

MODULE DESCRIPTION | 2025-2026 |

University of Samarra



Faculty of Engineering

First Cycle – bachelor's degree (B.Sc.) Architectural Engineering



Modules

Description

First Level

MODULE DESCRIPTION (ARCHITECTURAL DESIGN I)

Module Information					
Module Title	Architectural Design I		Module Delivery		
Module Type	Core		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE1101				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level		1	Semester of Delivery		1
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Suhail Najm Abdullah		e-mail	suhail.najim@uosamarra.edu.iq	
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		Ph.D.
Module Tutor	---		e-mail	---	
Peer Reviewer Name		---	e-mail	---	
Scientific Committee Approval Date		11/11/2024	Version Number		1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. To develop understanding of interconnections between form, volume and function. 2. To sensitize students towards the interconnectedness of various elements of a context which impacts the architectural design. 3. Preparing the student to enter the world of architecture intellectually, conceptually, and practically, as a basic work base, and defining the concept of architecture, by identifying the principles of design, composition and the third dimension, architectural space, human scale, urban environment and others. 4. Developing the student's language of expression on design vocabulary 5. Developing the student's artistic and formative sense, and the analytical-synthetic thinking style. 6. Developing the student's awareness and sensitivity to the natural and urban environment, and respecting it, starting from understanding and appreciating the traditional urban environment, studying the formative and directive relationships of its elements and components.

Module Learning Outcomes	Having successfully completed this course, the student will be able to understand: • Anthropometrics pertaining to various areas of space design. • Determine space requirements for various day to day activities. • Establish relations between form, space and function with the help of simple flow path, circulation diagrams etc.
Indicative Contents	Anthropometrics • Study of anthropometrics and their relationship with the dimensions of objects of daily use. • Determining space for activities such as living, dining, sleeping and conveniences. • Measured drawing of a small building such as, a small room/studio, etc. of a house, office etc. Study of Circulation Simple circulation flow diagrams for small building projects Spatial Organization Three-dimensional organization of a variety of forms to create built forms, importance of shades and shadows in the entire composition, layout of repetitive units within a site to create interesting and functional compositions. Design exercises • Evolution of plan in relation to physical, site considerations, selection of materials and construction, study of architectural design vis a vis the concepts of privacy, security, comfort and maintenance • Single room design, such as self-occupied room, tea stall, guard room, canopy, boundary wall etc. • Design of small residential components, such as a kitchen, bathroom, bedroom etc

Learning and Teaching Strategies	
Strategies	Case studies along with primary and secondary surveys. • Documentation of various data collected from case studies, research and literature studies. • Models and sketches. • Synergy of various layers of data and its application in a small-scale space design.

Student Workload (SWL)			
Structured SWL (h/sem)	120	Structured SWL (h/w)	8
Unstructured SWL (h/sem)	75	Unstructured SWL (h/w)	5
Project preparation	5	Taken in one week	5
Total SWL (h/sem)	200		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Assignments	10	30% (10)	Continuous	All
	Assignments	10	30% (10)	Continuous	All
	Projects	1	20% (40)	Continuous	All
	Quizzes	2	20% (20)	Continuous	All
Summative assessment	Midterm Presentation	0	0		
	Final Presentation	0	0		
Total assessment			100% (280 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction: what does it mean to be a student in architectural engineering department? What tools do you need? How much money will you spend? All these questions will be explored.
Week 2	Training the student through an extensive set of exercises on different line values, using a pencil.
Week 3	Developing his expressive ability to draw with and without tools, Free Hand, in order to reach various linear values.
Week 4	Introducing the basic principles of two-dimensional design: the concept of composition, its elements, basic principles, types of configurations.
Week 5	Drawings 2-dimensional existing work, then developing their works
Week 6	Color theory and its basic principles, color derivation - the use of poster colors Poster C.
Week 7	- Color in the configuration: Enter the color as a new variable in the configuration. - Mi-Term Exam
Week 8	A short project through which the concepts that have been exposed are applied.
Week 9	Entering the volume of a new variable in the configuration, space and mass, and their expressive values
Week 10	Introducing volume as a new variable in composition, space and mass and their expressive values
Week 11	By using museum board students will explore all these value through building physical models
Week 12	Learn about the concept of the human scale, its applications, and distinguish between the scale in the residential building, the industrial building, etc
Week 13	A realistic study of one of the interior spaces of the residence, the development of the space with a focus on studying the spatial, functional and expressive requirements of the space, the introduction of color and texture and the study of furniture and others
Week 14	A lecture on the method of drawing and standardizing the facades of historical buildings and applying them on site.
Week 15	A visit to the heritage houses of one of the traditional sites in Najaf. A standard drawing of a part of a traditional facade...
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Ching, F. D. K. (2012). Architecture: Form, Space and Order. 3rd Ed. Hoboken: John Wiley & Sons.	---
Recommended Texts	Watson, D. (Editor). (2005) Time-saver Standards for Architectural Design: Technical Data for Professional Practice, 8th Ed., McGraw-Hill.	---
Websites	https://engineering.mu.edu.iq/?epkb_post_type_1	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (ARCHITECTURAL DRAWING I)

Module Information					
Module Title	Architectural Drawing I		Module Delivery		
Module Type	Core		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE1102				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1			Semester of Delivery
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Raed Abdullah Hasan		e-mail	Raed_hasan@uosamarra.edu.iq	
Module Leader's Acad. Title			Module Leader's Qualification		
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		11/11/2024	Version Number	1.0	

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	Module Overview: The Engineering Architectural Drawing module is designed to provide first-year engineering students with a comprehensive understanding of architectural drawing techniques and principles. This module emphasizes manual drafting skills, focusing on traditional methods and tools rather than computer-aided design (CAD) software. Students will learn how to create accurate and detailed architectural drawings by hand, gaining a strong foundation in technical drawing practices commonly used in the field of engineering. Module Objectives: 1. To introduce students to the fundamental principles and concepts of architectural drawing and its significance in the field of engineering design. 2. To develop students' proficiency in using manual drafting tools and equipment for architectural drawing. 3. To enable students to interpret and create accurate and detailed architectural drawings, including plans, elevations, sections, and details. 4. To teach students appropriate scaling and dimensioning techniques to accurately represent objects and structures in architectural drawings. 5. To familiarize students with standard architectural drawing conventions, symbols, and notation commonly used in the industry. 6. To enhance students' communication and presentation skills through the creation of clear and concise architectural drawings. 7. To instill in students an understanding of industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 8. To foster effective collaboration and teamwork skills through group projects involving architectural drawing exercises. 9. To provide students with opportunities to apply theoretical knowledge and practical skills to solve real-world architectural drawing challenges. 10. To prepare students for further study and practical application of architectural drawing techniques in subsequent engineering modules and professional practice.
Module Learning Outcomes	Module Learning Outcomes: Upon successful completion of this module, students will be able to: 1. Understand the fundamental principles of architectural drawing and its importance in engineering design. 2. Demonstrate proficiency in using drafting tools and equipment for manual architectural drawing. 3. Interpret and create architectural drawings, including plans, elevations, sections, and details. 4. Apply appropriate scaling and dimensioning techniques to accurately

	represent objects and structures in drawings. 5. Develop an understanding of standard architectural drawing conventions, symbols, and notation. 6. Demonstrate effective communication and presentation skills through the creation of clear and concise architectural drawings. 7. Apply industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 8. Collaborate effectively with peers in group projects involving architectural drawing exercises.
Indicative Contents	Indicative Contents of the Module: Semester 1: 1. Introduction to Architectural Drawing a. Importance and scope of architectural drawing in engineering b. Historical overview of architectural drawing techniques c. Introduction to basic drawing tools and equipment 2. Freehand Sketching and Visualization a. Principles of freehand sketching b. Techniques for representing objects and spaces in two dimensions. c. Visualization exercises to develop spatial thinking and observation skills. Geometric Constructions and Orthographic Projection d. Construction of basic geometric shapes and forms e. Principles of orthographic projection and Multiview drawings f. Creation of plans, elevations, and sections of simple objects and structures 3. Introduction to Architectural Drawing Types a. Understanding different types of architectural drawings (plans, elevations, sections, details) b. Techniques for creating accurate and scaled architectural drawings. c. Interpretation and analysis of architectural drawings in the context of engineering design Semester 2: 1. Technical Drawing Standards and Conventions a. Introduction to industry-standard drawing standards and conventions b. Drawing layout, sheet organization, and annotation c. Application of scale, line weights, and line types in architectural drawing 2. Advanced Orthographic Projection and Auxiliary Views d. Advanced principles of orthographic projection e. Creation of sectional views and auxiliary views to represent complex objects. f. Introduction to dimensioning and tolerance concepts in architectural drawing 3. Isometric and Perspective Drawings g. Principles of isometric and perspective drawing

	<i>h.</i> Techniques for creating three-dimensional representations of objects and spaces. <i>i.</i> Application of shading and rendering techniques in architectural drawings 4. Collaborative Drawing Projects and Portfolio Development <i>j.</i> Group projects involving complex architectural drawing exercises. <i>k.</i> Collaboration and teamwork skills in architectural drawing Creation of a portfolio showcasing the student's best architectural drawings
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Learning and Teaching Strategies	
Strategies	Learning and Teaching Strategies: 1. Lectures: The module will include lectures delivered by the instructor to introduce and explain key concepts, techniques, and principles of architectural drawing. Lectures will provide theoretical foundations and guidance for the practical application of drawing skills. 2. Demonstrations: The instructor will demonstrate various manual drafting techniques and methods, showcasing proper use of drafting tools and equipment. Students will observe and learn through visual demonstrations, allowing them to understand and replicate the techniques in their own work. 3. Practical Sessions: Students will participate in practical sessions where they will actively engage in architectural drawing exercises. These sessions will provide hands-on experience with manual drafting tools and allow students to practice and develop their drawing skills under the guidance of the instructor. 4. Group Work: Collaborative group projects will be assigned to promote teamwork and communication skills. Students will work together on architectural drawing assignments, allowing them to share ideas, perspectives, and problem-solving approaches. 5. Critique and Feedback: Regular critique sessions will be conducted, where students will present their drawings to the instructor and peers for evaluation and feedback. Constructive feedback will help students identify areas for improvement and refine their drawing techniques. 6. Tutorials and Workshops: Additional tutorial sessions and workshops may be provided to address specific challenges or topics that require further clarification. These sessions will allow students to seek assistance, ask questions, and receive one-on-one guidance from the instructor. 7. Independent Study: Students will be encouraged to engage in independent study and practice outside of class. This may involve reviewing lecture notes, conducting research on architectural drawing techniques, and practicing drawing exercises to reinforce learning.

	8. Visual Resources and References: Visual resources, such as examples of architectural drawings, textbooks, and online references, will be provided to supplement learning. These resources will aid students in understanding drawing conventions, standards, and best practices. 9. Portfolio Development: Students will be encouraged to maintain a portfolio of their architectural drawings throughout the module. This portfolio will showcase their progress, development, and the range of skills they have acquired. 10. Field Visits and Guest Speakers: Opportunities may be provided for students to visit architectural sites or attend guest lectures by industry professionals. These experiences will expose students to real-world applications of architectural drawing and provide insights into the profession. 11. Assessment and Feedback: Assessment methods such as practical drawing exercises, written assignments, group projects, and examinations will be used to evaluate students' understanding and application of architectural drawing principles. Constructive feedback will be provided to support students' learning and growth.
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Student Workload (SWL)					
Structured SWL (h/sem)		75	Structured SWL (h/w)		5
Unstructured SWL (h/sem)		45	Unstructured SWL (h/w)		3
Exam preparation		2			1
Total SWL (h/sem)		125			
Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2, #4 and #6
	Assignments	2	20% (20)	Continuous	LO #2- #7
	Projects / Lab.	1	10 % (10)	Continuous	LO #8
	Report				
Summative assessment	Midterm Exam	2hr	10 % (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	LO #1 - #7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Semester 1	Material Covered
Week 1-2	- Introduction to Architectural Drawing - Importance of architectural drawing in engineering design - Overview of manual drafting tools and equipment
Week 3-6	- Drafting Techniques and Principles - Line types, weights, and styles - Sketching and freehand drawing - Geometric constructions and projections - Orthographic projection and Multiview drawings
Weeks 7-10	- Architectural Drawing Types - Plans, elevations, sections, and details - Introduction to isometric and perspective drawings - Mid-Term Exam
Weeks 11-15	- Drawing Standards and Communication - Scaling and dimensioning techniques - Architectural drawing conventions, symbols, and notation
	- Communication and presentation skills in architectural drawing
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	1. "Architectural Graphics" by Francis D.K. Ching and James F. Eckler. This comprehensive textbook covers the principles and techniques of architectural drawing, including line types, scales, orthographic projection, and architectural lettering. It also explores the use of computer-aided design (CAD) software in architectural drawing. 2. "Architectural Drawing and Light Construction" by Edward J. Muller and Philip A. Grau III. This book provides a practical approach to architectural drawing, focusing on both manual and CAD techniques. It covers topics such as architectural drafting standards, construction drawings, dimensioning, and detailing. 3. "Engineering Drawing and Design" by David A. 4. Madsen, David P. Madsen, and Emeritus John R. 5. Wallace. This textbook offers a comprehensive introduction to engineering drawing principles and practices. It covers topics such as geometric constructions, orthographic projection, isometric drawing, dimensioning, and tolerancing.	---

	6. "Architectural Drafting and Design" by Alan Jefferis and David A. Madsen. This textbook provides a thorough introduction to architectural drafting, including architectural symbols, drafting conventions, working drawings, and building information modeling (BIM). It also covers topics like sustainability, energy-efficient design, and construction materials. 7. "Architectural Drawing Course: Tools and Techniques for 2D and 3D Representation" by Mo Zell. This book offers a practical guide to architectural drawing techniques, including freehand sketching, orthographic projection, isometric drawing, and perspective drawing. It also covers digital	
Recommended Texts	"Architectural Graphics" by Francis D.K. Ching and James F. Eckler	---
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (FREE HAND 1)

Module Information					
Module Title	Free hand 1		Module Delivery		
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE1103				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1	Semester of Delivery		1
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Zakaria Hashem		e-mail	Zakria.ha.ah@uosamarra.edu.iq	
Module Leader's Acad. Title		---	Module Leader's Qualification		---
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		00/06/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	Module Overview: The Free hand module is designed to provide first-year Architecture students with a comprehensive understanding of Free hand drawing techniques and principles. This module emphasizes skills, focusing on traditional free hand methods and drawing tools. Students will learn how to create accurate and detailed drawings by hand, gaining a strong foundation in free hand practices commonly used in the field of Architecture. Module Objectives: 1. To learn the most important techniques used in the basics of freehand drawing (such as pencils, pens). 2. To introduce students to the fundamental principles and concepts of Free hand and its significance in the field of Architectural design.

	3. To exercise Students to realize the exact details in the physical reality and being aware of the rates and movement, shadow, light & color. 4. To enable students to interpret and create accurate and detailed free hand drawings, including, nature, furniture, and Architectural details. 5. To teach students appropriate scaling and dimensioning techniques to accurately represent objects and structures in free hand drawings. 6. To familiarize students with free hand technique. 7. To enhance students' communication and presentation skills through the creation of clear and concise free hand drawings. 8. To instill in students an understanding of industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 9. To foster effective collaboration and teamwork skills through group projects involving free hand drawing exercises. 10. To provide students with opportunities to apply theoretical knowledge and practical skills to solve real-world free hand drawing challenges. 11. To prepare students for further free hand with color study and practical techniques 12. Enable the student to understand the vocabulary that will be used in other lessons such as design and architectural drawing.
Module Outcomes	Learning Module Learning Outcomes: Upon successful completion of this module, students will be able to: 1. Understand the fundamental principles of free hand drawing and its importance in Architecture design. 2. Demonstrate proficiency in using tools and equipment for manual Free hand drawing. 3. Demonstrate effective communication and presentation skills through the creation of clear and concise free hand drawings. 4. Collaborate effectively with peers in group projects involving Free hand drawing exercises. 5. Freehand Drawing is organized around the concepts for drawing from perception. 6. The objectives are to examine the various components of drawing: line, value, texture, composition, and spatial dynamics 7. It is based on working from still life, architecture, landscape, and photo collages.

Indicative Contents	Indicative Contents of the Module: Semester 1: 1. Introduction to Free hand a. Importance and scope of Free hand in Architecture b. Historical overview of Free hand techniques c. Introduction to Free hand tools and equipment 2. Freehand Sketching a. Principles of freehand sketching b. Techniques for representing objects and spaces in three dimensions. c. Visualization exercises to develop spatial thinking and observation skills. 3. Introduction to Free Hand Types a. The first is “rough sketching.” b. The second is “refined sketching” Semester 2: 1. Free Hand shadow ways 2. Perspective Drawings 3. Principles of perspective drawing 4. Perspective types: a. One vanishing point b. Two vanishing point c. Three vanishing point
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Learning and Teaching Strategies	
Strategies	Learning and Teaching Strategies: 1. Lectures: The module will include lectures delivered by the instructor to introduce and explain key concepts, techniques, and principles of Free hand. Lectures will provide theoretical foundations and guidance for the practical application of drawing skills. 2. Demonstrations: The instructor will demonstrate various manual drafting techniques and methods, showcasing proper use of drafting tools and equipment. Students will observe and learn through visual demonstrations, allowing them to understand and replicate the techniques in their own work. 3. Practical Sessions: Students will participate in practical sessions where they will actively engage in Free hand exercises. These sessions will provide hands-on experience with manual drafting tools and allow students to practice and develop their drawing skills under the guidance of the instructor.

	4. Group Work: Collaborative group projects will be assigned to promote teamwork and communication skills. Students will work together on free hand assignments, allowing them to share ideas. 5. Critique and Feedback: Regular critique sessions will be conducted, where students will present their drawings to the instructor and peers for evaluation and feedback. Constructive feedback will help students identify areas for improvement and refine their drawing techniques. 6. Tutorials and Workshops: Additional tutorial sessions and workshops may be provided to address specific challenges or topics that require further clarification. These sessions will allow students to seek assistance, ask questions, and receive one-on-one guidance from the instructor. 7. Independent Study: Students will be encouraged to engage in independent study and practice outside of class. This may involve reviewing lecture notes, conducting research on free hand drawing, and practicing drawing exercises to reinforce learning. 8. Visual Resources and References: Visual resources, such as examples of drawing, textbooks, and online references, will be provided to supplement learning. These resources will aid students in understanding drawing conventions, standards, and best practices. 9. Portfolio Development: Students will be encouraged to maintain a portfolio of their free hand drawings throughout the module. This portfolio will showcase their progress, development, and the range of skills they have acquired. 10. Field Visits and Guest Speakers: Opportunities may be provided for students to visit sites or attend guest lectures by professional artist. These experiences will expose students to real-world applications of free hand. 11. Assessment and Feedback: Assessment methods such as practical Free hand exercises, group projects, and examinations will be used to evaluate students' understanding and application of free hand principles. Constructive feedback will be provided to support students' learning and growth.
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Student Workload (SWL)			
Structured SWL (h/sem)	78	Structured SWL (h/w)	5.2
Unstructured SWL (h/sem)	47	Unstructured SWL (h/w)	3.1
Total SWL (h/sem)	150		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2, #4 and #6
	Assignments	2	15% (15)	Continuous	LO #2- #7
	Projects / Lab.	1	5% (5)	Continuous	LO #8
	Report				
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	LO #1 - #7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Semester 1	Material Covered
Week 1-2	-Introduction to Free hand. -Importance and scope of Free hand in Architecture -Historical overview of Free hand techniques -Free hand tools & equipment
Week 3-6	- Principles of freehand sketching -Techniques for representing objects and spaces in three dimensions. -Visualization exercises to develop spatial thinking and observation skills.
Weeks 7-10	- Introduction to Free Hand Types -The first is “rough sketching.” - Mid-term Exam
Weeks 11-15	- The second is “refined sketching”
Week 16	Preparatory week before the final Exam
Semester 2	
Weeks 1-4	- Free Hand shadow ways - Principles of perspective drawing
Weeks 5-8	- Perspective Drawings - - Perspective types: - Mid-Term Exam

Weeks 9-12	-One vanishing point -Two vanishing point
Weeks 13-15	- Three vanishing point - Group projects involving free hand drawing exercises. - Teamwork and collaboration skills in Free hand
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	1. "Drawing for Artist" by Sarah Simblet - This comprehensive textbook covers the principles and techniques of Free hand drawing, by using our imaginations .and Draw A new building ideas materials 2. "Architectural Drawing and Light Construction" by Edward J. Muller and Philip A. Grau III - This book provides a practical approach to architectural drawing, focusing on both manual and CAD techniques. It covers topics such as architectural drafting standards, construction drawings, dimensioning, and detailing.	---
Recommended Texts	Freehand: Sketching Tips and Tricks Drawn from Art, 2013 by Helen Birch	
Websites	https://freehandarchitecture.com/	

Grading Scheme

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتنياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION

PRINCIPLES OF ART AND ARCHITECTURE

Module Information معلومات المادة الدراسية					
Module Title	Principles of Art and Architecture			Module Delivery	
Module Type	Core			☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	AE1104				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level		1	Semester of Delivery		2
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Laheeb Bahgat Saab		e-mail	Laheebbahjat199@gmail.com	
Module Leader's Acad. Title		---	Module Leader's Qualification		---
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name			e-mail		
Scientific Committee Approval Date		00/06/2023	Version Number		1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	This course will introduce students to the basic concepts of art and architectural practice, through an analysis of the production of art and architecture drawn from a range of historical periods and contexts.

Module Learning Outcomes	1. Identify key art and architectural styles and movements 2. Understand the contexts in which art and architectural practices have been undertaken 3. Identify and understand common themes and links between art and architecture 4. Understand the meaning of art and architecture through acquiring the analytics tools allowing them to read and analyses the production of art and architecture
Indicative Contents	

Learning and Teaching Strategies	
Strategies	- Lectures and class discussions; Set readings will form a key component of the teaching practice. - Teaching Method Delivery Notes

Student Workload (SWL)			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.5
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	
	Assignments	2	10% (10)	2 and 12	
	Projects	1	10% (10)	Continuous	
	Report	1	10% (10)	13	
Summative assessment	Midterm Exam	3hr	10% (10)	8	
	Final Exam	3hr	50% (50)	16	
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Course introduction, Introduction to Art Architecture and Urban Design
Week 2	Understanding Art and Architecture - Line, Shape, Light and Color
Week 3	Understanding Art and Architecture - Texture, Pattern, Space, Time and Motion
Week 4	Assignment 1 - Group Presentation
Week 5	Understanding Art and Architecture - Principles of Design, Drawing and Painting
Week 6	Understanding Art and Architecture - Graphic Design, Photography
Week 7	Understanding Art and Architecture - Digital Arts, Sculpture and 3D Design
Week 8	Midterm Exam
Week 9	Art and Architecture of the Ancient World
Week 10	Art and Architecture of the 19-20 th century
Week 11	Art and Architecture of the Modern Era
Week 12	Non-working day –
Week 13	Assignment 2 - Group Presentation
Week 14	Art and Architecture of the Twentieth Century the Early Years and Postwar to Postmodern
Week 15	Art and Architecture Now a Global Perspective

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Art and Architecture by Sheren Ihsan	---
Recommended Texts	Understanding Architecture. Its Elements, History and Meaning. Leland M. Roth and Amanda C. Roth Clark. Third Edition. Routledge. 2014; The Story of Art by E.H.Gombrich. Phaidon Press. 16th Edition. 2007; Understanding Art. Lois Fichner Rathus. Cengage Learning. Eleventh Edition. 2017;	---
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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MODULE DESCRIPTION MATHEMATICS

Module Information				
Module Title	Mathematics		Module Delivery	
Module Type	Support		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	AE1105			
ECTS Credits	4			
SWL (hr/sem)	100			
Module Level	1	Semester of Delivery		
Administering Department	AE	College	Architectural Engineering Center	
Module Leader	Maha Rahman Rahi		e-mail	
Module Leader's Acad. Title	---		Module Leader's Qualification	---
Module Tutor	---		e-mail	---
Peer Reviewer Name		e-mail	E-mail	
Scientific Committee Approval Date	00/06/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives

1. Develop a comprehensive understanding of fundamental concepts in calculus, including derivatives, integration, and their applications.
2. Acquire proficiency in differentiating functions using various techniques, such as implicit differentiation, the chain rule, and differentiating parametric equations.
3. Gain competence in integrating functions, both indefinite and definite integration, and applying integration techniques to solve initial value problems and calculate areas under curves.

Module Learning Outcomes

Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks.

Learning Outcomes for the Calculus Module:

1. Demonstrate a solid understanding of derivatives, including their definition, laws, and the ability to calculate derivatives of various functions.
2. Apply the concept of second and higher order derivatives to analyze the behavior of functions and identify points of inflection.
3. Utilize implicit differentiation techniques to find derivatives of functions that are expressed implicitly.
4. Apply the chain rule effectively to differentiate composite functions, enabling the analysis of more complex relationships.
5. Understand and utilize parametric equations to differentiate and integrate functions with respect to a parameter.
6. Develop proficiency in integration, including both definite and indefinite integration, and apply integration techniques to solve initial value problems.
7. Apply integration to calculate areas under curves, providing insights into real-world applications and understanding the concept of accumulation.

Indicative Contents	Indicative content includes the following. Part 1: Basic Skills In this module, we will explore Sets and Intervals, Analytical Geometry, Functions, Limits, and Continuity. Let's begin with an introduction to Sets and Intervals, understanding their definitions and examples. We will then delve into Analytical Geometry, where we will learn about distance between points, point, line, and plane, as well as slope and equations of lines. Finally, we will explore the fundamentals of Functions, including domain, range, sums, differences, products, quotients, and composition. Get ready for an exciting exploration of mathematical principles! Part 2: Applications Skills In this module, we will dive into the world of derivatives, integration, and their applications. We will begin by understanding the definition of derivatives and
	exploring their laws through various examples. Moving forward, we will explore second and higher order derivatives, implicit differentiation, and the derivatives of trigonometric functions. We will then uncover the power of the chain rule and delve into the concept of parametric equations. Finally, we will explore integration, both definite and indefinite, along with solving initial value problems using indefinite integrals. Our journey will culminate in exploring the application of calculus through finding the area under curves. Get ready for an exhilarating exploration of calculus!

Learning and Teaching Strategies	
Strategies	The main strategy that is adopted in this unit is to encourage students to participate in exercises while improving constructive critical thinking skills and expanding them at the same time while correcting misconceptions. This is done through explanation and the practical side through simple experiments that will develop the concept of space engineering, which includes activities What students do that interests them.

