting site visits, recording spatial dimensions, and producing precise as-built drawings using both manual and digital methods. The course covers the use of surveying instruments, field sketching, scaled drawing techniques, basic photogrammetry, and systematic data collection. Students will learn to interpret and generate floor plans, sections, elevations, and detailed drawings derived from field data. Special focus is placed on analyzing building conditions, materials, and historical features to inform renovation, adaptive reuse, and heritage documentation. Through hands-on exercises and real-world case studies, students will be prepared to confidently engage with built environments and integrate survey data into the interior design process.	
5. Pre-requirements for this course (if any): None	
6. Co- requirements for this course (if any): None	
7. Course Main Objective(s) This course aims to equip students with the fundamental knowledge and practical skills necessary for conducting architectural surveys within the context of interior design. Students will learn the significance of surveying in accurately documenting existing spaces to support design development, renovation, and heritage preservation. The course emphasizes the use of manual and digital tools to measure and record spatial data and to produce precise as-built drawings, including floor plans, elevations, and sections. Students will also develop the ability to analyze building components, structural systems, and materials, enabling them to make informed design decisions. By the end of the course, students will be able to interpret field data and apply it effectively in the interior design process with a clear understanding of scale, proportion, and architectural detail.	

1. Teaching mode

No.	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	100%
2	E-learning		
3	Hybrid		

No.	Mode of Instruction	Contact Hours	Percentage
	• Traditional classroom • E-learning		
4	Distance learning		

2. Contact Hours (based on the academic semester)

No.	Activity	Contact Hours
1	Lectures	30
2	Laboratory/Studio	
3	Field	
4	Tutorial	
5	Others (specify)	
Total		**30**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
DES 783.C LO.K.1	Identify the fundamental concepts of architectural surveying and the basic theory of measurement used in interior design documentation	K.2(التصميم برنامج الداخلى Interior Design)	Primary: Lecture Additional: Group Work (competitive or cooperative / Online or F2F)	Formative: Homework Summative: Written Exam (MCQ or Essay / F2F or Online)
2.0	**Skills**			
DES 783.C LO.S.1	Generate accurate calculations of horizontal and vertical angles on-site using appropriate surveying tools and measurement formulas relevant to interior design applications	S.1(التصميم برنامج الداخلي Interior Design)	Primary: Interactive Lecture \ Demonstration Additional: Tutorial	Formative: Quiz (Online or F2F) Summative: Written Exam (MCQ or Essay / F2F or Online)
3.0	**Values, Autonomy, and Responsibility**			
DES 783.C LO.V.1	Demonstrate safety precautions and ethical values to support professional conduct during interior design site and	V.2(التصميم برنامج الداخلى Interior Design)	Primary: Discussion (or similar active learning strategies) Additional: Fieldwork	Formative: Observation (Instructor/ Students/ Committee) (Rubric)

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	documentation activities			Summative: Student Portfolio
DES 783.C LO.V.2	Demonstrate independent decision-making based on technical analysis and site data within the context of interior design projects	V.3(التصميم برنامج الداخلى Interior Design)	Primary: Fieldwork Additional: Independent Study or Research	Formative: Fieldwork Observation (by supervisors through Rubric) Summative: Case Study (Individual or Group)

C. Course Content

No.	List of Topics	Contact Hours
1	Chapter 1- Basics of Surveying: (Introduction, Definitions and Concepts in Land Surveying).	4
2	Chapter 2- Leveling: (Definitions, methods of measuring difference in elevation, instruments & accessories used in leveling, errors & mistakes in leveling, direct leveling & definitions, different types of direct leveling, correction for curvature & refraction, trigonometric leveling & definition, methods of observation, level loop adjustments).	6
3	Chapter 3-Distance Measurement: (Methods of measuring distances, systematic errors in taping, mistakes in taping, tape accessories, units used in taping a distance, methods of applying correction, sources & classification of error, weight of an observation, different cases of determining probable error, electronic distance & angle measurement, principles of EDM, EDM instrument characteristics).	6
4	Chapter 4-Angles & Directions: (General background, reference directions for vertical angles, meridians, horizontal angles, azimuths, reverse direction, azimuth & bearing computations). Chapter 5& 6-Total Stations & Theodolites & its applications.	4
5	Chapter 7-Traverse Surveys and Computations: (Types of traverses, methods of running traverse, purpose of the traverse survey, adjustment of angular error of closure in a close loop traverse, methods of traverse adjustment, methods of area computation for a close loop traverse).	4
6	Chapter 8-Topographic Surveying & Mapping: (Definitions, methods of ground point location, uses of topographic maps). Characteristics & types of contours. Topographic symbols.	6
Total		**30**

D. Students Assessment Activities

No.	Assessment Activities*	Assessment Timing (in Week No.)	Percentage of Total Assessment Score
1	Student Portfolio		5%
2	Homework		5%
3	Quiz (Online or F2F)		10%
4	Written Exam (Final Exam) (MCQ or Essay / F2F or Online)		45%
5	Written Exam (Midterm Exam) (MCQ or Essay / F2F or Online)		25%
6	Fieldwork Observation (By Supervisors Through Rubric)		5%
7	Observation (Instructor/ Students/ Committee) (Rubric)		5%
			100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	- B. Kavanagh, T.Mastin , "Surveying: Principles and Applications", (8th Edition), 2013, ISBN-13: 978-0137009404.
Supportive References	- Complexity and Contradiction in Architecture, Robert Venturi. - Learning From Las Vegas, Robert Venturi and Denise Scott Brown.
Electronic Materials	- http://www.architonic.com/nttre/architecture/7030001/1 - http://www.wallpaper.com/architecture - http://www.residentialarchitect.com/
Other Learning Materials	- MicroStation, SketchUp. - Revit Architecture. - Softplan. - Autodesk Revit. - Vectorworks Architecture.

2. Required Facilities and Equipment

Items	Resources
Facilities (Classrooms, Laboratories, Exhibition Rooms, Simulation Rooms, etc.)	Lecture hall, Studio Hall, Recreation room, small library, Workshop, Seminar room.
Technology Equipment (Projector, Smart Board, Software)	Projector, Computers, Smart board, CD player, big screen television.
Other Equipment (Depending on the nature of the specialty)	Architecture tools for each student, Workshop furniture.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Peer Reviewer	Direct (peer classroom observation according to the approved Rubric)
Effectiveness of students' assessment	Faculty/Instructor	Direct (analysis of CLOs assessment results and grade distributions)
Quality of learning resources	Students	Indirect (course evaluation survey)
The extent to which CLOs have been achieved	Faculty/Instructor	Direct (CLOs assessment and analysis of results according to CLOs targets)
	Students	Indirect (Students through course evaluation survey)
Commitment to learning and teaching strategies and assessment methods included in the program and course specifications	Peer Reviewer	Direct (Peer- classroom observation according to the approved Rubric in OC-QMS)
	Department Chair through Students Focus Groups	Indirect (Chair – survey questions to a focus group of students according to OC QMS)
Action Plan Continuity (Closing the Loop)	QAC (Quality Assurance Committee)	Direct (periodic review of course reports and submitting comments to course instructor/coordinator)
Instructor's Support to Students	Students	Indirect (course evaluation survey)

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Department of Architecture Council
REFERENCE NO.	11
DATE	2023-05-09

Learning outcomes of this course, as well as CLOs/Teaching Strategies/Assessment Methods matrix have been evaluated and reviewed by multiple OC parties according to OC-QMS. You can access results of these final reviews by scanning the QR code on the right, which contains a link to the reviews on OC-E-QMS.

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