Student Workload (SWL)			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.5
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 12	LO #1, #2 and #4
	Assignments	3	10% (10)	4,9 and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8&14	LO #5, #7and #6
	Midterm Exam	2hr	10% (10)	8	All
Summative assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Sets and Intervals: Introduction and examples, open, closed and half open
Week 2	Analytical Geometry: Distance between Points and point, line, plan, Slope and Equation of Line
Week 3	Functions: Domain, range, Sums, Difference and examples
Week 4	Functions: Product and Quotients of Functions, Composition
Week 5	Limits and Continuity: definition, rules,
Week 6	Right-hand left-hand limits examples
Week 7	Continuous Functions: definition, examples
Week 8	Mid exam
Week 9	Derivatives: definition, laws and examples
Week 10	Derivatives: Second and Higher Order Derivative
Week 11	Derivatives: Implicit Differentiation, Trigonometric Functions
Week 12	Derivatives: The Chain Rule, Parametric Equations
Week 13	Integration: definite and indefinite, rules,
Week 14	Integration: Solving Initial Value Problems with Indefinite Integrals
Week 15	Applications: Area under Curve
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Thomas' calculus early transcendental, 15 th edition, 2023	---
Recommended Texts	Applied Engineering Mathematics, Brian Vick, 2020	---
Websites	https://www.numerade.com/books/thomas-calculus	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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MODULE DESCRIPTION FORM

Module Information							
Module Title	Arabic			Module Delivery			
Module Type	Basic			☒ theory ☒ a lecture ☒ laboratory ☐ Tutorial ☐ practical ☐ seminar			
Module Code	UOE-1102						
ECTS Credits	2						
SWL (hr/sem)	33						
Module Level	1		Semester of Delivery	1			
Administering Department	AE		college	Architectural Engineering Center			
Module Leader	Mohanad Abdul Jabbar Hassan		Email	mohanad.abduljabbar@uosamarra.edu.iq			
Module Leader's Acad. Title	Lecture		Module Leader's Qualification	Ph.D in Arabic Language			
Module Tutor	None		Email	None			
Peer Reviewer Name	None		Email	None			
Scientific Committee Approval Date	06/17/2023		Version Number	1.0			

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	Course objectives .Enabling students to understand the eloquence of the Holy Quran and to appreciate the aesthetics of its language.. Training students to use punctuation marks between sentences correctly. To broaden the students' literary horizons of ideas, meanings and moral values.. Teaching students how to write correctly according to the basics of spelling, which enables them to write words correctly..
Module Learning Outcomes	- Cognitive objectives 1- Knowing the basics of spelling in the Arabic language. 2- Getting to know world literature and their influence on Arabic literature. 3- Studying some Quranic verses to explore the linguistic and rhetorical aspects therein. B - Course specific skill objectives. 1- Writing correctly. 2- The ability to extract common errors in daily use. 3- The ability to identify the areas of Quranic eloquence and to know its effect on understanding the meanings.
Indicative Contents	Guiding Contents Arabic language among the languages of the world, the emergence of spoken and written language, the grammatical system, Quranic rhetoric, the morphological system, the written system, numbers in the Arabic language, Arabic and Arabization, world literature and Orientalism.

Learning and Teaching Strategies

Strategies	The main strategy that will be adopted in presenting this unit: It is to encourage students to engage in exercises while simultaneously honing and expanding their critical thinking skills. This will be achieved through interactive classes and tutorials and by considering the type of topics some of which include sampling activities that interest students."
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Student Workload (SWL)

SWL Organization (hr/sem)	33	SWL organization (h/w) Regular weekly student load	2
Unstructured SWL (hr/sem)	17	Unstructured SWL (h/w) Irregular student load per week	1.13
Total SWL (hr/sem)	50		

Module Evaluation

		Time/number	Weight (marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Verbal assignments	1	10% (10)	16	everyone
	laboratory.		10% (10)		everyone
	a report	15	10% (10)	continuous	everyone
Summative assessment	Midterm Exam	2 hours	10% (10)	continuous	#1 - #7 Goal
	Final Exam	3 hours	50% (50)	16	All
Overall Rating			100% (100 marks)		

Delivery Plan (Weekly Syllabus)	
	Covered Materials
Week 1	Arabic language, definition, origin, function
Week 2	Arabic language and the beginning of blogging
Week 3	Quranic eloquence and Surat Al-Fatihah
Week 4	Basic introduction to grammar
Week 5	Number in Arabic
Week 6	Writing system, ta Marbut and ta open
Week 7	Diminutive morphological system
Week 8	Midterm Exam
Week 9	For the written system A Hamzat al-Wasl and Hamzat al-Qat`
Week 10	Quranic eloquence and Surat Al-Kahf
Week 11	Synonyms in Arabic
Week 12	Poetic purposes in Arabic literature
Week 13	Writing system punctuation marks
Week 14	Mention and deletion in language
Week 15	Final exam

Learning and Teaching Resources		
	Text	Available in the library?
Required texts	The book is by Sibawayh, Secrets of Rhetoric by Al-Jurjani, Spelling and Punctuation in Arabic Writing by Abdul-Aleem Ibrahim.	Yes
Recommended Texts	The book is by Sibawayh, Secrets of Rhetoric by Al-Jurjani, Spelling and Punctuation in Arabic Writing by Abdul-Aleem Ibrahim.	Yes
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
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MODULE DESCRIPTION FORM

Module Information				
Module Title	Democracy and Human Rights		Module Delivery	
Module Type	Basic		☒ theory ☐ a lecture ☒ Tutorial ☐ practical ☐ seminar	
Module Code	UOE-12012			
ECTS Credits	2			
SWL (hr/sem)	33			
Module Level	1	Semester of Delivery		2
Administering Department	AE		college	Architectural Engineering Center
Module Leader	Qutaiba Mukhleef Abbas		Email	Qutiba.m.abbas@uosamarra.edu.iq
Module Leader's Acad. Title	Teacher		Module Leader's Qualification	Master's Political science
Module Tutor	None		Email	None
Peer Reviewer Name	None		Email	None
Scientific Committee Approval Date	06/01/2023		Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	UOE-12012	Semester	1

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	What is the purpose of human rights? Human rights seek to achieve fundamental interests while maintaining an understanding of the dignity and equality of people. They help express desires and respond to those who must fulfill them. Those desires. They are a universal language for humans, but they can be contributed to through the innovative use of tools such as visual indicators. Quantity and quality by increasing their understanding and implementation
Module Learning Outcomes	1-Students benefit from knowing the types of rights and their scope of application.. 2-Explaining the historical stages of human rights and their development. 3-Knowing the concept of freedoms and democracy correctly. Providing the student with the moral values that must be adhered to and clarifying the most important rights and duties incumbent upon the individual.
Indicative Contents	1-Students benefit from knowing the types of rights and their scope of application.. 2-Explaining the historical stages of human rights and their development. 3-Knowing the concept of freedoms and democracy correctly. Providing the student with the moral values that must be adhered to and clarifying the most important rights and duties incumbent upon the individual.

Learning and Teaching Strategies

Strategies	The learning and teaching strategy is designed to: Carefully cover the essential material and analytical techniques required in lectures, and demonstrate the concepts using appropriate (and where possible practical) examples. Give students sufficient time to practice the techniques using a large number of carefully selected learning problems.
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Student Workload (SWL)			
Structured SWL (hr/sem) Lectures in Chapter 150 Tests in Chapter 3	33	Structured SWL (h/w) Regular weekly student load	2.2
Unstructured SWL (hr/sem)	17	Unstructured SWL (h/w) Irregular student load per week	1.13
Total SWL (hr/sem)	50		

Module Evaluation					
		Time /Number	Weight (marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10, 12, 14	LO #1, 2, 3, 4
	Assignments	5	15% (15)	4,8,11,15	LO #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14
	Discussions	6	15% (15)	continuous	
Summative assessment	Midterm Exam	2	10% (10)	7	#LO 1-6
	Final Exam	3	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

	Covered Materials
Week 1	Human rights in ancient times 1- Human rights in Greek civilization
Week 2	Human rights in ancient Egyptian civilization
Week 3	- Human rights in Mesopotamian civilization,
Week 4	Human rights in divine laws and religions Human Rights in Christianity and Judaism
Week 5	Human rights in Islamic law.
Week 6	International sources of human rights International sources and the Universal Declaration of Human Rights.
Week 7	Midterm Exam
Week 8	The two international covenants on human rights.
Week 9	Human rights guarantees At the international and local levels Constitutional guarantees.
Week 10	Legal guarantees
Week 11	Human rights guarantees in Islam.
Week 12	Charter of the United Nations.
Week 13	United Nations General Assembly.
Week 14	Legal guarantees International
Week 15	Final exam

Learning and Teaching Resources

	Text	Available in the library?
Required Texts	Human rights, children and democracy	Yes
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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MODULE DESCRIPTION (ARCHITECTURAL DESIGN II)

Module Information					
Module Title	Architectural Design II		Module Delivery		
Module Type	Core		☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE1201				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level	2	Semester of Delivery		4	
Administering Department	AE	College	Architectural Engineering Center		
Module Leader	Maysun Muhi Hilal		e-mail	maysoon.hilal@uosamarra.edu.iq	
Module Leader's Acad. Title	---		Module Leader's Qualification	---	
Module Tutor	---		e-mail	---	
Peer Reviewer Name	---		e-mail	---	
Scientific Committee Approval Date	01/06/2024	Version Number	1.0		

Relation with other Modules				
Prerequisite module	AE111		Semester	1
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. After studying the basic principles of design, the necessity of design interaction with its surrounding environment is stressed here, through a series of lectures and field visits to different urban fabrics, and applying all of that later in the final project, which represents a summary of everything that the student was exposed to in the first stage. 2. Developing the student's language of expression on design vocabulary 3. Developing the student's artistic and formative sense, and the analytical-synthetic thinking style. 4. Developing the student's awareness and sensitivity to the natural and urban environment, and respecting it, starting from understanding and appreciating the traditional urban environment, studying the formative and directive relationships of its elements and components.
Module Learning Outcomes	Having successfully completed this course, the student will be able to understand: • Anthropometrics pertaining to various areas of space design. • Determine space requirements for various day to day activities. • Establish relations between form, space and function with the help of simple flow path, circulation diagrams etc.
Indicative Contents	Spatial Organization Three-dimensional organization of a variety of forms to create built forms, importance of shades and shadows in the entire composition, layout of repetitive units within a site to create interesting and functional compositions. Design exercises • Evolution of plan in relation to physical, site considerations, selection of materials and construction, study of architectural design vis a vis the concepts of privacy, security, comfort and maintenance • Single room design, such as self-occupied room, tea stall, guard room, canopy, boundary wall etc. • Design of small residential components, such as a kitchen, bathroom, bedroom etc

Learning and Teaching Strategies	
Strategies	Case studies along with primary and secondary surveys. • Documentation of various data collected from case studies, research and literature studies. • Models and sketches.
	• Synergy of various layers of data and its application in a small-scale space design.

Student Workload (SWL)			
Structured SWL (h/sem)	120	Structured SWL (h/w)	8
Unstructured SWL (h/sem)	80	Unstructured SWL (h/w)	5.33
Total SWL (h/sem)	200		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Assignments	2	10% (10)	5 and 10	#1#2#3
	Assignments	2	10% (10)	2 and 12	#1#2#3
	Projects	1	10% (10)	Continuous	#2#3
	Projects	1	10% (10)	13	#3 #4
Summative assessment	Midterm Presentation	4hr	10% (10)	7	All
	Final Presentation	4hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	A visit to one of the historical sites outside the city of Najaf.
Week 2	Standardized drawings of one of the important landmarks that were visited.
Week 3	Study of the site and its determinants, a study of traditional areas.
Week 4	Studying the traditional Najafi house and its relationship to its surroundings, spatial organization, functional relations....
Week 5	Functional study of the elected project
Week 6	Studying the location, surroundings, and various environmental and contextual influences
Week 7	- Studying the effectiveness in an in-depth manner in terms of functional aspects and expressive and symbolic requirements - Mid-Term Exam
Week 8	Sketch Design
Week 9	Architectural form studies
Week 10	Studying the design concept and how to crystallize it
Week 11	Forming and developing the design concept.
Week 12	Emphasis on building materials and the structural system.
Week 13	A short project through which the concepts that have been exposed are applied.
Week 14	By using museum board students will explore all these value through building physical models
Week 15	Final submission, models, drawings to, facades, plans, sections, Isometric or perspective.
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Ching, F. D. K. (2012). Architecture: Form, Space and Order. 3rd Ed. Hoboken: John Wiley & Sons.	PDF
Recommended Texts	Watson, D. (Editor). (2005) Time-saver Standards for Architectural Design: Technical Data for Professional Practice, 8th Ed., McGraw-Hill.	PDF
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
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Fail Group (0 - 49)	FX – Fail	راسب (قد المعالجة)	(45-49)	More work required but credit awarded
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MODULE DESCRIPTION (ARCHITECTURAL DRAWING II)

Module Information				
Module Title	Architectural Graphics II		Module Delivery	
Module Type	Core	☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE1202			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	1			Semester of Delivery
Administering Department	AE	College	Architectural Engineering Center	
Module Leader	Raed Abdullah Hasan		e-mail	Raed_hasan@uosamarra.edu.iq
Module Leader's Acad. Title	---		Module Leader's Qualification	---
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	AE112	Semester	1
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	Module Overview: The Engineering Architectural Drawing module is designed to provide first-year engineering students with a comprehensive understanding of architectural drawing techniques and principles. This module emphasizes manual drafting skills, focusing on traditional methods and tools rather than computer-aided design (CAD) software. Students will learn how to create accurate and detailed architectural drawings by hand, gaining a strong foundation in technical drawing practices commonly used in the field of engineering. Module Objectives: 1. To introduce students to the fundamental principles and concepts of architectural drawing and its significance in the field of engineering design. 2. To develop students' proficiency in using manual drafting tools and equipment for architectural drawing. 3. To enable students to interpret and create accurate and detailed architectural drawings, including plans, elevations, sections, and details. 4. To teach students appropriate scaling and dimensioning techniques to accurately represent objects and structures in architectural drawings. 5. To familiarize students with standard architectural drawing conventions, symbols, and notation commonly used in the industry. 6. To enhance students' communication and presentation skills through the creation of clear and concise architectural drawings. 7. To instill in students an understanding of industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 8. To foster effective collaboration and teamwork skills through group projects involving architectural drawing exercises. 9. To provide students with opportunities to apply theoretical knowledge and practical skills to solve real-world architectural drawing challenges. 10. To prepare students for further study and practical application of architectural drawing techniques in subsequent engineering modules and professional practice.
Module Learning Outcomes	Module Learning Outcomes: Upon successful completion of this module, students will be able to: 1. Understand the fundamental principles of architectural drawing and its importance in engineering design. 2. Demonstrate proficiency in using drafting tools and equipment for manual architectural drawing. 3. Interpret and create architectural drawings, including plans, elevations, sections, and details. 4. Apply appropriate scaling and dimensioning techniques to accurately

	represent objects and structures in drawings. 5. Develop an understanding of standard architectural drawing conventions, symbols, and notation. 6. Demonstrate effective communication and presentation skills through the creation of clear and concise architectural drawings. 7. Apply industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 8. Collaborate effectively with peers in group projects involving architectural drawing exercises.
Indicative Contents	Indicative Contents of the Module: Semester 1: 1. Introduction to Architectural Drawing a. Importance and scope of architectural drawing in engineering b. Historical overview of architectural drawing techniques c. Introduction to basic drawing tools and equipment 2. Freehand Sketching and Visualization a. Principles of freehand sketching b. Techniques for representing objects and spaces in two dimensions. c. Visualization exercises to develop spatial thinking and observation skills. 3. Geometric Constructions and Orthographic Projection a. Construction of basic geometric shapes and forms b. Principles of orthographic projection and Multiview drawings c. Creation of plans, elevations, and sections of simple objects and structures 4. Introduction to Architectural Drawing Types a. Understanding different types of architectural drawings (plans, elevations, sections, details) b. Techniques for creating accurate and scaled architectural drawings. c. Interpretation and analysis of architectural drawings in the context of engineering design Semester 2: 1. Technical Drawing Standards and Conventions a. Introduction to industry-standard drawing standards and conventions b. Drawing layout, sheet organization, and annotation c. Application of scale, line weights, and line types in architectural drawing

	2. Advanced Orthographic Projection and Auxiliary Views d. Advanced principles of orthographic projection e. Creation of sectional views and auxiliary views to represent complex objects. f. Introduction to dimensioning and tolerance concepts in architectural drawing 3. Isometric and Perspective Drawings g. Principles of isometric and perspective drawing h. Techniques for creating three-dimensional representations of objects and spaces. i. Application of shading and rendering techniques in architectural drawings 4. Collaborative Drawing Projects and Portfolio Development j. Group projects involving complex architectural drawing exercises. k. Collaboration and teamwork skills in architectural drawing l. Creation of a portfolio showcasing the student's best architectural drawings
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Learning and Teaching Strategies	
Strategies	Learning and Teaching Strategies: 1. Lectures: The module will include lectures delivered by the instructor to introduce and explain key concepts, techniques, and principles of architectural drawing. Lectures will provide theoretical foundations and guidance for the practical application of drawing skills. 2. Demonstrations: The instructor will demonstrate various manual drafting techniques and methods, showcasing proper use of drafting tools and equipment. Students will observe and learn through visual demonstrations, allowing them to understand and replicate the techniques in their own work. 3. Practical Sessions: Students will participate in practical sessions where they will actively engage in architectural drawing exercises. These sessions will provide hands-on experience with manual drafting tools and allow students to practice and develop their drawing skills under the guidance of the instructor. 4. Group Work: Collaborative group projects will be assigned to promote teamwork and communication skills. Students will work together on

	architectural drawing assignments, allowing them to share ideas, perspectives, and problem-solving approaches. 5. Critique and Feedback: Regular critique sessions will be conducted, where students will present their drawings to the instructor and peers for evaluation and feedback. Constructive feedback will help students identify areas for improvement and refine their drawing techniques. 6. Tutorials and Workshops: Additional tutorial sessions and workshops may be provided to address specific challenges or topics that require further clarification. These sessions will allow students to seek assistance, ask questions, and receive one-on-one guidance from the instructor. 7. Independent Study: Students will be encouraged to engage in independent study and practice outside of class. This may involve reviewing lecture notes, conducting research on architectural drawing techniques, and practicing drawing exercises to reinforce learning. 8. Visual Resources and References: Visual resources, such as examples of architectural drawings, textbooks, and online references, will be provided to supplement learning. These resources will aid students in understanding drawing conventions, standards, and best practices. 9. Portfolio Development: Students will be encouraged to maintain a portfolio of their architectural drawings throughout the module. This portfolio will showcase their progress, development, and the range of skills they have acquired. 10. Field Visits and Guest Speakers: Opportunities may be provided for students to visit architectural sites or attend guest lectures by industry professionals. These experiences will expose students to real-world applications of architectural drawing and provide insights into the profession. 11. Assessment and Feedback: Assessment methods such as practical drawing exercises, written assignments, group projects, and examinations will be used to evaluate students' understanding and application of architectural drawing principles. Constructive feedback will be provided to support students' learning and growth.
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Student Workload (SWL)			
Structured SWL (h/sem)	78	Structured SWL (h/w)	5.2
Unstructured SWL (h/sem)	47	Unstructured SWL (h/w)	3.1
Total SWL (h/sem)	125		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2, #4 and #6
	Assignments	2	20% (20)	Continuous	LO #2- #7
	Projects / Lab.	1	10 % (10)	Continuous	LO #8
	Report				
Summative assessment	Midterm Exam	2hr	10 % (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	LO #1 - #7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Weeks 1-4	- Advanced Orthographic Projection - Sectional views - Auxiliary views - Revolved and rotated views
Weeks 5-8	- Advanced Drawing Techniques - Pictorial drawings - Exploded views. - Assembly drawings - Mid-term Exam
Weeks 9-12	- Detailing and Annotation - Dimensioning methods - Surface finish and material specifications - Bill of materials
Weeks 13-15	- Collaborative Drawing Projects - Group projects involving architectural drawing exercises
Week 16	- Teamwork and collaboration skills in architectural drawing
	Preparatory week before the final Exam
Semester 2	
Weeks 1-4	
Weeks 5-8	
Weeks 9-12	
Weeks 13-15	
Week 16	
Learning and Teaching Resources	
	Text Available in the Library?

Required Texts	1. "Architectural Graphics" by Francis D.K. Ching and James F. Eckler - This comprehensive textbook covers the principles and techniques of architectural drawing, including line types, scales, orthographic projection, and architectural lettering. It also explores the use of computer-aided design (CAD) software in architectural drawing. 2. "Architectural Drawing and Light Construction" by Edward J. Muller and Philip A. Grau III - This book provides a practical approach to architectural drawing, focusing on both manual and CAD techniques. It covers topics such as architectural drafting standards, construction drawings, dimensioning, and detailing. 3. "Engineering Drawing and Design" by David A. Madsen, David P. Madsen, and Emeritus John R. Wallace - This textbook offers a comprehensive introduction to engineering drawing principles and practices. It covers topics such as geometric constructions, orthographic projection, isometric drawing, dimensioning, and tolerancing. 4. "Architectural Drafting and Design" by Alan Jefferis and David A. Madsen - This textbook provides a thorough introduction to architectural drafting, including architectural symbols, drafting conventions, working drawings, and building information modeling (BIM). It also covers topics like sustainability, energy-efficient design, and construction materials.	---
	5. "Architectural Drawing Course: Tools and Techniques for 2D and 3D Representation" by Mo Zell - This book offers a practical guide to architectural drawing techniques, including freehand sketching, orthographic projection, isometric drawing, and perspective drawing. It also covers digital representation methods and architectural communication.	
Recommended Texts	"Architectural Graphics" by Francis D.K. Ching and James F. Eckler	---
Websites		

Grading Scheme

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION FREE HAND II

Module Information					
Module Title	Free hand II		Module Delivery		
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE1203				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1		Semester of Delivery	2
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Zakaria Hashem		e-mail	Zakria.ha.ah@uosamarra.edu.iq	
Module Leader's Acad. Title		---	Module Leader's Qualification		---
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		00/06/2023	Version Number	1.0	

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	Module Overview: Freehand2 drawing is the artistic part of architectural drawing, this module is designed to provide second-year Architecture students with a comprehensive understanding of Free hand coloring techniques and principles. This module emphasizes skills, focusing on traditional free hand coloring methods and drawing tools. Students will learn how to create accurate and detailed coloring drawings by hand, gaining a strong foundation in free hand practices commonly used in the field of Architecture. watercolor is a water-soluble paint made of pigments suspended in a water-based solution. This flexible and non-toxic coloring medium works well in a wide range of arts and Architecture projects. Module Objectives: 1. To learn the most important techniques used in the advance of freehand drawing (such as water color). 2. To introduce students to the fundamental principles and concepts of Free hand coloring and its significance in the field of Architectural design. 3. To exercise Students to realize the exact details in the physical reality and being aware of the rates and movement, shadow, light by color. 4. To enable students to interpret and create accurate and detailed free hand coloring drawings, including, nature, furniture, and Architectural details. 5. To teach students appropriate scaling and dimensioning techniques to accurately represent objects and structures in free hand drawings. 6. To familiarize students with free hand coloring technique. 7. To enhance students' communication and presentation skills through the creation of clear and concise free hand coloring drawings. 8. To instill in students an understanding of industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements. 9. To foster effective collaboration and teamwork skills through group projects involving free hand coloring drawing exercises. 10. To provide students with opportunities to apply theoretical knowledge and practical skills to solve real-world free hand drawing challenges. 11. To prepare students for further free hand with oil color study and practical techniques 12. Enable the student to understand the vocabulary that will be used in other lessons such as design and architectural drawing.
Module Learning Outcomes	Module Learning Outcomes: Upon successful completion of this module, students will be able to: 1. Understand the fundamental principles of free hand coloring drawing and its importance in Architecture design. 2. Demonstrate proficiency in using tools and equipment for manual Free hand drawing. 3. Demonstrate effective communication and presentation skills through the creation of clear and concise free hand drawings.

	4. Collaborate effectively with peers in group projects involving Free hand coloring drawing exercises. 5. Freehand Drawing is organized around the concepts for drawing from perception. 6. It is based on working from still life, architecture, landscape, and photo collages. 7. The objectives are to examine the various components of drawing: line, value, texture, & composition.
Indicative Contents	Indicative Contents of the Module: Semester 1: 1. Introduction to coloring: a. Importance of coloring in Architecture b. Introduction to collecting color. 2. color Types: a. Water color b. Gouache color c. Acrylic color d. Chalk color Semester 2: 1. coloring tools and equipment. 2. Water color Types a. Watercolor Pans. b. Watercolor Tubes. c. Liquid Watercolor Paints. 3. Watercolor Palette Types. 4. Watercolor Brushes types.

Learning and Teaching Strategies	
Strategies	Learning and Teaching Strategies: 1. Lectures: The module will include lectures delivered by the instructor to introduce and explain key concepts, techniques, and principles of Free hand. Lectures will provide theoretical foundations and guidance for the practical application of free hand skills. 2. Demonstrations: The instructor will demonstrate various manual drawing techniques and methods, showcasing proper use of drafting tools and equipment. Students will observe and learn through visual demonstrations, allowing them to understand and replicate the techniques in their own work. 3. Practical Sessions: Students will participate in practical sessions where they will actively engage in Free hand exercises. These sessions will provide hands-on experience with manual drafting tools and allow students to practice and develop their drawing skills under the guidance of the instructor.

	4. Group Work: Collaborative group projects will be assigned to promote teamwork and communication skills. Students will work together on free hand assignments, allowing them to share ideas. 5. Critique and Feedback: Regular critique sessions will be conducted, where students will present their drawings to the instructor and peers for evaluation and feedback. Constructive feedback will help students identify areas for improvement and refine their drawing techniques. 6. Tutorials and Workshops: Additional tutorial sessions and workshops may be provided to address specific challenges or topics that require further clarification. These sessions will allow students to seek assistance, ask questions, and receive one-on-one guidance from the instructor. 7. Independent Study: Students will be encouraged to engage in independent study and practice outside of class. This may involve reviewing lecture notes, conducting research on free hand drawing, and practicing drawing exercises to reinforce learning. 8. Visual Resources and References: Visual resources, such as examples of drawing, textbooks, and online references, will be provided to supplement learning. These resources will aid students in understanding drawing conventions, standards, and best practices. 9. Portfolio Development: Students will be encouraged to maintain a portfolio of their free hand drawings throughout the module. This portfolio will showcase their progress, development, and the range of skills they have acquired. 10. Field Visits and Guest Speakers: Opportunities may be provided for students to visit sites or attend guest lectures by professional artist. These experiences will expose students to real-world applications of free hand. 11. Assessment and Feedback: Assessment methods such as practical Free hand exercises, group projects, and examinations will be used to evaluate students' understanding and application of free hand principles. Constructive feedback will be provided to support students' learning and growth.
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Student Workload (SWL)			
Structured SWL (h/sem)	78	Structured SWL (h/w)	5.2
Unstructured SWL (h/sem)	47	Unstructured SWL (h/w)	3.1
Total SWL (h/sem)	125		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2, #4 and #6
	Assignments	2	15% (15)	Continuous	LO #2- #7
	Projects / Lab.	1	5% (5)	Continuous	LO #8
	Report				
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	LO #1 - #7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Semester 1	Material Covered
Week 1-2	- Introduction to free hand coloring Importance of Free hand coloring in Architectural design - Overview of coloring tools and equipment - Introduction to collecting color.
Week 3-6	- color Types: 1. Watercolor 2. Gouache color 3. Acrylic color 4. Chalk color
Weeks 7-10	- coloring tools and equipment - Watercolor Palette Types. - Watercolor Brush types - Mid-Term Exam
Weeks 11-15	- Water color Types -Watercolor Pans. -Watercolor Tubes. -Liquid Watercolor Paints
Week 16	Preparatory week before the final Exam
Semester 2	
Weeks 1-4	- wet or dry. -wet or wet.
Weeks 5-8	- Drawing water color with mask. -Water color washes
Weeks 9-12	- Drawing water color with painter touch
Weeks 13-15	• Collaborative Drawing Projects - Group projects. • Teamwork and collaboration skills in water color
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	1. "Water color Techniques " by Emma Forge This comprehensive textbook covers the principles and techniques of water color, and many ways of coloring for Architecture. 2. "Artist Drawing techniques " by Saffron Stocker - This book provides a practical approach to coloring many subject one of them Architecture.	No
Recommended Texts	Water color Lessons: How to Paint and Unwind in 20 Tutorials (How to paint with water colors for beginners) Emma Lefebvre	No
Websites	https://www.watercoloronline.com/	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (BUILDING CONSTRUCTION I)

Module Information					
Module Title	Building Construction I			Module Delivery	
Module Type	Support			☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar	
Module Code	AE1204				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level	1		Semester of Delivery		
Administering Department		AE		College	Architectural Engineering Center
Module Leader	Mushtaq Hashem Kamel			e-mail	---
Module Leader's Acad. Title		---		Module Leader's Qualification	---
Module Tutor	Name (if available)			e-mail	E-mail
Peer Reviewer Name		Name		e-mail	E-mail
Scientific Committee Approval Date		00/06/2023		Version Number	1.0

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Learn about different local and international building materials 2. Learn the properties of building materials and their specifications 3. Focus on available building materials 4. Connecting and installing materials together
Module Learning Outcomes	5. Be able to know building materials and the difference between them 6. Use the right building material in the right place 7. Taking into account the economic cost in choosing building materials 8. Be able to know the materials that can be used outside the building and the materials that can be used inside the building 9. The possibility of using available local materials as a substitute for imported materials to reach the same performance 10. Understanding the importance of knowing the engineering properties of each building material and studying its specifications 11. Understand the concept of sustainable construction and how new technologies can be incorporated in the construction of sustainable low-rise buildings
Indicative Contents	- Definition of local and international building materials, factors affecting the quality of materials and the method of their selection - Addressing some construction concepts (walls, foundations, floors, ceilings, partitions and columns). [8 hrs] - The materials used in construction bricks stones concrete blocks. [16 hrs] - bonding materials - resistance to external conditions used in interior walls. [4 hrs] - Insulating materials in construction Moisture insulation - thermal insulation. [10 hrs] - The finishing materials in construction external walls interior walls - External floors - Interior floors. [12 hrs] - Basic materials in construction - Wood
	Steel. [8 hrs]

Learning and Teaching Strategies	
Strategies	The learning and teaching strategies for construction of buildings in the architecture department may include: Lectures: Traditional classroom lectures delivered by professors to provide theoretical knowledge and introduce key concepts related to building construction techniques, materials, and methods. Site Visits: Organizing visits to construction sites to observe and study real-life construction processes, techniques, and building systems. Construction Materials and Methods: Exploring various construction materials, their properties, and appropriate applications, as well as different construction methods and techniques for foundations, walls, roofs, and finishes. These learning and teaching strategies aim to provide students with a comprehensive understanding of construction processes, techniques, and systems in the field of building construction.

Student Workload (SWL)			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.47
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction - Defining local and international building materials, determining the factors affecting the quality of materials and the method of their selection.
Week 2	Structural concepts, walls and supports, partitions, foundations, floors, ceilings
Week 3	Building using bricks, types of bricks,
Week 4	uses of bricks in construction, types of bonding
Week 5	Building using stones, joints in connecting stones
Week 6	Construction using concrete blocks
Week 7	Binding materials in construction, their types and characteristics
Week 8	Midterm Exam
Week 9	Moisture-proofing materials, their types, and their characteristics
Week 10	Heat insulation and fire resistance materials
Week 11	The finishing materials in construction external walls
Week 12	interior walls
Week 13	External floors Interior floors
Week 14	Wood, its uses in construction, its properties, and its disadvantages
Week 15	Iron and steel, its uses, structural properties
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	انشاء المباني / يوسف الدواف	yes
Recommended Texts	- تركيب المباني / انيس جواد سلمان - انشاء المباني / زهير ساكو – ارتين ليفون	yes
Websites	https://engineering.mu.edu.iq/?epkb post type 1	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتاز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
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MODULE DESCRIPTION (ARCHITECTURAL HISTORY I)

Module Information					
Module Title	Architectural History I		Module Delivery		
Module Type	Core Learning activity		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE1205				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level		2		Semester of Delivery	4
Administering Department		Architecture	College	Architectural Engineering Center	
Module Leader	Rauoof Abd al razaq		e-mail		
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		M.Sc.
Module Tutor			e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2024	Version Number		1.0

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1- The aim of the lesson is to identify the nature of the emergence of the first civilizations, their buildings, and their settlement in the Mesopotamia Valley, and to trace the development of architecture in them until the Islamic conquests that were affected by it, as the difference in thought and belief was shown. 2- Preparing an architectural student with the ability to distinguish between architectural civilizations 3- Giving the ability to know the philosophical and theoretical ideas of architectural design formations 4- Learn about the most important historical periods of civilizations 5- Learn about the distinctive formations and architectural details of ancient civilizations
Module Learning Outcomes	Cognitive goals (knowledge and understanding) 1- Introducing what architecture is and the history of architecture 2- Learn the civilization of Mesopotamia in terms of architecture and philosophical ideas for architectural formations 3- Learn about the architectural formations and how they relate to the different cultures of ancient civilizations 4- Identify the architectural details within each historical period of a group of time periods of the Mesopotamian civilization and its reflection in architecture 5- Learn about the principles of architecture in urban and Arab caravan cities and study the most important components and details architecture that characterized each time period Skill objectives (subject specific skills) 6- Preparing reports by students in which projects of distinguished architects are selected to introduce students to how to deal with philosophical ideas and theoretical and design trends. 7- The ability of students to interact with each other within student groups (joint interaction) Emotional and value goals (thinking skills) 8- Enabling students to learn about the history of architecture in order to reach a clear perception of the most important architectural formations and details to increase awareness and systematic study education 9- The ability to distinguish the creative design ideas of historical civilizations by presenting and benefiting from the configurations of distinguished architectural buildings. 10- Enable students to solve their design problems General and transferable skills (other skills related to employability and personal development). 11- The ability to form architectural forms based on design principles 12- Choosing distinct architectural formations of ancient historical civilizations to

	present and discuss with students. 13- Developing his personality and being an educational and educational process at the same time 14- The ability to work with others with discipline within a single work team 15- A full awareness of the ethical and practical responsibility for team and individual action.
Indicative Contents	Methods of teaching and learning 1- Explanation of the lectures 2- How to show examples 3- The way to ask questions 4- test method 5- Self-learning method Evaluation modalities Theoretical study: 1- Students' response through actual participation in the lecture through interaction, asking questions and discussing the answer 2- Questions and discussion of the answer. 3- Evaluation through weekly tests. 4- Evaluation through exams, contributions, participation and attendance 5- Scientific tests 6- Reports and studies monitoring and tracking student progress: 7- Student activity and participation during the lecture. 8- The extent of the student's interest in providing the practical studies that are required of him. 9- The student's rush to attend the lecture despite the existence of various kinds of difficulties.

Learning and Teaching Strategies	
Strategies	The academic program includes two aspects, one of which complements the other (theoretical side) of the course in the form of lectures, (the practical side) represents the complementary side of the course and is represented by preparing reports for distinct architectural projects within the time periods that are studied within the prescribed curriculum and explaining philosophical ideas, formations and architectural design methods. Students are taught the design method according to the principles in terms of studying the architectural formations and details During the academic program, the technology provided by the tools (such as the smart board, computer, etc.) is used to discuss and present the projects selected by the students. Evaluation methods: Evaluation through monthly and quarterly exams, contributions, participation and attendance, in addition to evaluating reports and studies.

Student Workload (SWL) For 15 weeks			
Structured SWL h/sem)	48	Structured SWL (h/w)	3.2
Unstructured SWL (h/sem)	27	Unstructured SWL (h/w)	1.8
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	10	10% (10)	Continuous	All
	Assignments	2	10% (10)	5 and 10	All
	Report	1	10% (10)	14	All
	Seminar	1	10% (10)	15	All
Summative assessment	Midterm Exam	2hr	10% (10)	12	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	An introductory lecture to explain the nature of the material and its components, and the sources and reports required from students, in addition to explaining how to benefit from the material in architectural design
Week 2	Settlement theory and the stone ages
Week 3	Metal Stone Age
Week 4	The development the Warka and the proto-literate (proto-historic)
Week 5	Early Dynastic period
Week 6	The Sumerian era and the Akkadian era
Week 7	Third Ur dynasty
Week 8	Old Babylonian and Kassite era
Week 9	Assyrian era
Week 10	The last Babylonian period, the Chaldean state
Week 11	Parthian era, Seleucid era, Sasanian era
Week 12	Mid-term Exam.
Week 13	Al-hadier city
Week 14	The Arab caravan cities
Week 15	Seminars
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	History of Architecture, Sir Banister Fletcher tcher تاريخ العراق القديم، طه باقر تاريخ فن العمارة العراقية في مختلف العصور، شريف يوسف	Yes
Recommended Texts		
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (ENGLISH LANGUAGE I)

Module Information					
Module Title	English Language I		Module Delivery		
Module Type	Support		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	UOS-12011				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level		1			Semester of Delivery
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Ghassan Dhahed Kawan		e-mail		
Module Leader's Acad. Title		---	Module Leader's Qualification		---
Module Tutor	---		e-mail	---	
Peer Reviewer Name			e-mail	E-mail	
Scientific Committee Approval Date		00/06/2023	Version Number		1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives

1. Communication Skills: Develop students' speaking and listening abilities to engage in basic conversations, ask and answer questions, and express opinions on familiar topics.
2. Vocabulary Expansion: Expand students' everyday vocabulary through reading, listening, and interactive activities.
3. Grammar Understanding: Teach students essential grammar structures and patterns, including simple tenses, verb forms, and basic sentence construction.
4. Reading and Writing Skills: Improve students' reading comprehension and writing skills by exposing them to various text types and guiding them in constructing simple, coherent written texts.

Module Learning Outcomes

Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks.

Six learning outcomes of the module that combine multiple ABET components:

1. Apply language proficiency and effective communication skills (ABET A, B): Demonstrate the ability to effectively communicate in English, applying acquired knowledge of vocabulary, grammar, and language structures to express thoughts, ideas, and opinions clearly and coherently in various contexts.
2. Comprehend and analyze written and spoken English materials (ABET C, G): Demonstrate the ability to comprehend and critically analyze written and spoken English texts, including identifying main ideas, evaluating arguments, and synthesizing information.
3. Expand vocabulary and apply grammatical rules (ABET D, E): Expand and enhance English vocabulary by learning new words, idioms, and phrases, while applying knowledge of grammar rules and structures to construct grammatically correct sentences, paragraphs, and compositions.
4. Develop reading, writing, and information analysis skills (ABET F, G): Develop reading and writing skills in English by comprehending written texts, extracting key information, and producing well-structured compositions. Apply critical thinking skills to analyze and evaluate English language materials, including identifying biases and drawing conclusions.
5. Adapt language skills to cultural contexts (ABET B, H): Demonstrate effective communication and cultural awareness by recognizing and respecting cultural differences, adapting language usage appropriately, and effectively communicating with individuals from different cultural backgrounds.
6. Foster lifelong learning and ethical language use (ABET I, J): Develop a desire for lifelong learning in English language skills by seeking opportunities for continued language development and self-improvement. Demonstrate ethical and professional behavior in English language communication, including respecting intellectual property rights, maintaining academic integrity, and using language responsibly.

Indicative Contents	Indicative content includes the following. Part 1: Language Skills The Language Skills section of the English language module for the first-class Architecture Engineering program, based on New Headway Elementary, comprises units focused on greetings, architectural descriptions, project presentations, technical drawing, and report writing. These units introduce essential vocabulary, sentence structures, and language patterns required for effective communication in the architectural field. Students will practice engaging in conversations, describing architectural structures, presenting project plans, interpreting technical drawings, and writing comprehensive project reports. By mastering these language skills, students will develop a solid foundation for expressing themselves accurately and confidently in architectural contexts. Part 2: Communication Skills The Communication Skills section of the English language module for the first-class Architecture Engineering program, influenced by New Headway Elementary, includes units dedicated to developing effective communication abilities. Students will enhance their presentation skills by organizing and delivering architectural presentations, incorporating visual aids and engaging techniques. They will participate in collaborative design discussions, practicing giving and receiving constructive feedback while reaching consensus in design decisions. Additionally, students will learn negotiation skills for interacting with clients, understand cross-cultural communication dynamics, and refine their professional email writing skills. These communication skills are essential for successful interactions, teamwork, and effective communication within the architectural industry.
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Learning and Teaching Strategies	
Strategies	The main strategy that is adopted in this unit is to encourage students to participate in exercises while improving constructive critical thinking skills and expanding them at the same time while correcting misconceptions. This is done through explanation and the practical side through simple experiments that will develop the concept of space engineering, which includes activities What students do that interests them.

Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2.2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1.13
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 12	LO #1, #2 and #4
	Assignments	3	10% (10)	4,9 and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8&14	LO #5, #7and #6
Summative assessment	Midterm Exam	2hr	10% (10)	8	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Greetings and Introductions: greetings, introductions, names, countries, languages
Week 2	Everyday Activities: wake up, get dressed, have breakfast, go to work, watch TV.
Week 3	Free Time: hobbies, activities, sports, music, movies
Week 4	Present Simple and Present Continuous: daily routines, habits, actions, temporary situations.
Week 5	Shopping: clothes, sizes, prices, shopping, discounts
Week 6	Describing People: appearance, personality, character, relationships, feelings
Week 7	Past Simple and Past Continuous: past events, completed actions, ongoing actions
Week 8	Mid exam
Week 9	Describing Places: cities, countries, landmarks, activities, attractions
Week 10	Expressions and Emotions: idioms, emotions, feelings, expressions, reactions
Week 11	the Restaurant: menu, ordering food, making reservations, paying the bill
Week 12	Future Plans : future arrangements, intentions, predictions, schedules
Week 13	Jobs and Careers: professions, job interviews, qualifications, work experience
Week 14	Describing Experiences: travel, holidays, adventures, memorable moments
Week 15	Ability and Permission: can, could, may, might, should
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	- The New Headway elementary fourth edition by Liz & John - Soars, Oxford University Press,2011	Yes
Recommended Texts	English for builders and architects, R Rakhimova, Nova 2009	---
Websites	https://www.youtube.com/watch?v=LB8zpf_MWgw	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (COMPUTER I)

Module Information معلومات المادة الدراسية					
Module Title	Computer I		Module Delivery		
Module Type	Support		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	UOS-1101				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level		1	Semester of Delivery		1
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Maha Rahman Rahi		e-mail		
Module Leader's Acad. Title		---	Module Leader's Qualification		---
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Finding the ability to deal and understand with computer lab in laboratory locations. 2. Identify engineering concepts within the field of computer applications related to architectural engineering work through design, implementation and work auditing. 3. To introduce and develop the basic understanding of the principles of computer features and application.
Module Learning Outcomes	After successful completion of this course, students will be. 1- Able to perform documentation and presenting skills. 2- Proficient in using Windows, Word Processing Applications, Spreadsheet Applications, Database Applications and Presentation Graphics Applications. 3- The students will be able to explain the general concepts of the Word processors, application with the window elements of the Word Program 4- The students will be able to do text processing, apply the applications about page design and print. 5- The students will apply the Table applications. 6- The students will be able to implement procedures for the drawing tools and objects over the Microsoft Word program. 7- As a result of taking the Advanced Topics In Microsoft Excel Course, Students Will Be Able to: Edit worksheets using advanced enhancements and worksheet features, Create templates after writing complex worksheets and workbooks. 8- Import and Export data to and from Excel and other Office applications, enhance lists using pivot tables and pivot table charts, Audit and check worksheets and workbooks for errors, summarize data in worksheets and workbooks, Customize Excel worksheets and workbooks. 9- Use case studies to create worksheets and workbooks. 10- Because of taking the Advanced Topics in Microsoft PowerPoint Course, Students Will Be Able to: Identify the names and functions of the PowerPoint interface, Create, edit, save, and print presentations. 11- Format presentations, add a graphic to a presentation, Create and manipulate simple slide shows with outlines and notes. 12- Create slide presentations that include text, graphics, animation, and transitions, use design layouts and templates for presentations, Create a PowerPoint presentation. 13- As a result of taking the Advanced Topics internet Course, Students Will Be Able to: • To be able to explain the initial and development process of the internet. • To explain the functions of important internet services • To be able to define the main components of web architecture. • To be able to explain the purpose of using front-end and back-end web technologies. To explain the formation of HTML language

Indicative Contents	Indicative content includes the following.
	<u>Part A – Windows 10</u> Explains the basics of Windows 10 in an easy way for beginners Explains the task bar in detail Explains how to change the date and time settings Change the language and location Windows Feedback Explains the Touch keyboard, Navigation, Windows Feedback, Tablet mode, Connect, Note, On Note, All settings, Battery saver, VPN, Bluetooth, Brightness, Wi-Fi. [15 hrs.]
	PART B- Microsoft Office (word) Designed by Word 2010 to help students in the Department of Architecture create professional-quality documents. Word can also help you organize and write documents more efficiently. When student create a document in Word, you can choose to start from a blank document or let the template do a lot of the work for you. After that, the basic steps for creating and sharing documents are the same. In addition, Word is a powerful editing and revision tool that can help you work with others to make your document great. [15 hrs]
	<u>Part C – Learning Excel 2010</u> These materials introduce basic Excel skills such as entering various types of data, working with common formulas and functions, and creating a simple chart. We will also cover formatting a worksheet, naming a range of cells, adding columns to a spreadsheet, and creating a data table. [15 hrs.]
	<u>Part C – Learning Power Point 2010 and Internet</u> [PowerPoint 2010 is a complete presentation graphics program that allows you to produce professional-looking presentations. Slides can be created and displayed as a slide show on your computer, video projector, or on the Internet. In addition, It helps the students with the learning process as it helps to simplify the knowledge. In addition, it helps to visualize what the teachers in school are teaching. If you want to prepare for final exams, you can access Video Tutorials and other resources online through the Internet. [15 hrs.]

Learning and Teaching Strategies	
Strategies	The main strategy that is adopted in this unit is to encourage students to participate in exercises while improving constructive critical thinking skills and expanding them at the same time while correcting misconceptions. This is done through explanation and
	the practical side through simple experiments that will develop the concept of space engineering, which includes activities, what students do that interests them.

Student Workload (SWL)			
Structured SWL (h/sem)	48	Structured SWL (h/w)	3.2
Unstructured SWL (h/sem)	27	Unstructured SWL (h/w)	1.8
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction - Definition of Computer, Its Components and How It Works.
Week 2	File Definition, Types, Naming, And an Explanation of The MSDOS Operating System And Its Internal and External Commands, Introduction to Windows, Desktop. Using The Mouse, My Computer, Closing Any Open Window, Temporary Closes
Week 3	Zooming Any Window, Creating New Folder, Select, Find Folder or File Copying From Any Folder To Another, How To Start Any Program, Print Program, Shut Down, Formatting Floppy Disk, Scandisk, Arranging Icon, Run, Help
Week 4	Microsoft Word, File (New, Open, Close, Save, Save As Page Setup, Print Preview, Print) Edit (Undo Typing, Repeat Typing, And Cut Copy, Past. Clear, Select All, Find Replace, Go To),
Week 5	View (Tools Bars, Heard and Footer, Zoom) Insert (Page Numbers, Symbol, Footnote, Picture, Textbox, Object). Format (Font Paragraph, Bullets and Numbering, Borders and Shading. Columns),
Week 6	Tools (Spelling and Grammar, Language), Table (Insert Table, Insert Rows, Delete Cells, Split Cells, Select Row, Select Column), Table (Table Auto Format, Sort Formula).
Week 7	- Microsoft Excel: How To start Excel Program, Menu Bar Tool - Bar Formula Bar, Worksheet, Cell, Cell, Creating New Workbooks, Open Existing Workbooks. - Mid-Term Exam
Week 8	Clearing Cell, Saving Your Work, Closing Workbooks, Zoom, and Drag. In Addition, Drop, Inset Cells, Delete Cell, Find, Replace, Auto Sum.
Week 9	Enter A Formula Manually, Formatting Work Sheet, Auto Format, Print, Print Preview.

Week 10	Microsoft Excel: How To start Excel Program, Menu Bar Tool Bar Formula Bar, Worksheet, Cell, Cell, Creating New Workbooks, Open Existing Workbooks, Charts
Week 11	What Is the Power Point Presentation System and How to Access It, File: New, Open, Close Save, Save As, Page, Setup, Print, Exit,
Week 12	Edit: Undo Repeat, Cut, Copy, and Paste, Select All Clear, Duplicate, Delete Slide, Find, Replace. New: Slide, Slide Show, Tools, Header and Footer, Zoom, Insert: New Slide, Slide Number, Date and Time, Slide from File, Picture, And Text Box. Movies And Sounds, Chart, Object, Tools: Spilling, Format: Font Alignment, Text Direction, Slide Layout, Background, Apple Deeding Slid Show: View Show Rehearse Taming, Setup Shoe, Preset Animation and Animation Preview, Slid Transition.
Week 13	Format Capabilities, Format Capabilities Tools Commands.
Week 14	Internet
Week 15	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	What Is the Power Point Presentation System And How To Access It.? File new, Open, Close Save, Save As, Page, Setup, Print, and Exit.
Week 2	Edit: Undo Repeat, Cut, Copy, and Paste, Select All Clear, Duplicate, Delete Slide, Find, Replace.
Week 3	New: Slide, Slide Show, Tools, Header and Footer, Zoom
Week 4	Insert: New Slide, Slide Number, Date and Time, Slide from File, Picture, And Text Box. Movies And Sounds, Chart, Object, Tools: Spilling.
Week 5	Format: Font Alignment, Text Direction, Slide Layout, Background, Apple Deeding
Week 6	Slid Show: View Show Rehearse Taming, Setup Shoe, Preset Animation and Animation Preview, Slide Transition. An Introductory Lecture on What Are the Required Spreadsheet Programs, Then the Specificity of Excel Programs
Week 7	Explain The Possibilities of Entering and Exiting and Storing And Recalling Information
Week 8	Explain The Capabilities of Editing Information (Delete - Copy - Move)
Week 9	Display Commands and Accessories
Week 10	Input Orders and Change Information
Week 11	Format Capabilities
Week 12	Tools Commands
Week 13	Tools Commands, Internet
Week 14	Internet
Week 15	Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Linda Foulkes, 2020: Learn Microsoft Office 2019, A comprehensive guide to getting started with Word, PowerPoint, Excel, Access, and Outlook. BIRMINGHAM – MUMBAI. Published by Packt Publishing Ltd.	---
Websites	https://www.haio.ir/app/uploads/2022/05/Learn-Microsoft-Office-2019-Acomprehensive-guide-to-getting-started-with-Word-PowerPoint-Excel-Access-and-Outlook-Linda-Foulkes-z-lib.org_.pdf	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



Modules

Description

Second

Level

MODULE DESCRIPTION (ARCHITECTURAL DESIGN III)

Module Information				
Module Title	Architectural Design III		Module Delivery	
Module Type	Core learning activity		☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	AE211			
ECTS Credits	10			
SWL (hr/sem)	250			
Module Level	2	Semester of Delivery		
Administering Department	Architecture	College	Architectural Engineering Center	
Module Leader	Maan Sahab Muhamad		e-mail	dr.maanalbadri@uosamarra.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D	
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date	01/06/2024	Version Number	1.0	

Relation with other Modules			
Prerequisite module	Architectural Design Principles II ARE121	Semester	2
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	To introduce students with the fundamentals of collective housing design and to develop the students' capability to design residential building using architectural standards, regulations and architectural language.
Module Learning Outcomes	1. Successfully demonstrate knowledge about residential housing, typologies and main forms 2. Demonstrate the understanding of architectural and urban context. 3. Perform the ability to use norms and standards in proper way, and to use proper typology of residential buildings. 4. Perform knowledge about appropriate approaches and methods of infill design. 5. Develop skills of understanding human needs in order to have quality life.
Indicative Contents	1. Determining space for activities such as living, dining, sleeping and conveniences. 2. Measured drawing of a small building such as, a small room/studio, etc. of a house, office etc. 3. develop an understanding of the way building structure, construction and services inform, interpret and contribute to the architectural design process; 4. Provide the opportunity for the demonstration of that understanding as an essential component of practical architectural design 5. Simple circulation flow diagrams for small building projects. 6. Three-dimensional organization of a variety of forms to create built forms, importance of shades and shadows in the entire composition, layout of repetitive units within a site to create interesting and functional compositions.

Learning and Teaching Strategies

Strategies	- Class discussions with examples. - Active tutorial sessions for engaged learning and continuous feedback on progress. - Class debates on relevant case studies.
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Student Workload (SWL) For 15 weeks

Structured SWL (h/sem)	150	Structured SWL (h/w)	10
Unstructured SWL (h/sem)	100	Unstructured SWL (h/w)	6.7
Total SWL (h/sem)	250		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Assignments	2	10% (10)	5 and 10	
	Assignments	2	10% (10)	2 and 12	
	Projects	1	10% (10)	Continuous	
	Projects	1	10% (10)	13	
Summative assessment	Midterm Presentation	4hr	10% (10)	7	
	Final Presentation	4hr	50% (50)	15	
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to the course. Explanation of tasks and expectations.
Week 2	Urban /Site/ Analysis. Historic overview of the development of collective housing.
Week 3	Residential typologies. Spatial requirements, dimensional standards in collective housing design
Week 4	Dimensional standards in collective housing design.
Week 5	Organizational characteristics of the single residential unit
Week 6	Presentation of certain elements in conceptual design project.
Week 7	Analysis of referent examples. Typologies and practice.
Week 8	Midterm presentation
Week 9	Analysis of referent examples. Functional organization of apartments.
Week 10	Building envelope and materials. Design reviews
Week 11	Analysis of referent examples. Site visit.
Week 12	Analysis of referent examples regarding facades, shapes etc.
Week 13	Work presentation of conceptual design project.
Week 14	Final review of students' projects
Week 15	final presentation

Delivery Plan (Weekly Lab. Syllabus)

Material Covered

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts		No
Recommended Texts	Watson, D. (Editor). (2005) Time-saver Standards for Architectural Design: Technical Data for Professional Practice, 8th Ed., McGraw-Hill.	Yes
Websites		

Grading Scheme

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0- 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION

(Architectural Presentation)

Module Information				
Module Title	Architectural Presentation		Module Delivery	
Module Type	Core Learning activity	☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE212			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	2			Semester of Delivery
Administering Department	Architecture	College	Architectural Engineering Center	
Module Leader			e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.Sc.	
Module Tutor	Name (if available)	e-mail	E-mail	
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	01/06/2024	Version Number	1.0	

Relation with other Modules			
Prerequisite module	Architectural Drawing and Visualization ARE 122	Semester	2
Co-requisites module	Architectural design studio III ARE 212	Semester	2

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1- The lesson aims to develop students' knowledge of the basics and skills of measured two- and three-dimensional architectural drawings 2- Introduce students to how to employ these measured graphics and use them as a means to express their design ideas by showing them in the form of three-dimensional graphics that convey and express their ideas 3- Developing students' skills in various architectural directing methods using (pencils, wooden pens, ink pens, watercolors and posters, texture and pantone colors, collage / etc.) 4- This aims to teach the student how to choose the appropriate means in the architectural rendering process 5- Using the rendering process as an expressive tool in an architectural language that conveys the idea of design production 6- The lesson contributes greatly to the process of expanding the imaginary horizon prior to students' ideas, and thus the ease of conveying these ideas by choosing an appropriate method of presentation.
Module Learning Outcomes	Cognitive goals (knowledge and understanding) 1- To familiarize the student with the types of isometrics 2- To familiarize the student with perspective and its types 3- To distinguish between isometric and perspective 4- To distinguish between areas of shadow, shadows and light 5- The student chooses the appropriate drawing mechanism for the proposed model 6- The student chooses the most beautiful model and angle in the engineering drawing 7- That the student distinguishes between the types of colors used in the architectural display Marathi Output (subject specific skills) 8- To draw and show the student the isometric of the geometric and nongeometric shapes of the design plans 9- To draw and show the student the perspective and all kinds of design schemes 10- The student applies the appropriate colors for the proposed design scheme 11- The student should use all kinds of colors in his design plans 12- That the student devise new ways of showing Emotional and value outputs (thinking skills) 13- To distinguish between the different types of isometrics 14- To understand the difference between isometric and perspective 15- The student analyzes the model and chooses the best angle for drawing 16- For the student to link between the architectural rendering techniques lesson and other related lessons as a lesson of Design, for example, in the application of visual skills General and transferable skills 17- Developing the student's personality in line with the requirements of architecture 18- Developing the student's ability to communicate his idea and project to the recipient in the simplest and most beautiful ways and tools 19- Developing the student's ability to deal fruitfully with the recipient, since architecture is from and to the recipient and for all segments in society. 20- Developing the student's personality in analysis and synthesis to reach innovation 21- Encourage the student to innovate new ways of displaying

Indicative Contents	Education for students through: 1- Lecture by course instructor 2- Use the brainstorming method 3- Use the discussion method 4- Giving the student the freedom to choose the angle of drawing, and then discussing with him the advantages and disadvantages of this angle 5- Diversity in choosing drawing models 6- Collective criticism of students' products 7- Displaying models of previous stages, if any, or selected models and images to serve the course Student assessment by: 1- The student's response to the notes and directions given by the professor 2- Practical application of the student inside the classroom and through homework as well 3- The emotional interaction of the student with the vocabulary of the lesson and the keenness to provide the best 4- Follow-up the student's skill development for the academic year 5- The student's realization of the importance of the lesson in completing his requirements as an architect
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Learning and Teaching Strategies	
Strategies	The lesson of architectural drawing and rendering bears the greatest responsibility in defining and enabling the student to produce and display his final project in a manner appropriate to the idea and design scheme, so the lesson of rendering techniques represents two interconnected parts of the techniques starting with architectural drawing and ending with architectural rendering techniques, so it was necessary to have a theoretical lecture in each lesson To explain the techniques of isometric and perspective engineering display of all kinds, the techniques of distributing the drawing inside the board and the different ways of producing it, with the presence of a practical application for each lecture in the classroom and homework with the addition of color and display technology, all of this is applied using the lecture method using the smart board and pen to draw illustrations. The lesson is practical, so the class application depends on what is presented to him by the student as a way to evaluate the objectives of the lesson, as well as the homework, while conducting sudden and announced tests.

Student Workload (SWL) For 15 weeks			
Structured SWL (h/sem)	75	Structured SWL (h/w)	5
Unstructured SWL (h/sem)	75	Unstructured SWL (h/w)	5
Total SWL (h/sem)	150		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	All
	Homework	13	10% (10)	Continuous	All
	Projects / Lab.	14	15% (15)	Continuous	All
	Final Project	1	5% (5)	15	All
Summative assessment	Midterm Exam	3hr	10% (10)	12	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	An introductory lecture - introducing students to the nature and requirements of the subject, with examples of the products of previous years students using the isometric method in its various types. Primitive Objects. Two-dimensional graphics - drawing basic shapes.
Week 2	2D Drawings - drawing horizontal Plans, drawing Elevations and Sections
Week 3	3D Drawings: Learn to draw isometric types by drawing Primitive Objects, cubes and rectangular prisms.
Week 4	3D Drawings: Learn to draw the dome, vault and arches using the isometric method
Week 5	Shade and Shadows: Learn how to project them onto simple and complex plans and elevations. And Quiz
Week 6	3D Drawings: Perspective with one vanishing point, drawing Primitive Objects, cubes and rectangular prisms.
Week 7	3D Drawings: Perspective with one vanishing point, drawing complex objects
Week 8	3D Drawings: Perspective with two vanished points, drawing Primitive Objects, cubes and rectangular prisms.
Week 9	3D Drawings: Perspective with two vanished point, drawing complex objects
Week 10	3D Drawings: Sective and Quiz
Week 11	3D Drawings: Interior perspective with one vanishing point, Draw the interior perspective with one vanishing point showing the ceilings, walls, and floors
Week 12	Mid-term Exam.
Week 13	3D Drawings: Perspective plan drawing of the interior spaces with furniture
Week 14	3D Drawings: A perspective drawing of a skyscraper with floors divided
Week 15	Final Project: Presenting integrated plans for a building (2D and 3D plans) with choosing the appropriate display for the project
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	الظل والمنظور ، عماد محمد البكري Working and design drawing, Rudolf Prenzels Architecture drawing Architecture details	yes
Recommended Texts		
Websites	https://www.youtube.com/channel/UCAVDseen1swiR0WkfwN-Kzg	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (STRUCTURES I)

Module Information					
Module Title	Structures I		Module Delivery		
Module Type	Support	☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar			
Module Code	AE213				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level	3			Semester of Delivery	1
Administering Department	AE	College	Architectural Engineering Center		
Module Leader	Muhammad Abbas Husayn		e-mail	mhmdabbas@uosamarra.edu.iq	
Module Leader's Acad. Title			Module Leader's Qualification		
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2024	Version Number		

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. Teaching students the concepts of forces and moments and their effects on structures. 2. Providing students with the basics of equilibrium in structures and the basics of structural analysis. 3. Teaching students the types of trusses and their methods of analysis. 4. Teaching students the concepts of centroid and moment of inertia. 5. Providing students the principles of axial, shear, and moment diagrams for beams. 6. Teaching students the basics of stress and strain in structural members.
Module Learning Outcomes	1. 2. The ability to understand the effects of loads on structures. 3. Understanding the concept of equilibrium in structures. 4. Knowing the types of trusses and how they work in structures. Acquiring the skill of drawing axial, shear, and moment diagrams for beams and understanding their concepts. 5. Understanding the basics of stress and strain in structural members and their applications in structures.
Indicative Contents	This module establishes the basic principles of structural analysis and its relationship with architectural design. The course begins by presenting the principles of force and moments and how they affect structures and their behavior, and explores the principle of equilibrium and its applications in structures, then focusing on trusses and their importance in architecture applications and how they work and analyzed. The module then moves on to other topics related to internal actions in structural members, starting from the centroid of member cross sectional area and its moment of inertia, then presenting how to draw axial, shear, and moment diagrams for beams, and finally providing the principles of stress and strain in structural members to deepen the understanding of the effects of loading on structural parts and its role in architectural design.

Learning and Teaching Strategies	
Strategies	The learning and teaching strategies for the module includes: Lectures: providing theoretical knowledge and introduce key concepts related to the structure's topics. Assignments: Assigning students to do homework in order to apply the theories they learned in class. Supplementary sources: Providing useful sources to deepen the understanding. Virtual class: Take advantage of virtual classes to provide the opportunity for discussion and presentation of the basic and additional information

Student Workload (SWL)			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.47
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	#2, #3 and #4
	Assignments	2	10% (10)	5 and 10	All
	Attendance	1	5% (5)	Continuous	All
Summative assessment	Midterm Exam	2hr	15% (15)	8	#1 - #3
	Final Exam	3hr	60% (60)	17	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction, Forces and their Effects, Types of Forces.
Week 2	Resultant of Forces in Plane (Concurrent Forces).
Week 3	Resultant of Forces in Plane (Nonconcurrent and Parallel Forces), Couple and Moment.
Week 4	Equilibrium of Particles and Bodies.
Week 5	Applications in Equilibrium for beams and Frames.
Week 6	Trusses and their types, Methods of Analysis.
Week 7	Applications in Trusses Analysis.
Week 8	Midterm Exam
Week 9	Centroid of Area.
Week 10	Moment of Inertia.
Week 11	Applications in Centroid and Moment of Inertia.
Week 12	Axial Force, Shear, and Moment diagrams.
Week 13	Applications in Axial Force, Shear, and Moment diagrams.
Week 14	Stress: Normal, Shear, and Bending Stresses.
Week 15	Strain and its Applications.
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Basic Structures for Engineers and Architects , Philip Garrison, Blackwell Publishing Ltd., 2005.	yes
Recommended Texts	1. Engineering Mechanics: Statics , R.C. Hibbeler, Pearson Education, 12th edition, 2010. 2. Mechanics of Materials , R.C. Hibbeler, Pearson Education, 8th edition, 2011.	yes
Websites	https://mechanicsmap.psu.edu/index.html	

Grading Scheme

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0- 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54). The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION of AutoCAD

Module Information					
Module Title	Engineering Drawing Using AutoCAD		Module Delivery		
Module Type	Support		☐ Theory ☒ Lecture ☒ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE214				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level		1	Semester of Delivery		1
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Dr. Raed Abdullah Hassan		e-mail	Raed_hasan@uosamarra.edu.iq	
Module Leader's Acad. Title		Assist. Lecturer	Module Leader's Qualification		MSc.
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name			e-mail		
Scientific Committee Approval Date		01/06/2024	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	1. The students obtain knowledge and understanding in the subject of engineering drawing by using the computer through the AutoCAD program Understanding and teaching students the basics of engineering drawing related to computer engineering 2. Knowing the correct methods of engineering drawing using the computer and how to apply them in the AutoCAD program in the field of computer engineering 3. Increasing the student's experience in identifying drawing, designing engineering, electronic shapes, and electrical circuits. 4. Easy to publish, and give the drawing on people across the globe just in a second.
Module Learning Outcomes	5. Explain why CAD software is now replacing traditional pencil drawing. 6. Explain commands and AutoCAD's user interfaces, description of menu Bar and toolbars of AutoCAD 7. Recognize how AutoCAD defines the position of points with coordinates and specify the angle in AutoCAD 8. Explain How to draw lines, circles, Ellipses, Rectangles and arcs using precise methods 9. Learn editing commands: copy, cut, paste, erase, move, selecting objects, orthogonal projection, ISO drawing. 10. Developing the students' practical, theoretical and creative abilities in computer design techniques of various types. CAD Electrical, drawing electrical symbols on simple architectural plans
Indicative Contents	Indicative content includes the following. <u>Part A – AutoCAD interfaces</u> The use of CAD in engineering drawing, description of menu Bar and toolbars [6 hrs.] <u>Part B – Drawing</u> Drawing Ellipse, Rectangle, line, Ray, Circle, point, Arc, ----- etc. [24 hrs.] <u>Part C – Editing Commands and CAD Electrical</u> CAD Electrical, the use of various layers, drawing electrical symbols on simple architectural plans, editing commands: copy, cut, paste, erase, move, selecting objects, orthogonal projection, ISO drawing. [15 hrs.]

Learning and Teaching Strategies	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, homework's and examples. Practical examples help students to understand the course material.

Student Workload (SWL) For 15 weeks			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.46
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	7 and 12	LO #1 to #4 and #5, #6
	Assignments	3	20% (20)	4 ,6 and 13	LO #1 to #3 and #4 to #6
	Practice/lab	1	10% (10)	Continuous	All
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 to #4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	The use of CAD in engineering drawing
Week 2	description of menu Bar and toolbars
Week 3	Line, point
Week 4	Rectangle
Week 5	Circle
Week 6	drawing Ellipse
Week 7	Arc, ----- etc.
Week 8	editing commands
Week 9	copy, cut
Week 10	paste, erase
Week 11	move
Week 12	selecting objects
Week 13	selecting objects
Week 14	CAD Electrical selecting objects
Week 15	Mechanical/ Special features the use of various layers selecting objects
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	- AutoCAD 2019 Beginning and Intermediate - The benefits of using the electrical toolset in AutoCAD	pdf
Recommended Texts	Any other materials available on the web.	No
Websites	https://www.youtube.com/playlist?list=PLHCD1a8slQtJbEKJawJL9qQaY5P9SgCUX	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0- 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION OF (BUILDING CONSTRUCTION II)

Module Information					
Module Title	Building Construction II		Module Delivery		
Module Type	Core learning activity		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE215				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level		2			Semester of Delivery
Administering Department		Architecture	College	Architectural Engineering Center	
Module Leader	Safaa Yasin Hamd		e-mail	Safaa.yassin@uosamarra.edu.iq	
Module Leader's Acad. Title		Lecturer assistant	Module Leader's Qualification		M.Sc.
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2024	Version Number		1.0

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1. The student gets acquainted with some aspects of technical systems related to building information that the architect must know in order to develop his ability to design structurally, and then infiltrate with knowledge and in a way that suits the way the architect perceives his building as an environmental envelope that enjoys durability, beauty and environmental protection. Relevant in terms of form and content to the basic and secondary activities and functions of the building. 2. In general, the focus is on the solid structural system and the use of brick material that is suitable for the environment and local architecture (especially the city of Najaf as an enhancement to the local architecture). 3. The study material includes two parts, the first is theoretical that deals with general principles (particularly the solid system), and the second is practical, dealing with ways of expressing structural problems in an architectural language as an application of theoretical material. 4. The study includes on-site visits for the student to learn about the building reality. Due to the limited time and the breadth of the material provided to the student, each student is assigned to follow up the process of building a house and prepare a report on that.
Module Learning Outcomes	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. - Increasing the student's knowledge base from the practical and executive side. 2. - The student is introduced to the building and construction systems in general. 3. Understanding and comprehending the information of the basic and secondary elements of the building and its complementary components, leading to the understanding of the building as a whole. 4. - Forming a knowledge base for the student that qualifies him to understand the structural and operational processes. 5. - The student's understanding of building materials and external and internal finishes and knowing their characteristics. 6. - The student's ability to employ the structural elements of the building in a way that is compatible with the architectural elements. 7. Be able to know building materials and the difference between them

Indicative Contents	- Structural Structures and Columns (20 h) - Structural design principles - Types of columns and their components - Column installation and installation techniques - Structural walls and ceilings (20 h) - Types of structural walls - Wall mounting techniques - Types of roofs and their installation - Doors and Windows (10 hours) - Types of doors and windows - Door and window installation and installation techniques - Interior and exterior finishes (20 hours) - Concepts of interior and exterior finishes - Installation of floors and interior walls - Installation of external facades and external finishes - Isolation and protection systems (10 hours) - Types of thermal and acoustic insulation systems - Installation and isolation techniques - Fire protection systems and natural disasters - Review and applied projects (10 hours) - Comprehensive review of school subjects - Apply theoretical knowledge in practical projects
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Learning and Teaching Strategies	
Strategies	Active Learning: Active participation in practical processes, such as gathering materials and installation, and collaborating on team projects. This helps apply theoretical concepts in a practical context and enhance understanding and practical skills. 1- Discussion and interaction: Discuss concepts and issues with colleagues and teachers. Inquire about any unclear ideas and listen to the views of others. This can help promote critical thinking and a deep understanding of the material. 2- Cooperative learning: working in small groups to solve problems and to practice compositional techniques. Knowledge and experience can be shared with colleagues and understanding enhanced through collaboration and communication. 3- Use of various sources: Make use of various learning resources such as textbooks, articles, electronic resources, and educational videos. Explore practical examples and case studies to illustrate concepts and their practical applications. 4- Creative solutions: Using creative thinking and searching for innovative solutions to problems in building installation.

Student Workload (SWL) For 15 weeks			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.47
Total SWL (h/sem)	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction - Definition of Engineering surveying and the relationship of theoretical representation to reality, fields that can be employed in the service of architecture.
Week 2	construction operations - construction methods
Week 3	Structural systems (solid, structural, decimal)
Week 4	the wall as a structural element (the behavior of the structural element towards different stresses and ways to resist them)
Week 5	classification of walls structurally, methods of construction
Week 6	the wall with the building units (bricks), methods of attachment
Week 7	linking and the problem of coordinating dimensions
Week 8	Holes in Brick Walls + (Quick Exam)
Week 9	foundations
Week 10	foundations+ (Quick Exam)
Week 11	the upper floors (pipe, wood)
Week 12	concrete floors
Week 13	Selling

Week 14	Resistance to environmental factors in the wall, resistance to environmental factors in the floors and ceiling
Week 15	Mid exam
Week 16	Preparatory week before the final Exam
Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	types of bonding in bricks
Week 2	types of walls (solid, hollow, wood, veneer, stone)
Week 3	Openings
Week 4	the foundations of the wall and floor
Week 5	Roofing (all types) Basement level, dome
Week 6	A Hole in the Roof Setting of constructions + (an isometric clip of a building from the foundation to the roof)
Week 7	final presentation and evaluation

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	"Structures: Or Why Things Don't Fall Down" by J.E. Gordon. "Building Construction Illustrated" by Francis D.K. Ching.	No
Recommended Texts	Architectural Graphic Standards By The American Institute of Architects	Yes
Websites	https://www.khanacademy.org https://www.britannica.com	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0– 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



Module Description (Crimes of the Baath Regime)

Module Information معلومات المادة الدراسية					
Module Title	Crimes of the Baath Regime		Module Delivery		
Module Type	B		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	UOS- 2303				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	2	Semester of Delivery		3	
Administering Department	Architecture	College	Architectural Engineering Center		
Module Leader	Rauoof Abdulrazak Nori		e-mail	rauoof.a.nori@uosamarra.edu.iq	
Module Leader's Acad. Title	Lecturer		Module Leader's Qualification	M.Sc.	
Module Tutor			e-mail	E-mail	
Peer Reviewer Name	Name		e-mail	E-mail	
Scientific Committee Approval Date	01/06/2024		Version Number	1.0	

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1. To provide a comprehensive understanding of the Baath Regime, its rise to power, and the socio-political context in which it operated. 2. To examine the crimes committed by the Baath Regime, including human rights violations, war crimes, and genocidal acts. 3. To critically analyze the impact of the Baath Regime's policies on various ethnic, religious, and political groups. 4. To foster an understanding of the international response to the Baath Regime's actions and the subsequent legal and humanitarian consequences. 5. To encourage critical thinking about the legacy of the Baath Regime and the ongoing challenges in the region.
Module Learning Outcomes	By the end of this module, students should be able to: 1. Identify and explain the historical and political context of the Baath Regime's rise to power in Iraq. 2. Critically analyze the key events and policies of the Baath Regime that led to widespread human rights violations. 3. Evaluate the impact of the Baath Regime's crimes on various groups, including ethnic minorities, political dissidents, and religious communities. 4. Discuss the international legal frameworks and responses to the Baath Regime's actions, including sanctions, interventions, and trials. 5. Synthesize knowledge about the Baath Regime's legacy and its implications for contemporary Middle Eastern politics and global human rights discussions.
Indicative Contents	10- Introduction to the Baath Party: - a Origins and ideology of the Baath Party in Iraq. - b Key figures in the Baath Regime, including Saddam Hussein. - c The role of the Baath Party in the political landscape of the Middle East. 11- Consolidation of Power: - a The Baath Party's rise to power in Iraq. - b Methods of control: propaganda, repression, and the use of security forces. - c Political purges, coups, and the establishment of authoritarian rule. 12- Crimes Against Humanity: - a The Anfal Campaign and the Kurdish genocide. - b The use of chemical weapons in Halabja. - c Repression of political opposition and the persecution of Shiite Muslims. - d Mass executions, torture, and disappearances. 13- War Crimes and Regional Conflict: - a The Iran-Iraq War: causes, major events, and war crimes. - b The invasion of Kuwait and the Gulf War. - c The impact of these conflicts on the civilian population. 14- International Response and Legal Accountability: - a The role of the United Nations and other international organizations. - b Sanctions, no-fly zones, and military interventions. - c The trial of Saddam Hussein and other Baath officials. - d Challenges of transitional justice in post-Baath Iraq. 15- The Legacy of the Baath Regime: - a Long-term effects on Iraqi society.

	- b The role of memory, trauma, and reconciliation. - c Current political dynamics in the region influenced by the Baath Regime's legacy. 16- Case Studies and Comparative Analysis: - a Comparison with other authoritarian regimes and genocides. - b The role of international law in addressing state crimes. 17- Student Presentations and Discussions: - a In-depth analysis of specific crimes or events related to the Baath Regime. - b Discussions on the ethical implications of international intervention and justice.
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Learning and Teaching Strategies	
Strategies	1. Project-Based Learning: Students create research projects on crimes such as the Anfal campaign and the use of chemical weapons. 2. Inquiry-Based Learning: Encourages students to ask questions about the causes and ethical-political implications of these crimes and research them. 3. Group Discussions: Enhances critical thinking through discussions on the impact of the crimes on communities and the role of leaders in their execution. 4. Experiential Learning: Includes field visits or using virtual reality to understand the depth and impact of the crimes. 5. Collaborative Learning: Students work in groups to analyze various aspects of the crimes and their effects from a multidisciplinary perspective. 6. Use of Primary Sources: Analyzing historical documents, testimonies, and documentaries to understand the facts on the ground. 7. Problem-Based Learning: Involves case studies on rebuilding affected communities and offering practical solutions. 8. Student-Centered Learning: Allows students to choose specific aspects of the crimes to study in-depth, presenting findings or creative projects. These strategies provide students with a deep and comprehensive understanding of the crimes of the Baath regime through diverse and effective learning approaches.

Student Workload (SWL) For 15 weeks			
Structured SWL h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	10	10% (10)	Continuous	All
	Assignments	2	10% (10)	5 and 10	All
	Report	1	10% (10)	14	All
	Seminar	1	10% (10)	15	All
Summative assessment	Midterm Exam	2hr	10% (10)	12	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Violations of rights and freedoms
Week 2	A descriptive overview of the political systems in Iraq 1921-2003
Week 3	Violations of the Baath regime of public rights and freedoms
Week 4	The impact of the Baath regime's behaviors on society and its control over the state
Week 5	The impact of the transitional phase in combating authoritarian politics
Week 6	The psychological field, the social field
Week 7	Religion and the state
Week 8	Mid-term exam
Week 9	Culture, media and the militarization of society
Week 10	The impact of repression and wars on the environment and population
Week 11	The use of internationally prohibited weapons and environmental pollution
Week 12	Scorched earth policy
Week 13	Draining the marshes and forced migration
Week 14	Destruction of the agricultural and animal environment and radioactive pollution
Week 15	Mass graves and bombing of places of worship
Week 16	Final exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	The curriculum of the crimes of the defunct Baath Party 2023 issued by the Ministry of Higher Education and Scientific Research	Yes
Recommended Texts		
Websites	https://www.uomustansiriyah.edu.iq/media/lectures/5/5_2023_10_02!01_30_03_AM.pdf	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
 Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (Architectural Design IV)

Module Information					
Module Title	Architectural Design IV		Module Delivery		
Module Type	Core learning activity		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☒ Seminar		
Module Code	AE221				
ECTS Credits	10				
SWL (hr/sem)	250				
Module Level		2	Semester of Delivery		4
Administering Department		Architecture	College	Architectural Engineering Center	
Module Leader			e-mail		
Module Leader’s Acad. Title		Lecturer	Module Leader’s Qualification		MSc
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2024	Version Number		1.0

Relation with other Modules			
Prerequisite module	Architectural Design III AE211	Semester	2
Co-requisites module	None	Semester	

Learning and Teaching Strategies	
Strategies	• Class discussions with examples. • Active tutorial sessions for engaged learning and continuous feedback on progress. • Class debates on relevant case studies.

Student Workload (SWL)			
Structured SWL (h/sem)	150	Structured SWL (h/w)	10
Unstructured SWL (h/sem)	100	Unstructured SWL (h/w)	6.7
Total SWL (h/sem)	250		

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	The second year in architectural study represents an important transitional stage that moves the student from the stage of preparing designs of an abstract, definitional nature (represented in the first stage) to a more comprehensive stage in its definition of what architecture is (utility, durability, and beauty). With an emphasis on the concept of local privacy and integration with the urban context and landscape.
Module Learning Outcomes	Designing a building of an educational nature. The goal is to identify the design principles of specialized buildings of a public service nature that include spaces of small, medium, and sometimes relatively large sizes. This project moves the student from the stage of thinking about buildings of a mass nature and load-bearing walls to another type of building that depends on combining more than one system. Constructive and within more complex contextual and expressive determinants than the residence hall project as an initial stage of the student's preparation for the third year. Expanding the architectural student's awareness and moving him from thinking about designing a single building with a specific function to a larger building with multiple functions.
Indicative Contents	- Determining space for activities such as classes, administration, library, auditorium and cafeteria. - Measured drawing of a large building such as, a large auditorium, etc. of a school, collage etc. - develop an understanding of the way building structure, construction and services inform, interpret and contribute to the architectural design process; - Provide the opportunity for the demonstration of that understanding as an essential component of practical architectural design - Simple circulation flow diagrams for large building projects. 6. Three-dimensional organization of a variety of forms to create built forms, importance of shades and shadows in the entire composition, layout of repetitive units within a site to create interesting and functional compositions.

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Assignments	2	10% (10)	2 and 3	
	Assignments	2	10% (10)	5 and 7	
	projects	2	20% (20)	9 and 11	
	projects	1	20% (20)	13	
Summative assessment	Midterm Exam (Day sketch)	5hr	10% (10)	8	
	Final presentation	5hr	30% (30)	15	
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to the course. Explanation of tasks and expectations.
Week 2	Urban /Site/ Analysis. Historic overview of the development of collective education.
Week 3	Education typologies. Spatial requirements, dimensional standards in collective education design
Week 4	Dimensional standards in collective education design.
Week 5	Organizational characteristics of the schools
Week 6	Presentation of certain elements in conceptual design project.
Week 7	Analysis of referent examples. Typologies and practice.
Week 8	Midterm presentation
Week 9	Analysis of referent examples. Functional organization of schools.
Week 10	Building envelope and materials. Design reviews
Week 11	Analysis of referent examples. Site visit.
Week 12	Analysis of referent examples regarding facades, shapes etc.
Week 13	Work presentation of conceptual design project.
Week 14	Final review of students' projects
Week 15	final presentation

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Form, Space, and Order by Francis D.K. Ching	yes
Recommended Texts	- Watson, D. (Editor). (2005) Time-saver Standards for Architectural Design: Technical Data for Professional Practice, 8th Ed., McGraw-Hill. - Ernst and Peter Neufert 5BWILEY-BLACKWELL A John Wiley & Sons, Ltd., Publication	yes
Websites	https://www.archdaily.com/	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION

(ARCHITECTURAL HISTORY I)

Module Information				
Module Title	Architectural History II		Module Delivery	
Module Type	Core Learning activity	☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE222			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level		2	Semester of Delivery	4
Administering Department		Architecture	College	Architectural Engineering Center
Module Leader	Rauoof Abd al razaq		e-mail	
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor			e-mail	E-mail
Peer Reviewer Name		Name	e-mail	E-mail
Scientific Committee Approval Date		01/06/2024	Version Number	1.0

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	6- The aim of the lesson is to identify the nature of the emergence of the first civilizations, their buildings, and their settlement in the Mesopotamia Valley, and to trace the development of architecture in them until the Islamic conquests that were affected by it, as the difference in thought and belief was shown. 7- Preparing an architectural student with the ability to distinguish between architectural civilizations 8- Giving the ability to know the philosophical and theoretical ideas of architectural design formations 9- Learn about the most important historical periods of civilizations 10- Learn about the distinctive formations and architectural details of ancient civilizations
Module Learning Outcomes	Cognitive goals (knowledge and understanding) 13- Introducing what architecture is and the history of architecture 14- Learn the civilization of Mesopotamia in terms of architecture and philosophical ideas for architectural formations 15- Learn about the architectural formations and how they relate to the different cultures of ancient civilizations 16- Identify the architectural details within each historical period of a group of time periods of the Mesopotamian civilization and its reflection in architecture 17- Learn about the principles of architecture in urban and Arab caravan cities and study the most important components and details architecture that characterized each time period Skill objectives (subject specific skills) 18- Preparing reports by students in which projects of distinguished architects are selected to introduce students to how to deal with philosophical ideas and theoretical and design trends. 19- The ability of students to interact with each other within student groups (joint interaction) Emotional and value goals (thinking skills) 20- Enabling students to learn about the history of architecture in order to reach a clear perception of the most important architectural formations and details to increase awareness and systematic study education 21- The ability to distinguish the creative design ideas of historical civilizations by presenting and benefiting from the configurations of distinguished architectural buildings. 22- Enable students to solve their design problems General and transferable skills (other skills related to employability and personal development). 23- The ability to form architectural forms based on design principles 24- Choosing distinct architectural formations of ancient historical civilizations to

	present and discuss with students. 16- Developing his personality and being an educational and educational process at the same time 17- The ability to work with others with discipline within a single work team 18- A full awareness of the ethical and practical responsibility for team and individual action.
Indicative Contents	Methods of teaching and learning 6- Explanation of the lectures 7- How to show examples 8- The way to ask questions 9- test method 10- Self-learning method Evaluation modalities Theoretical study: 1- Students' response through actual participation in the lecture through interaction, asking questions and discussing the answer 2- Questions and discussion of the answer. 18- Evaluation through weekly tests. 19- Evaluation through exams, contributions, participation and attendance 20- Scientific tests 21- Reports and studies monitoring and tracking student progress: 22- Student activity and participation during the lecture. 23- The extent of the student's interest in providing the practical studies that are required of him. 24- The student's rush to attend the lecture despite the existence of various kinds of difficulties.

Learning and Teaching Strategies	
Strategies	The academic program includes two aspects, one of which complements the other (theoretical side) of the course in the form of lectures, (the practical side) represents the complementary side of the course and is represented by preparing reports for distinct architectural projects within the time periods that are studied within the prescribed curriculum and explaining philosophical ideas, formations and architectural design methods. Students are taught the design method according to the principles in terms of studying the architectural formations and details During the academic program, the technology provided by the tools (such as the smart board, computer, etc.) is used to discuss and present the projects selected by the students. Evaluation methods: Evaluation through monthly and quarterly exams, contributions, participation and attendance, in addition to evaluating reports and studies.

Student Workload (SWL) for 15 weeks			
Structured SWL h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	12	Unstructured SWL (h/w)	0.8
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	10	10% (10)	Continuous	All
	Assignments	2	10% (10)	5 and 10	All
	Report	1	10% (10)	14	All
	Seminar	1	10% (10)	15	All
Summative assessment	Midterm Exam	2hr	10% (10)	12	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	An introductory lecture to explain the nature of the material and its components, and the sources and reports required from students, in addition to explaining how to benefit from the material in architectural design
Week 2	Settlement theory and the stone ages
Week 3	Metal Stone Age
Week 4	The development the Warka and the proto-literate (proto-historic)
Week 5	Early Dynastic period
Week 6	The Sumerian era and the Akkadian era
Week 7	Third Ur dynasty
Week 8	Old Babylonian and Kassite era
Week 9	Assyrian era
Week 10	The last Babylonian period, the Chaldean state
Week 11	Parthian era, Seleucid era, Sasanian era
Week 12	Mid-term Exam.
Week 13	Al-hadier city
Week 14	The Arab caravan cities
Week 15	Seminars
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	History of Architecture, Sir Banister Fletcher tcher تاريخ العراق القديم، طه باقر تاريخ فن العمارة العراقية في مختلف العصور، شريف يوسف	Yes
Recommended Texts		
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE Description OF **FREE HAND III**

Module Information					
Module Title	Free hand III		Module Delivery		
Module Type	Support		☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE223				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level	2	Semester of Delivery		3	
Administering Department	AE	College	Architectural Engineering Center		
Module Leader	Zakaria Hashim Ahmad		e-mail	Zakria.ha.ah@uosamarra.edu.iq	
Module Leader's Acad. Title	lecture		Module Leader's Qualification		
Module Tutor	Name (if available)		e-mail	E-mail	
Peer Reviewer Name	Name		e-mail	E-mail	
Scientific Committee Approval Date	01/06/2024		Version Number	1.0	

Relation with other Modules			
Prerequisite module	Free hand I ARE 113	Semester	1
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Content

Module Objectives

Module Overview:

Freehand2 drawing is the artistic part of architectural drawing, this module is designed to provide second-year Architecture students with a comprehensive understanding of Free hand coloring techniques and principles. This module emphasizes skills, focusing on traditional free hand coloring methods and drawing tools. Students will learn how to create accurate and detailed coloring drawings by hand, gaining a strong foundation in free hand practices commonly used in the field of Architecture. watercolor is a water-soluble paint made of pigments suspended in a water-based solution. This flexible and non-toxic coloring medium works well in a wide range of arts and Architecture projects.

Module Objectives:

13. To learn the most important techniques used in the advance of freehand drawing (such as water color).
14. To introduce students to the fundamental principles and concepts of Free hand coloring and its significance in the field of Architectural design.
15. To exercise Students to realize the exact details in the physical reality and being aware of the rates and movement, shadow, light by color.
16. To enable students to interpret and create accurate and detailed free hand coloring drawings, including, nature, furniture, and Architectural details.
17. To teach students appropriate scaling and dimensioning techniques to accurately represent objects and structures in free hand drawings.
18. To familiarize students with free hand coloring technique.
19. To enhance students' communication and presentation skills through the creation of clear and concise free hand coloring drawings.
20. To instill in students an understanding of industry-standard drawing standards and practices to ensure compliance with engineering regulations and requirements.
21. To foster effective collaboration and teamwork skills through group projects involving free hand coloring drawing exercises.
22. To provide students with opportunities to apply theoretical knowledge and practical skills to solve real-world free hand drawing challenges.
23. To prepare students for further free hand with oil color study and practical techniques
24. Enable the student to understand the vocabulary that will be used in other lessons such as design and architectural drawing.

Module Learning Outcomes	Module Learning Outcomes: Upon successful completion of this module, students will be able to: 25. Understand the fundamental principles of free hand coloring drawing and its importance in Architecture design. 26. Demonstrate proficiency in using tools and equipment for manual Free hand drawing. 27. Demonstrate effective communication and presentation skills through the creation of clear and concise free hand drawings. 28. Collaborate effectively with peers in group projects involving Free hand coloring drawing exercises. 29. Freehand Drawing is organized around the concepts for drawing from perception. 30. It is based on working from still life, architecture, landscape, and photo collages. 31. The objectives are to examine the various components of drawing: line, value, texture, & composition.
Indicative Contents	Indicative Contents of the Module: 32. Introduction to coloring: - a Importance of coloring in Architecture - b Introduction to collecting color. 33. color Types: - a Water color - b Gouache color - c Acrylic color - d Chalk color Semester 2: 34. coloring tools and equipment. 35. Water color Types a. Watercolor Pens. b. Watercolor Tubes. c. Liquid Watercolor Paints. 36. Watercolor Palette Types. 37. Watercolor Brushes types.

Learning and Teaching Strategies	
Strategies	Learning and Teaching Strategies: 4. Lectures: The module will include lectures delivered by the instructor to introduce and explain key concepts, techniques, and principles of Free hand. Lectures will provide theoretical foundations and guidance for the practical application of free hand skills. 5. Demonstrations: The instructor will demonstrate various manual drawing techniques and methods, showcasing proper use of drafting tools and equipment. Students will observe and learn through visual demonstrations, allowing them to understand and replicate the techniques in their own work. 6. Practical Sessions: Students will participate in practical sessions where they will actively engage in Free hand exercises. These sessions will provide hands-on experience with manual drafting tools and allow students to practice and develop their drawing skills under the guidance of the instructor.

	7. Group Work: Collaborative group projects will be assigned to promote teamwork and communication skills. Students will work together on free hand assignments, allowing them to share ideas . 8. Critique and Feedback: Regular critique sessions will be conducted, where students will present their drawings to the instructor and peers for evaluation and feedback. Constructive feedback will help students identify areas for improvement and refine their drawing techniques . 9. Tutorials and Workshops: Additional tutorial sessions and workshops may be provided to address specific challenges or topics that require further clarification. These sessions will allow students to seek assistance, ask questions, and receive one-on-one guidance from the instructor . 10. Independent Study: Students will be encouraged to engage in independent study and practice outside of class. This may involve reviewing lecture notes, conducting research on free hand drawing, and practicing drawing exercises to reinforce learning . 11. Visual Resources and References: Visual resources, such as examples of drawing, textbooks, and online references, will be provided to supplement learning. These resources will aid students in understanding drawing conventions, standards, and best practices . 12. Portfolio Development: Students will be encouraged to maintain a portfolio of their free hand drawings throughout the module. This portfolio will showcase their progress, development, and the range of skills they have acquired . 13. Field Visits and Guest Speakers: Opportunities may be provided for students to visit sites or attend guest lectures by professional artist. These experiences will expose students to real-world applications of free hand . 14. Assessment and Feedback: Assessment methods such as practical Free hand exercises, group projects, and examinations will be used to evaluate students' understanding and application of free hand principles. Constructive feedback will be provided to support students' learning and growth.
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Student Workload (SWL) For 15 weeks			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.47
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2, #4 and #6
	Assignments	2	15% (15)	Continuous	LO #2- #7
	Projects / Lab.	1	5% (5)	Continuous	LO #8
	Report				
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	LO #1 - #7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Week 1-2	- Introduction to free hand coloring - Importance of Free hand coloring in Architectural design Overview of coloring tools and equipment - Introduction to collecting color.
Week 3-4	- color Types: a. Water color b. Gouache color c. Acrylic color d. Chalk color
Weeks 5-6	- coloring tools and equipment - Watercolor Palette Types. - Watercolor Brushes types
Weeks 7-8	- Water color Types - Watercolor Pans. - Watercolor Tubes. - Liquid Watercolor Paints
Week 9	Preparatory week before the final Exam
Weeks 10	- wet or dry. - wet on wet.
Weeks 11-12	- Drawing water color with mask. - Water color washes
Weeks 13	- Drawing water color with painter touch
Weeks 14-15	- Collaborative Drawing Projects - Group projects. - Teamwork and collaboration skills in water color
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	1. "Water color Techniques " by Emma Forge - This comprehensive textbook covers the principles and techniques of water color, and many ways of coloring for Architecture. 2. "Artist Drawing techniques" by Saffron Stocker - This book provides a practical approach to coloring many subject one of them Architecture.	No
Recommended Texts	Water color Lessons: How to Paint and Unwind in 20 Tutorials (How to paint with water colors for beginners) Emma Lefebvre	No
Websites	https://www.watercoloronline.com/	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0- 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION OF DIGITAL DESIGN AND PRESENTATION – REVIT

Module Information معلومات المادة الدراسية				
Module Title	Digital Design and Presentation – Revit		Module Delivery	
Module Type	S	☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar		
Module Code	AE 224			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	2			Semester of Delivery
Administering Department	architecture	College	Architectural Engineering Center	
Module Leader	Dr. Raed Abdullah Hasan		e-mail	Raed_hasan@uosamarra.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification		
Module Tutor	Maria Salim Dawood		e-mail	E-mail:
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	01/06/2024	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	Improved quality of construction drawings (CDs). 1. Reduced time to prepare the sheets. 2. Quantities and shared properties of materials are easily extracted for cost estimating. 3. Learning coordination between other disciplines.
Module Learning Outcomes	1. Learning the student concept of a BIM (Building Information Modeling). 2. Improved the ability to generate and manage building data during its life cycle. Increasing the Knowledge about are Analytical properties of materials used in the buildings. 3. Developing the ability to use universal families (intelligent objects: A 3D BIM Model with objects with schedule and time constraint data added to them) or manufacturing them inside the program. 4. Built efficiency to create phases for the building to estimate the time for implementing the project. 5. Learning What parameters are and creating your first parameter and testing it.
Indicative Contents	1. Revit the user interface. 2. Revit Fundamentals. Modify tools. 3. Modeling essentials. 4. Core and Shell. 5. Creating walls. 6. Circulation elements.

Learning and Teaching Strategies

Strategies	The unit depends on the concept of active learning or effective learning, which depends on the problem-solving strategy by involving the learners in doing things that force them to think about what they are learning, by transforming the goal of the lesson into a specific problem that requires discovery in the first place, and then understanding and analyzing it and finding the appropriate solution to it, Thus, the learner acquires new experiences and skills.
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Student Workload (SWL) For 15 weeks

Structured SWL (h/sem)	48	Structured SWL (h/w)	3.2
Unstructured SWL (h/sem)	27	Unstructured SWL (h/w)	1.8
Total SWL (h/sem)	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3 and 13	LO #1, #2 and #11, #14
	Assignments	2	10% (10)	2 and 12	LO #2, #5
	Projects	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #6
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1,2	Introduction to BIM & Revit user interface ☐ Introduction to BIM. • Install Revit Program. • Overview of Revit user interface. • Revit fundamental.
Week 3,4	Modify tools • Selection setting • Move, Copy, Rotation, Array, Scale, Mirror, Copy, Split, Match, Create Similarly, Pick new host, Trim/ extend, Offset, Pin/ unpin, Cut/ join & Measure.
	☐ Paint.
Week 5,6	Modeling essentials • View range. • Datum elements • Scope box • Work plane • Snaps
Week 7,8,9	Core and shell • Walls • Doors & windows • Compound structures
Week 10,11,12	Creating walls • Basic walls • Curtain walls • Stacked walls
Week 13,14,15	Circulation element • Stairs • Ramps • Railings
Week 16	the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	The Complete Beginner's Guide to Autodesk Revit Architecture	No
Websites	https://help.autodesk.com/view/RVT	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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	C - Good	جيد	70 - 79	Sound work with notable errors
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	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work is required but credit awarded
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head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION OF ENGINEERING SURVEYING

Module Information					
Module Title	Engineering surveying		Module Delivery		
Module Type	Support		☐ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar		
Module Code	AE225				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level		2			Semester of Delivery
Administering Department		AE	College	Architectural Engineering Center	
Module Leader	Safaa Yasin Hamd		e-mail	Safaa.yassin@uosamarra.edu.iq	
Module Leader's Acad. Title		Professor	Module Leader's Qualification		Ph.D.
Module Tutor			e-mail	E-mail	
Peer Reviewer Name		Name	e-mail	E-mail	
Scientific Committee Approval Date		01/06/2024	Version Number	1.0	

Relation with other Modules				
Prerequisite module	None		Semester	
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1. Finding the ability to deal and understand with survey work in practical locations. 2. Identify engineering concepts within the field of surveying engineering related to architectural engineering work through design, implementation and work auditing. 3. The ability to control sites and visualize their phenomena in a preliminary manner without the need for field visits and reconnaissance. 4. to introduce and develop the basic understanding of the principles of engineering surveying
Module Learning Outcomes	1. be familiar with common survey instruments and possess some technical skills. 2. have a basic understanding of quantity and computation, 3. have a basic understanding of the setting out in Civil Engineering setting out by coordinates verticality. 4. have a basic understanding of the theory of measurement errors and concepts of adjustment. 5. have a basic understanding of the GNSS systems. 6. have a basic understanding of the Photogrammetry and remote measurement. 7. have a basic understanding of the GIS, digital mapping and surface models.
Indicative Contents	<u>Part A - Concept of Surveying</u> Surveying work - the importance of Surveying in architecture - elementary units of measurement and angle measurement systems (degree, grad, Radian). Measurement of horizontal distances indirectly possible vision and measurement is not possible as well as, scale drawing, enlarging and reducing maps. [7 hrs.] Calculating the area, whether it is regular or not, using Simpson's rule and the Trapezoid rule. Cases of measuring the distance using the tape measure if the ground is flat or sloping and has a regular slope, errors in measuring distances with the tape and correcting them, with notes on the accuracy of the tape measure. [7 hrs.] Revision problem classes [2 hrs.] <u>Part B - Angles and Leveling</u> Angles and directions, types of angles (horizontal and vertical), horizontal angles and directions, quadratic coordinates, calculating coordinates, inverse coordinates.
	Leveling, height and level, types of leveling, devices used in the leveling process, components of the leveling device and its installation, taking readings for levels. [7hrs] GPS, signature system elements and its currency, contour maps and their characteristics, steps to prepare a contour map, contour line specifications, horizontal and vertical arcs, arc radius calculation and pI pT. [7 hrs.]

Learning and Teaching Strategies

Strategies	The main strategy that is adopted in this unit is to encourage students to participate in exercises while improving constructive critical thinking skills and expanding them at the same time while correcting misconceptions. This is done through explanation and the practical side through simple experiments that will develop the concept of space engineering, which includes activities What students do that interests them.
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Student Workload (SWL) For 15 weeks

Structured SWL (h/sem)	48	Structured SWL (h/w)	3.2
Unstructured SWL (h/sem)	27	Unstructured SWL (h/w)	1.8
Total SWL (h/sem)	150		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #3 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #2, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #9
	Midterm Exam	2hr	10% (10)	7	LO #1 - #8
Summative assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Introduction - Definition of Engineering surveying and the relationship of theoretical representation to reality, fields that can be employed in the service of architecture.
Week 2	Methods for determining regular areas with non-standard anomalies, and irregular areas, and how to calculate those areas through applied examples.
Week 3	Determining directions and types of directions, the relationship between quadrant, circular and semi-circular directions, and how to convert between them.
Week 4	Definition of angle, method of angle measurement, reflection of angles and their corrections on the accuracy of field work, comparison between types of angles, the specificity of their work, and methods of mathematical conversion between them.
Week 5	Practical application of the concepts explained in the previous weeks.
Week 6	How to locate a point with geographical and cartesian dimensions, how to refer to points, what are the relationships between points, the importance of obtaining control points and how to deal with them.
Week 7	Mid-term Exam.

Week 8	Defining the concepts of a straight line and its extensions, with the geometric connection between the point and the line, finding the coordinates of the unknown points by knowing the coordinates of one point, relying on a default reference in the unknown points.
Week 9	Calculating coordinates based on distance and direction and making binding corrections to avoid errors resulting from field observations.
Week 10	How to sign buildings and facilities from the plans to reality, with the mechanism reversed by uploading the existing facilities to the plans and creating site maps.
Week 11	Calculating coordinates based on distance and direction and making binding corrections to avoid errors resulting from field observations.
Week 12	Learn about the most important errors resulting from field measurements and how to get rid of them and reduce their effects.
Week 13	Reading the map and identifying the most important main joints in it, distinguishing the phenomena and differentiating between those that can be adopted according to the real scale whose representation methods are symbolic only, inferring from the map on the locations and defining directions to be adopted as a reference in the field.
Week 14	Definition of elevations and how to represent them, types of contour lines, methods of determining longitudinal and transverse sections, and determining the nature of the site and the specificity of the work it requires.
Week 15	The concepts of models in (CAD & 3D) systems on the computer and the method of calculating them by ready-made programs, addressing the concepts of (TIN & GIS & GPS) and their relationship to the urban aspect of the city.
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Lab 1: Measure the horizontal distance using a tape measure
Week 2	Lab 2: Setting of constructions
Week 3	Lab 3: Measure area from the map
Week 4	Lab 4: Establish a perpendicular line perpendicular to a straight line from a point on it
Week 5	Lab 5: Measure the horizontal distance across the beams using a tape measure
Week 6	Lab 6: Use the leveling device to measure levels Setting of constructions
Week 7	Lab 7: Direct differential leveling

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Uren, J and B Price 2010 Surveying for Engineers UK, PALGRAVE MACMILLAN	No
Recommended Texts	Ghilani, C D and P R WOLF 2014 Elementary Surveying An Introduction to Geomatics New Jersey, PEARSON	Yes
Websites	https://www.coursera.org/courses?query=civil%20engineering	

Grading Scheme

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

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Module Information					
Module Title	Computer II		Module Delivery		
Module Type	UOS-2304		☒ Theory ☒ Lecture Lab ☐ ☐ Tutorial ☐ Practical ☒ Seminar		
Module Code	Basic				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level		2			Semester of Delivery
Administering Department		AE	College	Archtectural Engineering Center	
Module Leader	Rauoof Abd al razaq		e-mail		
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		Master of Mechanical Engineering
Module Tutor	None		e-mail	None	
Peer Reviewer Name		None	e-mail	None	
Scientific Committee Approval Date		06/01/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	-
Co-requisites module	None	Semester	-

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	1- The student will gain an understanding of the basic principles, structure, grammar, and uses of the C#.NET programming language. 2- Develop the ability and skill to write and compile C#.NET programs, including an understanding of the use of variables, data types, and operators. 3- Learn how to use control structures, including if-else statements, loops (while, for, and do-while), and switch statements to control program flow. 4- Building interfaces and windows and linking them to the programming code.
Module Learning Outcomes	After completing the course, students will be able to: 1. Develop custom desktop applications for civil engineering tasks, such as structural analysis, design, and project management. Engineers can create tools tailored to specific needs, such as calculating loads, designing structural elements, or automating repetitive tasks. 2. Analyze engineering data and visualize results. With libraries like Charting for .NET, engineers can create detailed graphs and charts that help in the interpretation of analysis results or the presentation of project data.
Indicative Contents	1. Introduction to computer programming 2. Introduction to C# Programming 3. C# Standard Library 4. Control flow in C# 5. Memory Management in C# 6. C# Application Development

Learning and Teaching Strategies	
Strategies	Conceptual Understanding: Practical Practice Code Review and Feedback Problem Solving Exercises

Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w) Regular weekly student load	2.2
Unstructured SWL (h/sem)	42	Unstructured SWL (h/w) Irregular student load per week	2.8
Total SWL (h/sem)	75		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5and10	
	Assignments	2	10% (10)	2and12	
	Projects /Lab.	1	10% (10)	continuous	
	Report	1	10% (10)	13	
Summative assessment	Midterm Exam	2hr	10% (10)	7	
	Final Exam	3 hours	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction to computer program and programming languages
Week 2	Other components, helping to organize code and .avoid name conflicts
Week 3	.Variable declared within a class to store data
Week 4	C# Operators (Arithmetic operators, Bitwise operators, logical operators, and Relational operators)
Week 5	Mechanism to read, write, or compute the values of private fields within a class using get .and set accesses
Week 6	A basic building block in C#.NET that defines a data structure, encapsulating data and behavior
Week 7	.Mid-term Exam

Week 8	.Function and procedure defined within a class that performs a specific action
Week 9	.Methods to call an object of a class
Week 10	.Heredity and behavior are of another class
Week 11	.Define a set of methods and properties that a class must implement
Week 12	civil engineering application in C# project
Week 13	civil engineering application in C# project
Week 14	civil engineering application in C# project
Week 15	civil engineering application in C# project
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Visual C#.NET Window.
Week 2	Dealing with interfaces
Week 3	Main Menus
Week 4	Toolbars
Week 5	C# Libraries.
Week 6	C# User Input and output and Operators
Week 7	Mid-term Exam.
Week 8	If condition, Switch condition and Break and Continue.
Week 9	For loop, While loop and Do-while loop.
Week 10	Break and Continue statements.
Week 11	Solving exercises related to civil engineering

Week 12	Solving exercises related to civil engineering
Week13	Solving exercises related to civil engineering
Week 14	Solving exercises related to civil engineering
Week 15	Final Exam.

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Pro C# 10 with .NET 6: Foundational Principles and Practices in Programming.	No
Website	https://codefinity.com/courses/v2/07f06374-cc72-4ab1-87c6-393472e2175d?utm_source=google&utm_medium=cpc&utm_campaign=20955067105&utm_content=161128867347&utm_term=c%23&gad_source=1&gclid=Cj0KCQjwzva1BhD3ARIsADQuPnUCzyr8X83fc7V3zR0Eu3-DbODtDue6P4EaLUC7a7SRriye-fXKN2caAuc4EALw_wcB	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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MODULE DESCRIPTION FORM

Module Information				
Module Title	Arabic II		Module Delivery	
Module Type	Basic		☒ theory ☒ a lecture ☒ laboratory ☐ Tutorial ☐ practical ☐ seminar	
Module Code	UOE-2305			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level	1	Semester of Delivery	1	
Administering Department	AE	college	Archtectural Engineering Center	
Module Leader	Mohanad Abdul Jabbar Hassan		Email	mohanad.abduljabbar@uosamarra.edu.iq
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Ph.D in Arabic Language	
Module Tutor	None		Email	None
Peer Reviewer Name	None		Email	None
Scientific Committee Approval Date	06/17/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	Course objectives .Enabling students to understand the eloquence of the Holy Quran and to appreciate the aesthetics of its language.. Training students to use punctuation marks between sentences correctly. To broaden the students' literary horizons of ideas, meanings and moral values.. Teaching students how to write correctly according to the basics of spelling, which enables them to write words correctly..
Module Learning Outcomes	- Cognitive objectives 1- Knowing the basics of spelling in the Arabic language. 2- Getting to know world literature and their influence on Arabic literature. 3- Studying some Quranic verses to explore the linguistic and rhetorical aspects therein. B - Course specific skill objectives. 1- Writing correctly. 2- The ability to extract common errors in daily use. 3- The ability to identify the areas of Quranic eloquence and to know its effect on understanding the meanings.
Indicative Contents	Guiding Contents Arabic language among the languages of the world, the emergence of spoken and written language, the grammatical system, Quranic rhetoric, the morphological system, the written system, numbers in the Arabic language, Arabic and Arabization, world literature and Orientalism.

Learning and Teaching Strategies	
Strategies	The main strategy that will be adopted in presenting this unit: It is to encourage students to engage in exercises while simultaneously honing and expanding their critical thinking skills. This will be achieved through interactive classes and tutorials and by considering the type of topics some of which include sampling activities that interest students."

Student Workload (SWL)			
SWL Organization (hr/sem)	33	SWL organization (h/w) Regular weekly student load	2
Unstructured SWL (hr/sem)	17	Unstructured SWL (h/w) Irregular student load per week	1.13
Total SWL (hr/sem)	50		

Module Evaluation					
		Time/number	Weight (marks)	Week Due	Relevant Learning Outcome
Formative assessment	Tests	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Verbal assignments	1	10% (10)	16	everyone
	laboratory.		10% (10)		everyone
	a report	15	10% (10)	continuous	everyone
Summative assessment	Midterm Exam	2 hours	10% (10)	continuous	#1 - #7 Goal
	Final Exam	3 hours	50% (50)	16	All
Overall Rating			100% (100 marks)		

Delivery Plan (Weekly Syllabus)	
	Covered Materials
Week 1	Arabic language, definition, origin, function
Week 2	Arabic language and the beginning of blogging
Week 3	Quranic eloquence and Surat Al-Fatihah
Week 4	Basic introduction to grammar
Week 5	Number in Arabic
Week 6	Writing system, ta Marbut and ta open
Week 7	Diminutive morphological system
Week 8	Midterm Exam
Week 9	For the written system A Hamzat al-Wasl and Hamzat al-Qat`
Week 10	Quranic eloquence and Surat Al-Kahf
Week 11	Synonyms in Arabic
Week 12	Poetic purposes in Arabic literature
Week 13	Writing system punctuation marks
Week 14	Mention and deletion in language
Week 15	Final exam

Learning and Teaching Resources		
	Text	Available in the library?
Required texts	The book is by Sibawayh, Secrets of Rhetoric by Al-Jurjani, Spelling and Punctuation in Arabic Writing by Abdul-Aleem Ibrahim.	Yes
Recommended Texts	The book is by Sibawayh, Secrets of Rhetoric by Al-Jurjani, Spelling and Punctuation in Arabic Writing by Abdul-Aleem Ibrahim.	Yes
Websites		

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتناز	90 - 100	Outstanding Performance
	B - Very Good	جد جدا	80 - 89	Above average with some errors
	C - Good	جد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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MODULE DESCRIPTION OF ENGLISH LANGUAGE II

Module Information				
Module Title	English Language II		Module Delivery	
Module Type	B		☐ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOS- 2306			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level		2		
Administering Department		Architecture	College	CENGs
Module Leader	Ghassan Dhahid		e-mail	
Module Leader's Acad. Title		Assistance lecturer	Module Leader's Qualification	
Module Tutor			e-mail	
Peer Reviewer Name			e-mail	E-mail
Scientific Committee Approval Date		01/06/2024	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives أهداف المادة الدراسية	Module Objectives: 1. Develop oral fluency and accuracy in English conversation. 2. Expand vocabulary and improve listening comprehension skills. 3. Use grammatical structures effectively in spoken and written English. 4. Enhance reading and writing skills for effective communication.
Module Learning Outcomes	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. Six learning outcomes of the module that combine multiple ABET components: Learning Outcomes for English Language Module: 1. Develop effective communication skills in English (ABET Component: A, C, F) - Demonstrate proficiency in speaking and listening, conveying ideas accurately and confidently. Use appropriate grammar and vocabulary to express thoughts and opinions clearly. 2. Expand vocabulary and language fluency in various topics (ABET Component: B, F) - Acquire a wide range of vocabulary related to different themes, such as daily life, travel, and media. Enhance language fluency through engaging in conversations and discussions on diverse subjects. 3. Apply grammar rules and structures accurately (ABET Component: C, D) - Utilize proper grammar, including verb tenses, subject-verb agreement, and sentence structure. Demonstrate understanding of grammatical concepts in both spoken and written English. 4. Develop reading and comprehension skills (ABET Component: E) - Read and comprehend a variety of texts, such as articles, short stories, and dialogues. Extract key information, infer meaning, and critically analyze written material. 5. Enhance writing skills in English (ABET Component: D, G) - Produce well-structured and coherent written compositions. Apply correct grammar, vocabulary, and punctuation to express ideas effectively. 6. Engage in cross-cultural communication (ABET Component: A, H) - Understand and appreciate cultural differences in communication styles. - Demonstrate sensitivity and adaptability when interacting with individuals from different cultural backgrounds.
Indicative Contents	Indicative content includes the following. Part 1: Language Skills In this module, we will explore the English language through various topics. We will begin by covering basic introductions, greetings, and personal information. Moving forward, we will discuss hobbies, daily routines, food and drink, health and fitness, travel and transport. Additionally, we will learn about media and entertainment, jobs

	and careers, shopping, holidays and celebrations. Throughout the module, we will focus on building vocabulary and practicing essential language skills. Part 2: Communication skills Continuing from Part 1, this module will further develop our language skills. We will delve into topics such as environmental issues, emphasizing the importance of sustainability. We will also explore advanced grammar concepts, including present perfect, past simple, and modal verbs. Additionally, we will enhance our communication skills through engaging activities, discussions, and real-life scenarios. This module aims to provide a comprehensive understanding of English language usage and proficiency.
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Learning and Teaching Strategies	
Strategies	The main strategy that is adopted in this unit is to encourage students to participate in exercises while improving constructive critical thinking skills and expanding them at the same time while correcting misconceptions. This is done through explanation and the practical side through simple experiments that will develop the concept of space engineering, which includes activities What students do that interests them.

Student Workload (SWL) for 15 weeks			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1.3
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 12	LO #1, #2 and #4
	Assignments	3	10% (10)	4,9 and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8&14	LO #5, #3and #6
Summative assessment	Midterm Exam	2hr	10% (10)	8	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Greetings and Introductions: greetings, introductions, names, countries, languages
Week 2	Hobbies, leisure, sports, pastimes; present simple and frequency adverbs.
Week 3	Rooms, furniture, daily routines; present continuous, prepositions of place.
Week 4	Food and drink vocabulary, likes and dislikes; countable and uncountable nouns, some/any.
Week 5	Health-related vocabulary, giving advice; should/shouldn't, imperative sentences.
Week 6	Travel vocabulary, types of transport; present perfect, past simple.
Week 7	Daily activities, time expressions; adverbs of frequency, present simple vs. present continuous.
Week 8	Mid exam
Week 9	Types of media, leisure activities; comparative and superlative adjectives.
Week 10	Professions, job skills; future plans and intentions, will/won't.
Week 11	Shopping vocabulary, describing products; countable and uncountable nouns, articles.
Week 12	Holiday and celebration vocabulary, past events; past simple vs. present perfect.
Week 13	Jobs and Careers: professions, job interviews, qualifications, work experience
Week 14	Applying language skills through interactive activities, discussions, and real-life scenarios.
Week 15	Environmental issues, actions to protect the environment; modal verbs: can/could/may/might.
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	The New Headway Pre-Intermediate fourth edition by Liz & John Soars, Oxford University Press, 2011	Yes
Recommended Texts	English for builders and architects, R Rakhimova, Nova 2009	No
Websites	https://www.youtube.com/watch?v=LB8zpf_MWgw	

Grading Scheme				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0– 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

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Modules

Description

Third Level

MODULE DESCRIPTION (Architectural Design V)

Unit Information			
Unit Title	Architectural Design V		Unit Submission
Unit Type	Specialization-Specific Educational Activity		☒ Theory ☐ Present ☒ Lab ☐ Instructional ☐ Practical ☐ Seminar
Unit Code	AE311		
ECTS Credits	10		
Course Load (SWL (hours/semester))	250		
Course Level	3	Semester in Which the Course Is Offered	5
Department	Architectural Engineering	College	Engineering
Course Instructor	Dr. Ali Majid Hamid	Email	
Academic Title of the Course Coordinator	Professor	Academic Qualifications of the Course Coordinator	Ph.D.
Course Instructor		Email	
Name of Academic Evaluator		Email	
Date of Scientific Committee Approval		Issue Number	

Relationship to Other Units			
Core Requirements Unit	No	Semester	
Common Requirements Module	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	1. To enable students to develop a comprehensive architectural project that integrates complex functions and advanced design requirements, while taking into account environmental, functional, and aesthetic aspects. 2. To enhance students' ability to produce architectural designs based on a comprehensive site analysis, international design standards, and user needs, while expressing a clear and distinctive architectural concept. 3. To develop students' skills in project presentation using traditional and digital architectural drafting tools, including working drawings, 3D models, and final presentations.
Learning Outcomes	To analyze architectural problems related to complex commercial or hotel buildings by studying the site, user needs, and design standards. Formulate and develop an integrated architectural concept that responds to functional, site-specific, and environmental factors. Design integrated architectural solutions for large-scale projects, including the organization of spaces, circulation, and functional divisions. Produce accurate architectural drawings (plans, sections, elevations) and 3D renderings using appropriate software tools. Demonstrate the ability to effectively present and communicate design ideas through visual and verbal means. Critically evaluate design proposals and refine them based on feedback and self-assessment.
Course Content Teaching	This course trains students to design a comprehensive and complex architectural project, beginning with the analysis of the site, its surroundings, and functional requirements, through the development of the spatial program and massing, and culminating in the development of plans, sections, and elevations. The course also covers the stages of developing the design concept, organizing functional relationships, and designing the overall site, with a focus on integrating environmental, aesthetic, and functional aspects. At the end of the course, students are trained to produce the project using digital drawing and modeling tools and to prepare it for a professional final presentation.

Teaching and Learning Strategies	
Strategies	1. Lectures: Providing theoretical knowledge and fundamental concepts related to architectural design topics. 2. Project-Based Learning: Students are tasked with developing a comprehensive architectural project throughout the semester, which enhances their design, planning, and execution skills. 3. Group Critique and Class Discussions: Through weekly presentation sessions on the various stages of the project, students receive constructive feedback from professors and peers to improve their projects. 4- One-on-One Guidance: Time is set aside to work with each student individually to guide them in developing their project and resolving any design challenges they encounter.

	5- Presentations: Students are trained to effectively present their design ideas using visual and verbal means. 6- Self-Directed Learning: Students are encouraged to independently research and analyze similar projects and study international design standards to inform their design decisions.
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Student Workload (SWL)			
Structured (number of hours/semester)	150	Structured (Hours/Week)	10
Unstructured (number of hours per semester)	100	Structure (Number of hours/week)	6.66
Total	250		

Course Evaluation					
		Number	Percentage	Week	Related Learning Outcomes
Formative Assessment	Short Tests	1	10%	15	Total
	Homework	2	20%	15	Total
	Classwork	2	20%	15	Total
	Report	4	20%	15	Total
Final Grade	End of Semester	1	30%	15	Total
Overall Grade			100%	16	Total

Weekly Plan	
Week	Topics
1	Explain the project concept and requirements, map out the site, and analyze preliminary data; begin collecting case studies
2	Site analysis (climate, foot traffic, noise, views), analysis of the target demographic and nature of commercial use, preparation of a preliminary analysis report
3	Preparation of the project's functional and spatial program; creation of a functional relationships diagram (Bubble Diagram); presentation and discussion of the analytical results

4	Generation of design concepts, selection and justification of the final concept, preliminary layout of building masses
5	Develop the massing, study the project's public facades and entrances, and discuss the massing with the supervisor
6	Organization of interior spaces (corridors, retail spaces, services); preliminary review of the building's internal relationships
7	Drawing the ground floor plan; beginning the layout of the upper floors
8	Development of repetitive floors and service areas; coordination of user flow and general circulation patterns
9	Draw longitudinal and cross-sections; illustrate the vertical relationship between floors
10	Designing facades (materials, openings, aesthetic concept); studying natural lighting and ventilation
11	Conducting an exam based on an external project (daysketch)
12	Comprehensive review of all drawings; implementation of modifications suggested by the follow-up committee or supervisor
13	Preparation of final drawings (Plans, Sections, Elevations); preparation of rendering materials (Textures, Colors, Materials)
14	Production of 3D renders; preparation of presentation materials (posters or paper boards)
15	Presenting the final project to the committee or peers; comprehensive evaluation of performance and design

Learning and Teaching Resources		
	Details	Is it available in the library?
	- Ching, Francis D.K., Architecture: Form, Space, and Order, 3rd edition, Wiley, 2007.	Yes
	- Neufert, Ernst, Architects' Data, Wiley-Blackwell, 4 th edition, 2012.	Yes
Required Textbooks	- De Chiara, Joseph; Panero, Julius, *Time-Saver Standards for Building Types* 9 th edition, 2014.	Yes
Recommended Resources	- Unwin, Simon, *Analyzing Architecture*, 1952.	No
Websites	ArchDaily.com	

Grading System			
Group	Grade	Percentage	Rating
Good (50–100)	Excellent	100 - 90	Outstanding Performance
	Very Good	89–80	Above-average performance with some errors
	Good	79–70	Acceptable work with noticeable errors
	Average	69–60	Poor, with significant shortcomings
	Acceptable	59–50	Meets the minimum requirement
Failure Group (49–0)	Fail (under review)	(49–45)	Fail (with the possibility of a retake)
	Fail	(44–0)	Failed by a wide margin
Note: Decimal parts of grades above or below 0.5 will be rounded to the nearest whole number (for example: a grade of 54.5 is rounded up to 55, while a grade of 54.4 is rounded down to 54). The university has a policy of not making exceptions for “failing by a narrow margin,” so the only adjustment allowed to the grades given by the original grader is the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Working Drawings I*)

Course Information					
Course Title	Working Drawings I		Course Submission ☐ Theory ☒ Lecture ☐ Lab ☐ Instructional ☒ Practical ☐ Seminar		
Module Type	Supporting Educational Activity				
Unit Code	AE312				
ECTS Credits	3				
Course Load (SWL (hours/semester)	75				
Course Level		3	Semester in Which the Course Is Offered		5
Department		Architectural Engineering	College	Engineering	
Course Instructor			Email		
Academic Title of Course Coordinator			Academic Qualifications of the Course Coordinator		
Course Instructor			Email		
Scientific Resident's Name			Email		
Date of Approval by the Scientific Committee			Issue Number		

Relationship with Other Units			
Core Requirements Unit	No	Semester	
Common Requirements Module	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	- To educate students on how to design working drawings and to teach them other relevant building systems through theoretical and practical study (exercises and field visits), so that students are able to work with and read practical and architectural drawings and learn the technical details involved. - To introduce students to concrete designs and how to handle concrete sections of various types and shapes, in addition to teaching students how to shape and form concrete structures with relatively large areas, handle details related to concrete sections, and describe various architectural spaces designed using concrete sections - The topic of building construction covers methods of building construction from an architectural perspective, modern methods in building construction, new technologies in building construction (concrete structures), and the use of machinery in building construction.

Learning Outcomes	Upon completion of the course, students will be able to: - Teach students the principles of designing structures with concrete frameworks, as well as familiarize them with the types of concrete structures and how to incorporate them as an essential part of architectural design. - Apply practical, detailed programs focused on the technical aspects of using concrete structures. Without neglecting the standards of architectural aesthetics and keeping pace with developments in advanced countries, by offering an architectural education program that establishes a foundation based on modern technologies related to recent advancements in engineering and technical fields, particularly with regard to architectural construction and building assembly. - Focusing on the quality of the architectural education process by selecting up-to-date curricula and - completing self-assessment reports to obtain academic accreditation. - Focusing on applied scientific research and the design of applied projects to build partnerships and relationships with distinguished institutions and universities, particularly regarding advanced structural and architectural construction, as well as the practical application of construction and contemporary design methods.
Contents Guidelines	The instructional content includes the following: 1. Definition of construction materials and the relationship between initial concepts, executive plans, and all disciplines; how to prepare an executive plan and plan standards; and a diagram of special executive symbols. (20 hours) 2. A detailed explanation of the physical planning of floor plans, elevations, and facades, including architectural details. (30 hours) 3. A detailed explanation of various prefabricated construction systems and methods, architectural details, and prefabricated building construction at the ceiling and wall levels, as well as the work involved in connecting prefabricated components. (35 hours)

Teaching and Learning Strategies	
Strategies	The main strategy to be adopted in delivering this module is to encourage student participation in exercises while simultaneously refining and expanding their critical thinking skills. This will be achieved through classroom sessions and interactive learning activities, as well as by incorporating simple experiments that include hands-on activities relevant to the students.

Student Workload (SWL)			
Structured (number of hours per semester)	93	Structure (Number of Hours/Week)	
Unstructured (number of hours per semester)	57	Structured (number of hours per week)	
Total	150		

Course Evaluation					
		Time / Number	Weight (Points)	Week Due	Related Learning Outcomes
Formative Assessment	Report	2	10%	2, 3,	LO #1, 2, 3, 4
	Weekly Assessment	13	10%	1–14	
	Introduction to the Concept	1	5%	5	LO # 1, 2, 3, 4, 5, 6
	Submitting Midterm Applications	1	5%	8	
	Submission Before the Final Deadline	1	15%	14	
	Final submission	1	25%	16	
Final Evaluation	Midterm Exam (Daily Drawing 1)	3 hours.	10%		LO #1–9
	Final Exam (Day 2 Drawing)	4 hours.	20%		LO #1–9
Overall Grade			100% (100 points)		

Weekly Plan	
Week	Topics
Week 1	Definition of building construction materials and the relationship between preliminary and implementation concepts, as well as all specializations.
Week 2	How to prepare the executive drawing and plan standards, as well as the executive symbol chart.
Week 3	First Presentation: A detailed explanation of the physical planning of floor plans, sections, and elevations as architectural details.
Week 4	Detailed explanation of the planned construction and structural details.
Week 5	Discussion
Week 6	Discussion
Week 7	Detailed explanation of the plan and its specifics.
Week 8	Today's Drawing
Week 9	Second Presentation: A detailed explanation of prefabricated systems for various types of buildings and structures.

Week 10	Architectural details and construction of the prefabricated building at the ceiling and wall levels, and connecting the prefabricated (pre-made) components.
Week 11	Discussion
Week 12	Discussion
Week 13	Discussion
Week 14	Discussion
Week 15	Final Submission
Week 16	Final Exam

Learning and Teaching Resources		
	Text	Is it available in the library?
Required Texts	- Working Drawings Handbook, Keith Styles, Kindle Edition 1, 2014, Architectural Press, USA, 2014. - Working Drawings Handbook, Keith Styles, Andrew Bichard, ISBN 9780750663724, No. 169, Published September 4, 2004 by Routledge, UK, 2004. Architectural Working Drawings, Fourth Edition, Ralph W. Liebing (Author), Wiley, USA, 1999. Architectural Working Drawings: Residential and Commercial Buildings, William P. Spence, John Wiley & - Working Drawings Handbook, Keith Styles, Kindle Edition, 2014, published by Architectural Press, USA, 2014. Working Drawings Handbook, Keith Styles, Andrew Bichard, ISBN 9780750663724, No. 169, published September 4, 2004, by Routledge, UK, 2004. - Architectural Working Drawings, Fourth Edition, Ralph W. Liebing (Author), Wiley, USA, 1999. Architectural Working Drawings: Residential and Commercial Buildings, William P. Spence, John Wiley &	No
Recommended Texts		No
Websites		

Grading System			
Group	Grade	Percentage	Grade
Passing Range (50–100)	Excellent	100–90	Outstanding Performance
	Very Good	89–80	Above-average performance with some errors
	Good	79–70	Acceptable work with noticeable errors
	Average	69–60	Poor, with significant shortcomings
	Acceptable	59–50	Meets the minimum requirement
Failure Group (49–0)	Fail (under review)	(49–45)	Fail (with the possibility of a retake)
	Fail	(44–0)	Failed by a wide margin

Note: Decimal parts of grades above or below 0.5 will be rounded to the nearest whole number (for example: a grade of 54.5 is rounded up to 55, while a grade of 54.4 is rounded down to 54). The university has a policy of not making exceptions for “failing by a narrow margin,” so the only adjustment allowed to the grades given by the original grader is the automatic rounding described above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Digital Design and Visualization (3ds Max)*)

Course Information				
Course Title	Digital Design and Visualization (3ds Max)		Course Submission	
Course Type	Supporting Educational Activity		☐ Theory ☒ Lecture ☒ Lab ☐ Instructional ☐ Practical ☐ Seminar	
Course Code	AE313			
ECTS Credits	100			
(SEM / hour) SWL				
Course Level	3	Semester of Offering		
Department of Management		College	CENGs	
Course Instructor		Email		
Course Instructor's Academic Title		Course Instructor Qualifications		
Course Instructor		Email	Email:	
Names of Peer Reviewers		Email	Email	
Date of Scientific Committee Approval		Issue Number		

Relationship to Other Course Materials			
	Semester	Neither	Core Requirements Module
	Semester	No	Common Requirements Unit

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives Learning	- To develop students' skills in 3D modeling of architectural spaces and elements. - Enable students to produce professional architectural models suitable for display and presentation. - To teach the principles of architectural visualization using materials, lighting, and cameras. - Enhance students' ability to produce realistic scenes using visualization software. - Prepare students to use advanced modeling and rendering software in future architectural projects.
Learning Outcomes for the Course	Upon completion of the course, students will be able to: 9. Understand the 3ds Max interface and its basic tools. 10. Create 3D architectural models using various modeling tools. 11. Apply modification and transformation commands to architectural elements. 12. Create materials and textures and apply them to models. 13. Set up natural and artificial lighting for architectural scenes. 14. Set up cameras and adjust architectural viewing angles. 15. Produce realistic renderings using V-Ray or Corona Renderer. 16. Preparing professional architectural presentation boards for projects. 17. Producing high-quality interior and exterior scenes.
Instructional Content	1. Introduction to 3ds Max. 2. The software interface and controls. 3. Fundamentals of 3D modeling. 4. Editable Poly Modeling. 5. Architectural modeling of elements and buildings. 6. Applying Materials and Textures. 7. Architectural lighting. 8. Cameras and perspectives. 9. Architectural rendering using V-Ray. 10. Preparing panels and presentations.

Learning and Teaching Strategies	
Strategies	The course is based on hands-on, practical learning in the lab through the completion of exercises and architectural projects of varying levels of difficulty. The focus is on "Learning by Doing" and solving design problems, using individual projects to develop skills in architectural modeling and visualization and to produce professional presentations for architectural projects.

The student's course load is calculated as 15 weeks (SWL)			
(h/sem) Structural SWL A student's regular course load during the academic year	48	(h/w) Structural SWL Student's regular weekly course load	3.2
(h/sem) Irregular SWL Student's irregular course load during the academic year	27	(h/w) Irregular SWL A student's irregular weekly course load	1.8
/ SEM) hours SWL (Total A student's regular course load during the academic year	75		

Course Evaluation					
		Time / Number	Weight (Grades)	Week Due	Relevant Learning
Formative Assessment	Classroom Activities	2	10% (10)	3 and 13	
	Homework	2	10% (10)	2 and 12	
	Projects	1	10% (10)	Ongoing	
	Report	1	10% (10)	13	
Final Grade	Midterm Exam	2	10% (10)	7	
	Final Exam	3		16	
Overall Assessment			100% (100 points)		

Weekly Theoretical and Practical Syllabus	
	Topics Covered
Week 2,1	• Introduction to 3ds Max 3 • Software Installation. • User Interface. • Tools for navigating within the scene. • Unit and measurement settings.
Week 4.3	• Creating basic shapes. • Transformation tools: Move, Rotate, Scale. • Clone commands. • Organizing the scene using Layers.

Week 6.5	• Basics of 3D Modeling. • Editable Poly. • Vertex, Edge, Border, Polygon. • Extrude, Inset, and Bevel operations.
Weeks 9, 8, 7	2. Architectural Modeling. 3. Walls, Floors, and Ceilings. 4. Doors and windows. 5. Stairs and railings.
Weeks 12, 11, 10	6. Materials and Raw Materials. 7. Material Editor. 8. UV Mapping. • Concrete, brick, glass, and metal materials.
Week 15, 41, 13	9. Architectural Lighting. 10. Corona Sun & Sky or V-Ray Sun. 11. Architectural cameras. 12. Render settings. a • Creating complete exterior and interior renderings.
Week 16	Final Exam

Learning and Teaching Resources Learning and Teaching Resources		
	Text	Are you available at the library?
Required Texts	Autodesk 3ds Max Fundamentals Architectural Visualization with 3ds Max	No No
Websites	https://docs.chaos.com/display/VMAX?utm_source=chatgpt.com	

Grading Scale

Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Functioning with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Failed	(0–44)	Requires a great deal of effort to

Note: Grades with decimal places greater than or less than 0.5 will be rounded up or down to the nearest whole number (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54). The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded beyond the original grade(s) will be the automatic rounding described above.

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Sanitary*)

Course Information						Module Information		
Module Title		Sanitary			Module Delivery			
Module Type		Supporting			☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar			
Module Code		AE314						
ECTS Credits								
SWL (hr/sem)								
Module Level		3		Semester of Delivery		5		
Administering Department		Architecture		College	Engineering			
Module Leader		Abbas Hadi Abbas			Email	abbas.hadi@uosamarra.edu.iq		
Module Leader's Academic Title		Professor		Module Leader's Qualification		Master's Degree		
Module Tutor		Name (if available)			Email	Email		
Peer Reviewer Name		Name			Email	Email		
Scientific Committee Approval Date		June 1, 2023			Version Number		1.0	

: Relationship with Other Modules			
	Semester	None	Prerequisite Module
	Semester	None	Co-requisite modules

Module Objectives, Learning Outcomes, and Indicative Contents	
Module Objectives Module Objectives	1. To familiarize architecture students with the fundamental principles of sanitary design. 2. To train students in the design of cold and hot water systems. 3. To train students on how to drain ordinary water, wastewater, and rainwater. To familiarize students with the principles of waste collection and disposal for low-rise and multi-story buildings.

	4. Students will also learn the principles of designing swimming pools, bathrooms, and sanitary facilities; the principles of their orthogonal projections; methods of mechanical water supply; and drainage systems with various capabilities, through a selection of real-world examples chosen for this purpose. 5. Train students to design sewage tanks for wastewater disposal 6. Students are trained in the design of fire suppression systems
Module Learning Outcomes Learning Outcomes for the Course	1. To learn about methods for designing hot and cold water systems. 2. To familiarize students with health insurance structures, types, and reimbursement. 3. To provide students with a basic understanding of residential and multi-story buildings and their relationship to the architectural design of such buildings. 4. Gain comprehensive knowledge of stormwater drainage systems for buildings. 5. To gain a basic understanding of ventilation systems for sewer pipe construction. 6. To complete design drawings for proposed sanitary facilities and bathrooms in buildings with specialized uses
Indicative Contents	Part A – Sanitary Facilities Construction Plumbing Engineering—Introduction—History of Plumbing—Installations. History of Plumbing. [7 hours] Fittings and Traps - Water Tanks - Toilets - Sinks - Bathtubs - Bathroom Construction Occupancy Classification—Equipment Required for Building Occupancy. [7 hours] Construction of Sanitary Facilities [2 hours]

	Part B – Sanitation Systems
	Sewer System Components – Sewer System Sizing – Flow in Water Pipes – Potential Energy – Kinetic Energy – Static Head – Bernoulli’s Principle – Friction in Pipes. [7 hours]
	Water System Design—Sizing a Water System. [7 hours]

Learning and Teaching Strategies

The main strategy adopted in this module is to encourage students to participate in exercises while improving and expanding their constructive critical thinking skills and correcting misconceptions. This is achieved through lectures, assignments throughout the course, and training in design through its application to buildings.

Strategies

Student Workload (SWL) is calculated for 15 weeks

2	Structured SWL (h/w) Student (h/w)	33	Structured SWL (h/sem) Regular student workload during the semester
3	Unstructured SWL (h/w) Course Load _h Student’s regular weekly workload	42	Unstructured SWL (h/sem) Course Load _h Student’s regular study time during the semester
75			Total SWL (h/sem) Course Load _i Total credit hours for the student during the semester

Module Evaluation

Relevant Learning Outcome	Week Due	Weight (Marks)	Time/Number		
LO #1, #3, #10, and #11	5 and 10	10% (10)	2	Quizzes	Formative Assessment
Learning Outcomes #2, #4, #6, and #7	2 and 12	10% (10)	2	Assignments	
All	Continuous	10% (10)	1	Projects / Lab.	
LO #5, #8, and #9	13	10% (10)	1	Report	
LO #1–#8	7	10% (10)	2 hours	Midterm Exam	Summative Assessment
All	16	50% (50)	3 hours	Final Exam	
		100% (100 Marks)	Total Assessment		

Weekly Theoretical Syllabus (Delivery Plan)

	Material Covered
Week 1	Introduction—Water Supply for Buildings; Design Fundamentals for Water Supply Networks
Week 2	Design Fundamentals for Water Supply Networks
Week 3	Requirements for Cold and Hot Water Rates and Hot and Cold Water Storage for Buildings and Facilities
Week 4	Sewage System.
Week 5	Ventilation system.
Week 6	Types of pipes used in sewer systems.
Week 7	Midterm exam.
Week 8	Design of Septic Tanks
Week 9	Swimming Pools
Week 10	Swimming Pool Design

Week 11	Architectural Design and Water Supply and Drainage Systems
Week 12	Design of Fire Protection Systems in Buildings
Week 13	Design of Bathrooms and Sanitary Facilities
Week 14	Design of Stormwater Systems in Buildings
Week 15	Proposed designs for a range of sanitary facilities and bathrooms for buildings with special uses.
Week 16	Preparatory week before the final exam

Weekly Lab Syllabus (Delivery Plan)

Material Covered	
Lab 1:	Week 1
Lab 2:	Week 2
Lab 3:	Week 3
Lab 4:	Week 4
Lab 5:	Week 5
Lab 6:	Week 6
Lab 7:	Week 7

Learning and Teaching Resources

Available in the Library?	Text	
	Sanitary Engineering for Architecture and Civil Engineering – Dr. Muhammad Sadiq Al-Adawi	Required Texts
	Hicks - Standard Handbook of Engineering – ^{4th} edition	Recommended Texts
		Websites

Grading Scheme				
Grading Scheme				
Definition	Marks %	Grade	Grade	Group
Outstanding Performance	90–100	Excellent	A - Excellent	Success Group (50–100)
Above average with some errors	80–89	Very Good	B - Very Good	
Solid work with notable errors	70–79	Good	C - Good	
Fair but with major shortcomings	60–69	Average	D - Satisfactory	
Work meets minimum criteria	50–59	Acceptable	E - Sufficient	
More work required, but credit awarded	(45–49)	Failed (in progress)	FX – Fail	Fail Group (0–49)
Considerable amount of work required	(0–44)	Fail	F – Fail	
Note: Decimal grades greater than or less than 0.5 will be rounded up or down to the nearest whole number (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near misses,” so the only adjustment to the grades awarded from the original grade(s) will be the automatic rounding described above				

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*History of Architecture II*)

Course Information				
Course Title	History of Architecture II		Course Delivery	
Course Type	Specialized Educational Activity		☒ Theory ☐ Lecture ☐ Lab ☐ Instructional ☐ Practical ☐ Seminar	
Course Code	AE315			
ECTS Credits	3			
)SEM / hour(SWL	75			
Course Level		3		
Department of Management		Architecture	College	CENGs
Course Advisor	Raouf Abdul Razzaq		Email	
Course Instructor's Academic Title		Lecturer	Course Instructor Qualification	
Course Instructor			Email	Email
Peer Reviewers' Names		Name	Email	Email
Date of Scientific Committee Approval		June 1, 2024	Issue Number	1.0

Relationship to Other Course Materials			
Core Requirement Unit	No	Semester	
Common Requirements Unit	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	1- This course aims to identify the nature of the emergence of the earliest civilizations, their structures, and their settlement in the Mesopotamian Valley, and to trace the development of architecture therein up to the Islamic conquests, which were influenced by them, as differences in thought and belief became apparent. 2- To prepare architecture students to be able to distinguish between different architectural civilizations.

	3- To develop the ability to understand the philosophical and theoretical ideas underlying architectural design concepts. 4- To familiarize students with the most significant historical periods of civilizations. 5- To study the architectural forms and distinctive details of ancient civilizations.
Learning Outcomes for the Course	Cognitive Objectives (Knowledge and Understanding): 1- To define the nature of architecture and its history. 2- To study the Mesopotamian civilization in terms of its architecture and the philosophical ideas associated with architectural structures. 3- To identify architectural structures and their relationship to the diverse cultures of ancient civilizations. 4- Identify architectural details within each historical period of Mesopotamian civilization and their reflection in architecture. 5- To identify architectural principles in urban cities and Arab caravan cities, and to study the most important architectural components and details that characterized each historical period. Skill Objectives (Specialized Skills): 6- Preparation of reports by students in which they select projects by distinguished architects to familiarize students with how to engage with philosophical ideas and theoretical and design trends. 7- Students' ability to interact with one another within student groups (collaborative interaction). Affective and Values-Based Objectives (Thinking Skills): 8- Enabling students to explore the history of architecture to develop a clear understanding of key architectural forms and details, thereby enhancing their awareness and systematic study. 9- The ability to identify the creative design ideas of historical civilizations by presenting and drawing upon distinctive architectural compositions. 10- Enable students to solve their own design problems. General and Transferable Skills (Skills Related to the Job Market and Personal Development): 11- The ability to create architectural compositions based on design principles.

	12- Selecting distinctive architectural compositions from ancient civilizations to present and discuss with students. 13- Developing students' character as part of an integrated educational and formative process. 14- The ability to work with discipline as part of a team. 15- Possessing a full awareness of the ethical and practical responsibilities of both group and individual work.
Guidance Contents	Teaching and Learning Methods: 1- Theoretical lecture explanations: Presenting scientific material through explanatory lectures. 2- Presentation of practical examples: Clarifying concepts through real-life or historical examples. 3- Question-based approach: Stimulating critical thinking by posing questions to students and discussing them. 4- Testing: Using exams as a means to assess students' understanding. 5- Self-directed learning: Encouraging students to conduct research and engage in independent study outside of lecture hours. Assessment Methods (Theoretical Study): 1- Student engagement through active participation in the lecture: This includes interaction, asking questions, and discussing answers. 2- Asking questions and discussing answers: To measure students' understanding and grasp of the material. 3- Assessment through weekly quizzes: To measure ongoing knowledge acquisition. 4- Assessment through exams, contributions, participation, and attendance: to measure students' knowledge and discipline. 5- Practical exams: To assess students' understanding of theoretical concepts in an applied context. 6- Preparation of reports and studies: To track students' progress in terms of knowledge and research. Monitoring and Evaluating Student Progress: 7- Student activity and participation during lectures: as an indicator of their engagement and understanding of the material. 8- The student's level of commitment to submitting the required practical assignments: as an indicator of their academic commitment. 9- The student's diligence in attending lectures despite various difficulties: as evidence of seriousness and self-motivation.

Learning and Teaching Strategies

Strategies	The academic program includes two complementary aspects: The theoretical aspect: This consists of lectures delivered as part of the course curriculum. The practical aspect: This complements the theoretical material and is embodied in students' preparation of reports on distinguished architectural projects from the historical periods being studied, along with an explanation of the associated philosophical ideas, compositions, and architectural design methods. Students are taught the design curriculum in accordance with architectural principles through the study of architectural compositions and details. Throughout the academic program, available technology—such as smart boards, computers, and other tools—is used to present and discuss projects selected by the students themselves. Assessment Methods: Assessment is conducted through: - Monthly and quarterly exams. - Class contributions, active participation, and attendance. - Evaluation of reports and research papers submitted by students.
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The student's course load is calculated as 15 weeks (SWL)

(h/sem) Structured SWL Student's regular course load during the semester	48	(h/w) Structural SWL Student's regular weekly workload	3.2
(h/sem) Unregulated SWL Student's irregular course load during the semester	27	(h/w) Unstructured SWL Student's non-structured weekly course load	1.8
/ SEM) hours of SWL (total The student's total course load for the semester	75		

Course Evaluation

		Time / Number	Weight (Points)	Week Due	Relevant Learning
Formative Assessment	Classroom Activities	10	10% (10)	Continuous	All
	Homework Assignments	2	10% (10)	Continuous	All
	Report	1	10% (10)	Ongoing	All

	Semester	1	10% (10)	Continuous	All
Final Grade	Midterm	2 hours	10% (10)	12	All
	Midterm				
	Final Exam	3 hours	50% (50)	16	All
Overall Grade			100% (100 points)		

Weekly Theoretical Curriculum	
	Topics Covered
Week 1	An introductory lecture explaining the nature of the course and its components, the required sources and reports, as well as how to apply the course material to architectural design
Week 2	The Theory of Settlement and the Stone Ages
Week 3	The Neolithic Period
Week 4	The Development of the Urka and Early Knowledge (Early History)
Week 5	Early Dynastic Period
Week 6	The Sumerian and Akkadian Periods
Week 7	The Third Dynasty of Ur
Week 8	The Babylonian and Early Kish Periods
Week 9	The Assyrian Period
Week 10	Late Babylonian Period, the Chaldean Kingdom
Week 11	The Parthians, the Seleucids, the Sassanids
Week 12	Midterm Exam.
Week 13	The City of Hadr
Week 14	Arab Caravan Cities
Week 15	Seminar Series
Week 16	Preparation Week Before the Final Exam

Learning and Teaching Resources		
	Text	Is it available in the library?
Requested Texts	History of Architecture, Sir Banister Fletcher Cher; History of Ancient Iraq, Taha Baqir; History of Iraqi Architecture Through the Ages, Sharif Youssef	Yes
Recommended Texts		
Websites		

Grading Scale Grading Scale			
Group	Grade	Grades %	Grading Scale
Passing Range (50– 100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Functioning with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Failed	(0–44)	Requires a great deal of effort to
Note: Grades with decimal places greater than or less than 0.5 will be rounded up or down to the nearest whole number (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54). The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded by the original grader(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Principles of Planning*)

Course Information				
Course Title	Principles of Planning		Course Syllabus	
Course Type	Specialization-Specific Educational Activity		☒ Theory ☐ Lecture ☐ Lab ☐ Instructional ☐ Practical ☐ Seminar	
Course Code	AE316			
ECTS Credits	4			
)SEM / hour(SWL	100			
Course Level	3	Semester of Delivery		
Department of Management	Architecture	College	CENGs	
Course Advisor	Maysoun Mohi Hilal	Email	maysoon.hilal@uosamarra.edu.iq	
Course Instructor's Academic Title	Professor	Course Instructor Qualifications	M.Sc.	
Course Instructor		Email	Email	
Peer Reviewers' Names	Name	Email	Email	
Date of Scientific Committee Approval	March 2, 2025	Issue Number	1.0	

Relationship to Other Course Materials			
Core Requirement Unit	No	Semester	
Common Requirements Unit	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	1. Basic knowledge, planning processes, and practical application. Students must understand the definition, importance, and types of planning, as well as the steps involved in the planning process. In addition, they must be able to apply planning principles to various scenarios and create effective plans. 2. Understanding the Nature of Planning: Define planning, its importance, and its relationship to other management functions.

	3. Identifying Types of Planning: Learn about different types of planning based on scope, time horizon, and function (e.g., strategic, tactical, and operational). 4. Train students in urban planning design
Learning Outcomes for the Course	1. Learn about planning methods around the world 2. Students must learn about the types of planning and their purposes. 3. Students should have a basic understanding of land use (such as residential and multi-story buildings, commercial uses, etc.) and its relationship to architectural forms. 4. Comprehensive knowledge of planning methods. 5. Basic understanding of the timeline for implementing plans
Syllabus	<u>Planning Stages for Part A</u> Introduction—History of Planning—Types of Planning [7 hours.] Stages and Steps of Planning: [7 hours.] The planning process consists of 4 stages or steps The plan preparation stage. Plan Approval Stage Plan implementation stage Monitoring and evaluation stage Types of Planning (Planning by Time Frame or Duration) [2 hours.] <u>Part B – Land Use and Planning</u> The planning process, studying and analyzing the future, anticipating potential problems and challenges, working to address them, and developing plans to avoid them in the future. An important decision-making process [7 hours]

Learning and Teaching Strategies	
Strategies	1. Lectures: The module will include lectures delivered by the instructor to introduce and explain the basic concepts, techniques, and principles of planning. The lectures will provide the theoretical foundation. 2. Demonstrations: The instructor will demonstrate planning techniques and methods. Students will observe and learn through visual demonstrations, allowing them to understand the principles of planning. 3. Group Work: Collaborative group projects will be assigned to enhance teamwork and communication skills.

The student's course load is calculated for 15 weeks (SWL)			
(h/sem) Structured SWL Student's regular course load during the semester	63	(h/w) Structural SWL Student's regular weekly course load	2
(h/sem) Unstructured SWL Student's irregular course load during the semester	37	(h/w) Unstructured SWL Student's irregular weekly course load	3
/ SEM) SWL hours (Total The student's total course load for the semester	100		

Course Grade					
		Time / Number	Weight (Grades)	Week Due	Related Learning GB
Formative Assessment	Quizzes	2	3% (10)	5 and 10	LO #1, #3
	Appointments	2	2% (10)	2 and 13	LO, #4 and #2,
	Report	1	5% (10)	14	LO #2 and #4
Final Grade	Midterm Exam	2 hours	20% (20)	7	LO #1 - #2
	Final Exam	3 hours	60% (50)	16	Total
Total Grade			100% (100 points)		

Weekly Theoretical Syllabus	
	Topics Covered
Week 1	Introduction—History of Planning
Week 2	Stages and Steps of Planning
Week 3	Plan Preparation Phase. Plan Approval Phase.
Week 4	Plan Implementation Phase Monitoring and Evaluation Phase
Week 5	Types of Planning: Introduction and Theory
Week 6	Types of Planning: Modern Planning Theories
Week 7	Midterm Exam.
Week 8	Residential Planning
Week 9	Social Area Planning
Week 10	Economic Area Planning
Week 11	Architectural Design of the Neighborhood
Week 12	Urban Housing Standards 1977 (Part 1)

Week 13	Urban Housing Standards 1977 (Part 2)
Week 14	Harrod's Garden Theory
Week 15	Proposed Designs for a Group of Special-Use Neighborhoods.
Week 16	Preparatory week before the final exam

Learning and Teaching Resources		
	Text	Are you available at the library?
Required Texts	<u>Urban Planning and Design—Dr. Ismail Abdulaziz Amer, 2012</u> Theories in Urban Planning—Dr. Mason Mohi, Dar Anwar al-Najaf, 2012	
Recommended Texts	Urban Housing Standards Handbook—Iraqi Housing Authority, 1977	
Websites		

Grading Scheme			
Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Passes with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Fail	(0–44)	Requires a significant amount of work
Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded beyond the original grade(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Logic and Design Methodology*)

Course Information				
Course Title	Logic and Design Methodology		Course Submission	
Course Type	Specialization-Specific Educational Activity		☒ Theory ☒ Lecture ☐ Lab ☐ Instructional ☐ Practical ☒ Seminar	
Course Code	AE317			
ECTS Credits	4			
s (SWL)	100			
Course Level	3	Semester of Delivery		
Department of Management		Architecture	College	CENGs
Course Instructor			Email	
Course Instructor's Academic Title		Lecturer	Course Instructor Qualifications	Ph.D.
Course Instructor			Email	Email
Peer Reviewers' Names		Name	Email	Email
Date of Scientific Committee Approval		2025/00/00	Issue Number	1.0

Relationship to Other Course Materials			
Core Requirement Unit	No	Semester	
Common Requirements Unit	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	To familiarize students with the various disciplines and topics that play an important role in the design process, and to clarify the fundamental design principles, processes, and factors involved in design work. In addition, to teach students to apply logic so that they can think clearly and arrive at sound conclusions and arguments, and avoid flawed and incorrect thinking in their design work.

Learning Outcomes for the Course	1. To understand the fundamental principles of logic and apply them to the architectural design process. Students will develop their skills in logical thinking, critical thinking, and problem-solving, enabling them to address design challenges in a systematic and analytical manner. 2. To acquire knowledge of the various design methodologies and approaches used in architecture. Students will become familiar with different design methods, such as iterative design, conceptual design, and evidence-based design, and understand how to apply them effectively in various architectural projects. 3. Develop proficiency in conducting research and analysis to enrich the design process. Students will learn how to collect relevant data, evaluate information, and make informed design decisions based on evidence and research findings. 4. Enhance communication and presentation skills to effectively convey design ideas and concepts. Students will learn how to articulate the rationale behind a design, use visual aids and digital tools to communicate design proposals, and engage in productive discussions and critiques. 5. Develop a collaborative mindset and teamwork skills through engagement in group design projects. Students will learn to collaborate with peers, architects, and other professionals, thereby developing the ability to work effectively in multidisciplinary teams. 6. To enhance understanding of ethical and sustainable design practices. Students will be encouraged to consider the social, cultural, and environmental impacts of their design decisions and to develop a sense of responsibility toward creating sustainable and inclusive built environments.
Syllabus	1. Introduction to Logic: 1. Basic principles of logic and reasoning 2. Types of logical reasoning (deductive, inductive, abductive) - Logical fallacies and common errors in reasoning 2. Design Methodologies: • An overview of the various design methodologies used in architecture • Understanding the Design Process and Its Stages • The Iterative Design Approach and Its Application in Architecture • Principles and Methods of User-Centered Design - Evidence-Based Design and Research in Architecture 3. Problem-Solving Techniques: • Techniques for Identifying and Framing Design Problems • Analytical and Critical Thinking Skills in Problem Solving • Decision-making models and tools used in design Brainstorming and Idea Generation Techniques 4. Research Methods: 1. Introduction to Research Methods Relevant to Architectural Design 2. Data collection techniques (surveys, interviews, and observations) 3. Methods of Data Analysis and Interpretation 4. Integrating Research Findings into the Design Process 5. Communication and Presentation: 1. Effective Communication Strategies in Design 2. Visual communication techniques (drawing, presentation, diagrams)

	3. Digital Tools and Software for Architectural Representation - Presenting Design Proposals to Clients and Stakeholders 6. Ethics and Sustainability: • Ethical Considerations in Architectural Design • Principles and Strategies of Sustainable Design • Integrating social, cultural, and environmental factors into design decisions The content above serves as a guide to the main topics and themes covered in the “Logic and Design Methodology” course and provides students with a comprehensive understanding of the logical aspects of architectural design and the methodologies used in the design process.
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Learning and Teaching Strategies	
Strategies	• Lectures: Lectures are held to introduce students to the fundamental concepts, principles, and theories related to logic and design methodology. These lectures provide a theoretical foundation and a framework for understanding the subject. • Case Studies: Case studies are used to illustrate real-world examples of design methodologies and their application in architectural projects. Through the analysis and discussion of these case studies, students gain insights into different design approaches and learn how to apply them in their own work. • Research Assignments: Students are assigned research projects that require them to explore relevant literature, collect data, and analyze information. These assignments develop their research skills and help them understand the importance of evidence-based design decisions. • Class Discussions and Group Discussions: Class discussions and group discussions encourage students to actively participate in class and engage in critical thinking and analysis. They provide a platform for sharing ideas, discussing different design methodologies, challenging assumptions, and fostering a deeper understanding of the subject. • Presentations: Students are often asked to present their design proposals, research findings, and critical analyses to the class. These presentations enhance their communication skills, help them articulate the rationale behind their designs, and allow them to receive feedback from peers and instructors. • Through the use of these learning and teaching strategies, the “Logic and Design Methodology” course aims to create an engaging and interactive learning environment where students can develop their logical thinking skills and explore diverse design

The student's course load is calculated for 15 weeks (SWL)			
(h/sem) Organized SWL A student's regular course load during the semester	33	(h/w) Structural SWL Student's regular weekly course load	2
(h/sem) Unstructured SWL Student's irregular course load during the semester	67	(h/w) Non-structured SWL Student's irregular weekly course load	4
/ SEM) SWL hours (Total The student's total course load for the semester	100		

Course Grade					
		Time / Number	Weight (Grades)	Week Due	Related Learning
Formative Assessment	Contests	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Appointments	2	10% (10)	2 and 12	LO #3, #4, #6, and #7
	Projects / Lab.				
	Report	1	20% (20)	13	LO #5, #8, and #10
Final Grade	Midterm Exam	2 hours	10% (10)	7	LO #1–#7
	Final Exam	3 hours	50% (50)	16	Total
Total Grade			100% (100 points)		

Weekly Theoretical Syllabus

	Topics Covered
Week 1	Clarification of lecture objectives and definition and classification of terminology.
Week 2	Design as a rational and intellectual process.
Week 3	The importance and effectiveness of rational thinking in the design process.
Week 4	The Mechanism of Logical Thinking and Methods Used in Logical Evaluation.
Week 5	Design phenomena and their manifestations as found in nature.
Week 6	Design as a reflection of geographical and physical conditions and their impact on humans.
Week 7	Vitruvius and his concept of architectural translation, and the six main elements of the design process.
Week 8	Midterm Exam
Week 9	Elements of system and order and their implications for design.
Week 10	Elements of Proportion and Symmetry and Their Implications for Design.
Week 11	Elements of appropriateness and economy and their implications for design.
Week 12	Design as a Reflection of Personal Desires and Objective Requirements.
Week 13	Explanation of the various stages required in the design process.
Week 14	Discussion of Student Reports
Week 15	Discussion of student reports
Week 16	Preparation week before the final exam

Learning and Teaching Resources

	Text	Is it available in the library?
Requested texts	"The Methodology of Architectural Design" by Mason Halal	Yes
Recommended Reading	"Design Thinking: Understanding How Designers Work" by Nigel Cross. "Design Research Methods in Architecture: The Practice of Design Inquiry" by Murray Fraser and David Lee. NK and Aiting	Yes
Websites		

Grading Scale			
Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Passes with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Fail	(0–44)	Requires a significant amount of work
Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded beyond the original grade(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Architectural Design VI*)

Course Information			
Course Title	Architectural Design VI		Unit Submission
Module Type	Supporting Educational Activity		☒ Theory ☐ Yes ☒ Lab ☐ Educational ☐ Practical ☐ Seminar
Unit Code	AE321		
ECTS Credits	10		
Course Load (SWL (hours/semester))	250		
Course Level	3	Semester in Which the Course Is Offered	6
Department	Architectural Engineering	College	Engineering
Course Instructor	Dr. Ali Majid Hamid	Email	
Academic Title of the Course Coordinator	Professor	Academic Qualifications of the Course Coordinator	Ph.D.
Course Instructor		Email	
Name of Academic Evaluator		Email	
Date of Scientific Committee Approval		Issue Number	

Relationship with Other Units			
Core Requirements Unit	No	Semester	
Common Requirements Module	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	- To enable students to develop a comprehensive architectural project that integrates complex functions and advanced design requirements, while taking into account environmental, functional, and aesthetic aspects. - To enhance students' ability to produce architectural designs based on a comprehensive site analysis, international design standards, and user needs, while expressing a clear and distinctive architectural concept. - To develop students' skills in project presentation using traditional and digital architectural drafting tools, including working drawings, 3D models, and final presentations.
Learning Outcomes	1. To analyze architectural problems related to complex commercial or hotel buildings by studying the site, user needs, and design standards. 2. Formulate and develop an integrated architectural concept that responds to functional, site-specific, and environmental factors.

	3. Design integrated architectural solutions for large-scale projects, including the organization of spaces, circulation, and functional divisions. 4. Produce accurate architectural drawings (plans, sections, elevations) and 3D renderings using appropriate software tools. 5. Demonstrate the ability to effectively present and communicate design ideas through visual and verbal means. 6. Critically evaluate design proposals and refine them based on feedback and self-assessment.
Course Content Teaching	This course trains students to design a comprehensive and complex architectural project, beginning with the analysis of the site, its surroundings, and functional requirements, through the development of the spatial program and massing, and culminating in the development of plans, sections, and elevations. The course also covers the stages of developing the design concept, organizing functional relationships, and designing the overall site, with a focus on integrating environmental, aesthetic, and functional aspects. At the end of the course, students are trained to produce the project using digital drawing and modeling tools and to prepare it for a professional final presentation.

Teaching and Learning Strategies	
Strategies	1. Lectures: Presentation of theoretical knowledge and fundamental concepts related to architectural design topics. 2. Project-Based Learning: Students are tasked with developing a comprehensive architectural project throughout the semester, thereby enhancing their design, planning, and execution skills. 3- Group Critique and Class Discussions (Critique & Peer Review): Through weekly project presentation sessions, students receive constructive feedback from professors and peers to improve their projects. 4- One-on-One Guidance: Time is set aside to work with each student individually to guide them in developing their project and resolving any design challenges they face. 5- Presentations: Students are trained to effectively present their design ideas using visual and verbal means. 6- Self-Directed Learning: Students are encouraged to independently research and analyze similar projects and study international design standards to inform their design decisions.

Student Workload (SWL)			
Structured (number of hours/semester)	150	Structured (Hours/Week)	10
Unstructured (number of hours per semester)	100	Structure (Number of hours/week)	6.66
Total	250		

Course Evaluation					
		Number	Percentage	Week	Related Learning Outcomes
Formative Assessment	Short Tests	1	10%	15	Total
	Homework	2	20%	15	Total
	Classwork	2	20%	15	Total
	Report	4	20%	15	Total
Final Grade	End of Semester	1	30%	15	Total
Overall Grade			100%	16	Total

Weekly Plan	
Week	Topics
Week 1	Explain the project concept and requirements, map the site, and analyze preliminary data; begin collecting case studies
Week 2	Analyze the site (climate, traffic, noise, views); analyze the target audience and nature of commercial use; prepare a preliminary analytical report
Week 3	Prepare the functional and spatial program for the project; draw the functional relationships (Bubble Diagram); present and discuss the analytical results
Week 4	Generating design concepts, selecting and justifying the final concept, and creating a preliminary layout for the building blocks
Week 5	Developing the massing, studying the project's public facades and entrances, and discussing the massing with the supervisor
Week 6	Organizing interior spaces (corridors, retail spaces, services); preliminary review of the building's internal relationships
Week 7	Drawing the ground floor plan; beginning the layout of the upper floors
Week 8	Development of repetitive floors and service areas; coordination of user flow and general circulation patterns
Week 9	Drawing longitudinal and cross-sections; illustrating the vertical relationship between floors

Week 10	Designing facades (materials, openings, aesthetic concept); studying natural lighting and ventilation
Week 11	Exam on an external project (daysketch)
Week 12	Comprehensive review of all drawings; implementation of modifications suggested by the follow-up committee or supervisor
Week 13	Preparation of final drawings (Plans, Sections, Elevations); preparation of rendering materials (Textures, Colors, Materials)
Week 14	Production of 3D renders; preparation of presentation materials (posters or paper boards)
Week 15	Presenting the final project to the committee or classmates; comprehensive evaluation of performance and design

Learning and Teaching Resources		
	Details	Is it available in the library?
	- Ching, Francis D.K., Architecture: Form, Space, and Order, 3rd edition, Wiley, 2007.	Yes
	- Neufert, Ernst, Architects' Data, Wiley-Blackwell, 4 th edition, 2012.	Yes
Required Textbooks	- De Chiara, Joseph; Panero, Julius, *Time-Saver Standards for Building Types* 9 th edition, 2014.	Yes
Recommended Resources	- Unwin, Simon, *Analyzing Architecture*, 1952.	No
Websites	ArchDaily.com	

Grading System			
Group	Grade	Percentage	Rating
Al-Naja Group (50–100)	Excellent	100–90	Outstanding Performance
	Very good	89–80	Above-average performance with some errors
	Good	79–70	Acceptable work with noticeable errors
	Average	69–60	Poor, with significant shortcomings
	Acceptable	59–50	Meets the minimum requirement
Failure Group (49–0)	Fail (under review)	(49–45)	Fail (with the possibility of a retake)
	Fail	(44–0)	Failed by a wide margin
Note: Decimal parts of grades above or below 0.5 will be rounded to the nearest whole number (for example: a grade of 54.5 is rounded up to 55, while a grade of 54.4 is rounded down to 54). The university has a policy of not making exceptions for “failing by a narrow margin,” so the only adjustment allowed to the grades given by the original grader is the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Working Drawings II*)

Course Information					
Course Title	Working Drawings II		Course Submission		
Module Type	Supporting Educational Activity		☐ Theory ☒ Lecture ☐ Lab ☐ Instructional ☒ Practical ☐ Seminar		
Unit Code	AE322				
ECTS Credits	6				
Course Load (SWL) (hours/semester)	150				
Course Level		3	Semester in Which the Course Is Offered		6
Department		Architectural Engineering	College	Engineering	
Course Instructor				Email	
Academic Title of Course Coordinator				Academic Qualifications of the Course Coordinator	
Course Instructor				Email	
Scientific Resident's Name				Email	
Date of Approval by the Scientific Committee				Issue Number	

Relationship with Other Units			
Core Requirements Unit	No	Semester	
Common Requirements Module	No	Semester	

Course Objectives, Learning Outcomes, and Syllabus	
Course Objectives	The course aims to equip students with the skills to conceptualize, design, and document engineering projects using Autodesk Revit, one of the BIM software packages.
Learning Outcomes	Upon completion of the course, students will be able to: 1. Equip students with the skills to use the software to design architectural projects 2. Equip students with the skills to use the software to document working drawing sets for architectural projects 3. Equip students with the skills to enrich the software library by designing additional elements and adding them to the software library
Contents Guidelines	The instructional content includes the following: 1. Creating basic building components: walls, finishes, floors, ceilings, stairs, etc. (15 hours). 2. Using editing tools (10 hours). 3. Working with data and creating standard views (10 hours). 4. Modeling using massing tools (20 hours). Creating project details.

	5. Adding annotations and dimensions (10 hours). 6. Creating drawing sheets and plots. (10 hours).
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Teaching and Learning Strategies	
Strategies	The main strategy to be followed in this module is to guide students in developing architectural design projects in Revit. The course aims to develop students' problem-solving skills in completing projects and preparing their working drawing sets. This is achieved through theoretical lectures and hands-on practice under supervision in the computer lab.

Student Workload (SWL)			
Structured (number of hours per semester)	90	Structure (Hours/Week)	
Unstructured (number of hours per semester)	60	Structured (number of hours per week)	
Total	150		

Course Evaluation					
		Time / Number	Weight (Points)	Week Due	Related Learning Outcomes
Formative Assessment	Quizzes	2	10% (20)	8.4	LO #1, 2
	Assignments	4	20% (20)	1, 2, 7, 14	LO # 2
	Laboratory				
	Report				
Final	Midterm Exam	2	20% (10)	7	LO # 2
	Final Exam	3	50% (50)	16	Total
Total Grade			100% (100 points)		

Weekly Plan	
Week	Topics
Week 1	Introduction to BIM. Definition and capabilities...
Week 2	Detailed explanation of the Revit user interface.
Week 3	Methods for building projects in Revit. Building components 1 (walls)...
Week 4	Building Components 2: (Doors, Windows).
Week 5	Building Components 2: (Floors, Ceilings, Roofs)...
Week 6	Components and Methods of Representation (Elevations, Sections, Grids, Levels, and Reference Planes).
Week 7	Building Component 3: (Stairs and Ramps).
Week 8	Building Component 3: (Curtain Walls).
Week 9	Constructing Complex-Shaped Buildings Using Blocking Tools ¹ .
Week 10	Building complex structures using array tools ² .
Week 11	Course Exam 1 (Practical) ...
Week 12	Annotations (text, labels, dimensions, keywords).
Week 13	Adding site features (topography and contour lines, building pads, and footnotes).
Week 14	Create details, drawing sheets, and dimensioning.
Week 15	Working with families.
Week 16	Final exam

Learning and Teaching Resources		
	Text	Is it available in the library?
Required Texts	2. Mastering Autodesk Revit 2018, Copyright © 2017 by John Wiley & Sons, Inc., Indianapolis, Indiana, Lance Kirby & others. 3. Revit 2019 Architecture, 2019, Munir M. Hamad, Publisher: David Pallai Mercury Learning and Information, 22841 Quicksilver Drive.	No
Recommended Texts		No
Websites		

Grading System			
Group	Grade	Percentage	Grade
Passing Range (50–100)	Excellent	100–90	Outstanding Performance
	Very Good	89–80	Above-average performance with some errors
	Good	79–70	Acceptable work with noticeable errors
	Average	69–60	Poor, with significant shortcomings
	Acceptable	59–50	Meets the minimum requirement
Failure Group (49–0)	Fail (under review)	(49–45)	Fail (with the possibility of a retake)
	Fail	(44–0)	Failed by a wide margin
Note: Decimal parts of grades above or below 0.5 will be rounded to the nearest whole number (for example: a grade of 54.5 is rounded up to 55, while a grade of 54.4 is rounded down to 54). The university has a policy of not making exceptions for “failing by a narrow margin,” so the only adjustment allowed to the grades given by the original grader is the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*English Language III*)

Course Information				
Course Title	English Language III	Course Delivery		
Course Type	Core Educational Activity	☒ Theory ☐ Lecture ☐ Lab ☐ Instructional ☐ Practical ☐ Seminar		
Course Code	AE324			
ECTS Credits	2			
)SEM / hour(SWL	50			
Course Level	3			Semester of Delivery
Department of Management		College	CENGs	
Course Instructor		Email		
Title of the Course Instructor's Academic Position	Assistant Lecturer	Course Instructor Qualification	Master's Degree.	
Course Instructor		Email		
Peer Reviewers' Names		Email	Email	
Date of Scientific Committee Approval	June 1, 2025	Version Number	1.0	

Relationship to Other Course Materials			
Core Requirement Unit	Yes	Semester	
Common Requirements Unit	Yes	Semester	

	Course Objectives, Learning Outcomes, and Suggested Content
Course Objectives	Course Objectives: - To develop oral fluency and accuracy in English conversation. - Expand vocabulary and improve listening comprehension skills. - To use grammatical structures effectively in spoken and written English. - To strengthen reading and writing skills for effective communication.
Learning Outcomes for the Course	Important: List at least 6 learning outcomes, preferably equal to the number of weeks of study. Six learning outcomes for the unit that combine multiple ABET components: Learning Outcomes for the English Language Unit: 7. Develop effective communication skills in English (ABET Components F, C, A): - Demonstrate proficiency in speaking and listening, and convey ideas accurately and confidently. Use appropriate grammar and vocabulary to express ideas and opinions clearly. 8. Expand vocabulary and linguistic fluency across various topics (ABET Component F): B - Acquire a wide range of vocabulary related to various topics, such as daily life, travel, and the media. Enhance linguistic fluency by engaging in conversations and discussions on diverse topics. 9. Accurately apply grammatical rules and structures Component D, ABET: C - Use appropriate grammatical rules, including verb tenses, subject-verb agreement, and sentence structure. Demonstrate an understanding of grammatical concepts in both spoken and written English. 10. Develop reading and comprehension skills ABET Component: E 11. Read and understand a variety of texts, such as articles, short stories, and dialogues. Extract key information, infer meaning, and critically analyze written material. 12. Enhance English writing skills—ABET Component G, D 13. Produce well-organized and coherent written compositions. Apply correct grammar, vocabulary, and punctuation to express ideas effectively 14. . Engage in intercultural communication—Component H, ABET: A 15. Understand and appreciate cultural differences in communication styles. - Demonstrate sensitivity and adaptability when interacting with individuals from different cultural backgrounds.
Contents Guidelines	The instructional content includes the following. Part 1: Language Skills In this course, we will explore the English language through various topics. We will begin by covering basic introductions, greetings, and personal information. Moving forward, we will discuss hobbies, daily routines, food and drink, health and fitness, travel, and transportation. In addition, we will learn about media, entertainment, jobs, careers, shopping, vacations, and celebrations. Throughout the course, we'll focus on building vocabulary and practicing essential language skills. Part 2: Communication Skills Following on from Part 1, this course will help us develop our language skills. We will delve deeper into topics such as environmental issues, emphasizing the importance of sustainability. We will also explore advanced grammar concepts, including the present perfect, simple past, and conditional tenses. In addition, we will strengthen our communication skills through activities, discussions, and real-life scenarios. This course aims to provide a comprehensive understanding of and proficiency in the English language.

Learning and Teaching Strategies	
Strategies	The main strategy adopted in this course is to encourage students to participate in exercises while improving and expanding their constructive critical thinking skills and correcting misconceptions. This is achieved through explanation and hands-on practice using simple experiments designed to develop an understanding of spatial geometry, which include student-centered activities that engage them.

(SWL) The student's course load is calculated for 15 weeks			
SWL Structured (h/sem) Regular course load per student per semester	33	(h/w) Structural SWL Student's regular weekly course load	2
(h/sem) Unstructured SWL Student's irregular course load during the semester	17	(h/w) Irregular SWL Student's irregular weekly course load	1.3
/ SEM) SWL hours (Total The student's total course load for the semester	50		

Course Evaluation					
		Time / Number	Weight (Grades)	Week Due	Relevant Learning
Formative Assessment	Classroom Activities	2	10% (10)	5 and 12	LO #1, #2, and #4
	Homework	3	10% (10)	4, 9, and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8 and 14	LO #5, #3, and #6
Final Assessment	Midterm Exam	2 hours	10% (10)	8	All
	Final Exam	3 hours	50% (50)	16	All
Overall Grade			100% (100 points)		

	Weekly Theoretical Syllabus
	Topics Covered
Week 1	Greetings and Introductions: Greetings, Introductions, Names, Countries, and Languages
Week 2	Hobbies, Leisure, Sports, and Entertainment. Introducing simple, recurring situations.
Week 3	Rooms, furniture, and daily routines. Present continuous tense; prepositions of place.
Week 4	Vocabulary related to food and drink; likes and dislikes; countable and uncountable nouns; some/any.
Week 5	Health-related vocabulary and giving advice; should/shouldn't, imperative sentences.
Week 6	Travel vocabulary and modes of transportation; present perfect, simple past.
Week 7	Daily activities, time expressions. Frequency adverbs, simple present vs. present continuous.
Week 8	Midterm Exam
Week 9	Types of media and leisure activities. Comparative and superlative adjectives.
Week 10	Professions and job skills. Future plans and intentions; will/will not do something.
Week 11	Shopping vocabulary; product descriptions; countable and uncountable nouns and articles.
Week 12	Vocabulary for holidays, celebrations, and past events. Simple past vs. present perfect.
Week 13	Jobs and careers: professions, job interviews, qualifications, and work experience
Week 14	Applying language skills through interactive activities, discussions, and real-life scenarios.
Week 15	Environmental Issues and Measures to Protect the Environment; Conditional Verbs: can / may / might / could.
Week 16	Preparation week before the final exam

Learning and Teaching Resources		
	Text	Is it available in the library?
Required Texts	The New Fourth Edition of Headway Pre-Intermediate by Liz & John Sours, Oxford University Press, 2011	Yes
Recommended Texts	English for Builders and Architects, Nova, R. Rakhimova 2009	No
Websites	https://www.youtube.com/watch?v=LB8zpf_MWgw	

Grading Scale

Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Functioning with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
The Losers) 49 – 0(	Failed (In Progress)	(45–49)	More work is needed, but credit has been awarded
	Failed	(0–44)	Requires a great deal of work

Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded beyond the original grade(s) will be the automatic rounding described above.

head of Department

Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Air Conditioning Services*)

Course Information			
Course Title	Air Conditioning Services		Course Delivery
Course Type	S		☐ Theory ☒ In-Person ☒ Lab ☐ Instructional ☐ Practical ☐ Seminar
Course Code	AE324		
ECTS Credits	3		
)SEM / hour(SWL	75		
Course Level	3	Semester of Delivery	
Department of Management	Architecture	College	CENGs
Course Instructor		Email	maha.m@uosamarra.edu.iq
Course Instructor's Academic Title		Course Instructor Qualifications	
Course Instructor		Email	Email:
Peer Reviewers' Names	Name	Email	Email
Date of Scientific Committee Approval	June 1, 2024	Issue Number	1.0

Relationship to Other Course Materials			
	Semester	No	Core Requirements Unit
	Semester	No	Common Requirements Unit

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives of Study	7. Understand the fundamentals of HVAC systems 8. Calculating Thermal Loads for Buildings 9. Designing air distribution systems 10. Achieving thermal comfort inside buildings 11. Integrating air conditioning concepts with architectural design to achieve a balance between thermal performance and architectural form
Learning Outcomes for the Course	6. Calculating thermal loads (cooling and heating loads) 7. Using the psychrometric chart 8. Duct design 9. Selecting Appropriate Air Conditioning Systems 10. Energy Efficiency Analysis of HVAC Systems
Table of Contents Guidelines	1. HVAC Fundamentals 2. Thermal Comfort 3. Properties of Air 4. Psychometrics 5. Thermal Load Calculations 6. Ventilation Systems 7. Air Conditioning Equipment

Learning and Teaching Strategies	
Strategies	The course is based on the concept of active or effective learning, which relies on a problem-solving strategy by engaging learners in activities that force them to think about what they are learning. This is achieved by transforming the lesson objective into a specific problem that requires discovery first and foremost, followed by understanding, analysis, and finding the appropriate solution, In this way, learners acquire new experiences and skills.

The student's course load is calculated as 15 weeks (SWL)			
(h/sem) Structural SWL Regular Student Course Load During the Academic Year	48	(h/w) Structural SWL Student's regular weekly course load	3.2
(h/sem) Irregular SWL Student's irregular course load during the academic year	27	(h/w) Irregular SWL A student's irregular weekly course load	1.8
/ SEM) hours SWL (Total A student's regular course load during the academic year	75		

Course Evaluation					
		Time / Number	Weight (Grades)	Week Due	Relevant Learning
Formative Assessment	Classroom Activities	2	10% (10)	3 and 13	14 # and #2 and #11 and LO #1
	Home Activities	2	10% (10)	2 and 12	#5, LO #2
	Projects	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 6
Final Assessment	Midterm Exam	2 hours	10% (10)	7	LO #1–#7
	Final Exam	3 hours	50% (50)	16	All
Overall Assessment			100% (100 points)		

Weekly Theoretical and Practical Syllabus	
	Topics Covered
Week 2.1	Introduction to Air Conditioning and Its Importance - Understanding the basic principles of air conditioning - Understanding and connecting the importance of the air distribution system to the space and its impact on the comfort of the occupants - Understanding air properties and psychrometric charts - Explaining the properties of moist and dry air and using psychrometric charts
Week 4.3	Thermal Loads - Calculating thermal loads for buildings using mathematical equations - Identifying the factors that affect the distribution of thermal loads correctly - Explaining the impact of climatic factors on the performance of air conditioning systems
Week 6.5	Methods of Heat Transfer - Heat Transfer by Conduction - Convective Heat Transfer - Solar Radiation Heat Transfer
Weeks 9, 8, 7	Air Distribution Systems - Understanding the Principles of Systems Operation and Maintenance of Air Systems - Identifying Types of Air Conditioning Systems and Selecting the Most Appropriate Ones for Buildings
Weeks 12, 11, 10	Preliminary Calculations for Cooling Loads - Identifying the Required Capacity for Cooling Loads - Identifying the key factors for ensuring occupant comfort - The Effect of Building Components and Climatic Factors on Heat Transfer in a Building

Weeks 15, 41, 13	Understanding the Principles of Heating Load Analysis for Buildings - Understanding the basics of heating load calculations - Applying calculations using mathematical equations to various spaces
Week 16	Final Exam

Learning and Teaching Resources Learning and Teaching Resources		
	Text	Are you available at the library?
Required Texts	ASHRAE Handbook—HVAC Fundamentals	No
Websites	https://mechanicsmap.psu.edu/index.html	

Grading Scale			
Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Functioning with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Failed	(0–44)	Requires a great deal of work
Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near misses,” so the only adjustment to grades awarded beyond the original grade(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*History of Architecture III*)

Course Information					
Course Title	History of Architecture III		Course Submission		
Course Type	Specialized Educational Activity		☒ Theory ☐ Lecture ☐ Lab ☐ Instructional ☐ Practical ☐ Seminar		
Course Code	AE325				
ECTS Credits	3				
(SEM / hour) SWL	75				
Course Level		3	Semester for Delivery		6
Department of Management		Architecture	College	CENGs	
Course Advisor	Raouf Abdul Razzaq		Email		
Course Instructor's Academic Title		Lecturer	Course Instructor Qualifications		M.Sc.
Course Instructor			Email	Email	
Peer Reviewers' Names		Name	Email	Email	
Date of Scientific Committee Approval		June 1, 2025	Issue Number	1.0	

Relationship to Other Course Materials			
Core Requirement Unit	No	Semester	
Common Requirements Unit	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content

Course Objectives	1- This course aims to identify the nature of the emergence of the earliest civilizations, their structures, and their settlement in the Mesopotamian Valley, and to trace the development of architecture therein up to the Islamic conquests, which were influenced by them, as differences in thought and belief became apparent. 2- To prepare architecture students to be able to distinguish between different architectural civilizations. 3- To develop the ability to understand the philosophical and theoretical ideas underlying architectural design concepts. 4- To familiarize students with the most significant historical periods of civilizations. 5- To study the architectural forms and distinctive details of ancient civilizations.
Learning Outcomes for the Course	Cognitive Objectives (Knowledge and Understanding): 1- To define the nature of architecture and its history. 2- To study the Mesopotamian civilization in terms of its architecture and the philosophical ideas associated with architectural structures. 3- To identify architectural structures and their relationship to the diverse cultures of ancient civilizations. 4- Identify architectural details within each historical period of Mesopotamian civilization and their reflection in architecture. 5- To identify architectural principles in urban cities and Arab caravan cities, and to study the most important architectural components and details that characterized each historical period. Skill Objectives (Specialized Skills): 6- Have students prepare reports in which they select projects by distinguished architects to familiarize students with how to engage with philosophical ideas and theoretical and design trends. 7- Students' ability to interact with one another within student groups (collaborative interaction). Affective and Values-Based Objectives (Thinking Skills): 8- Enabling students to explore the history of architecture to develop a clear understanding of key architectural forms and details, thereby enhancing awareness and systematic study. 9- The ability to identify the creative design ideas of historical civilizations by presenting and drawing upon distinctive architectural compositions. 10- Enable students to solve their own design problems. General and Transferable Skills (Skills Related to the Job Market and Personal Development):

	11- The ability to create architectural compositions based on design principles. 12- Selecting distinctive architectural compositions from ancient civilizations to present and discuss with students. 13- Developing students' character as part of an integrated educational and formative process. 14- The ability to work with discipline as part of a team. 15- Possessing a full awareness of the ethical and practical responsibilities of both group and individual work.
Guidance Contents	Teaching and Learning Methods: 1. Theoretical Explanation of Lectures: Presenting scientific material through explanatory lectures. 2- Presentation of practical examples: Clarifying concepts through real-life or historical examples. 3- Question-based approach: Stimulating critical thinking by posing questions to students and discussing them. 4- Testing method: Using tests as a means to assess students' understanding. 5- Self-directed learning: Encouraging students to conduct research and engage in independent study outside of lecture hours. Assessment Methods (Theoretical Study): 1- Student engagement through active participation in the lecture: This includes interaction, asking questions, and discussing answers. 2- Asking questions and discussing answers: To measure students' understanding and comprehension of the material. 3- Assessment through weekly quizzes: To measure ongoing knowledge acquisition. 4- Assessment through exams, contributions, participation, and attendance: to measure students' knowledge and discipline. 5- Practical exams: To assess students' understanding of theoretical concepts in an applied context. 6- Preparation of reports and studies: To track students' progress in terms of knowledge and research. Monitoring and Evaluating Student Progress: 7- Student activity and participation during lectures: as an indicator of their engagement with and understanding of the material. 8- The student's level of commitment to submitting the required practical assignments: as an indicator of their academic commitment. 9- The student's diligence in attending lectures despite various difficulties: as evidence of seriousness and self-motivation.

Learning and Teaching Strategies

Strategies	The academic program includes two complementary aspects: The theoretical aspect: This consists of lectures delivered as part of the course curriculum. The practical aspect: This complements the theoretical material and is embodied in students' preparation of reports on distinguished architectural projects from the historical periods being studied, along with an explanation of the associated philosophical ideas, compositions, and architectural design methods. Students are taught the design curriculum in accordance with architectural principles through the study of architectural compositions and details. Throughout the academic program, available technology—such as smart boards, computers, and other tools—is used to present and discuss projects selected by the students themselves. Assessment Methods: Assessment is conducted through: - Monthly and semester exams. - Class contributions, active participation, and attendance. - Evaluation of reports and studies submitted by students.
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The student's course load is calculated as 15 weeks (SWL)

(h/sem) Structured SWL Student's regular course load during the semester	48	(h/w) Structural SWL Student's regular weekly workload	3.2
(h/sem) Unregulated SWL Student's irregular course load during the semester	27	(h/w) Unstructured SWL Student's non-structured weekly course load	1.8
/ SEM) hours of SWL (total The student's total course load for the semester	75		

Course Evaluation					
		Time / Number	Weight (Points)	Week Due	Relevant Learning
Formative Assessment	Classroom Activities	10	10% (10)	Continuous	All
	Home Activities	2	10% (10)	Continuous	All
	Report	1	10% (10)	Ongoing	All
	Semester	1	10% (10)	Continuous	All
Final Grade	Midterm Midterm	2 hours	10% (10)	12	All
	Final Exam	3 hours	50% (50)	16	All
Overall Grade			100% (100 points)		

Weekly Theoretical Curriculum	
	Topics Covered
Week 1	An introductory lecture explaining the nature of the course and its components, the required sources and reports, as well as how to apply the course material to architectural design
Week 2	The Theory of Settlement and the Stone Ages
Week 3	The Neolithic Period
Week 4	The Development of the Urka and Early Knowledge (Early History)
Week 5	Early Dynastic Period
Week 6	The Sumerian and Akkadian Periods
Week 7	The Third Dynasty of Ur
Week 8	The Babylonian and Early Kish Periods
Week 9	The Assyrian Period
Week 10	Late Babylonian Period, the Chaldean Kingdom
Week 11	The Parthians, the Seleucids, and the Sassanids
Week 12	Midterm Exam.
Week 13	The City of Hadr
Week 14	Arab Caravan Cities
Week 15	Seminar Series
Week 16	Preparation Week Before the Final Exam

Learning and Teaching Resources		
	Text	Is it available in the library?
Requested Texts	History of Architecture, Sir Banister Fletcher Cher; History of Ancient Iraq, Taha Baqir; History of Iraqi Architecture Through the Ages, Sharif Youssef	Yes
Recommended Texts		
Websites		

Grading Scale Grading Scale			
Group	Rating	Ratings %	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	The audio works, but with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Failed	(0–44)	Requires a great deal of effort to
Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking “near-pass failures,” so the only adjustment to grades awarded by the original grader(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Architectural Conservation Methods*)

Course Information					
Course Title	Architectural Conservation Methods		Course Delivery		
Course Type	Specialization-Specific Educational Activity		☒ Theory ☐ Lecture ☐ Lab ☐ Instructional ☐ Practical ☐ Seminar		
Course Code	AE326				
ECTS Credits	4				
)SEM / hour(SWL	100				
Course Level		3	Semester of Delivery		6
Department of Management		Architecture	College		CENGs
Course Instructor			Email		
Course Instructor's Academic Title			Course Advisor Qualifications		
Course Instructor			Email	Email	
Peer Reviewers' Names		Name	Email	Email	
Date of Scientific Committee Approval		March 2, 2025	Issue Number	1.0	

Relationship to Other Course Materials			
Core Requirement Module	No	Semester	
Common Requirements Unit	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	8. Understanding Conservation Principles: The objective is to develop an understanding of the principles and philosophies of architectural conservation. Students will learn about the importance of preserving cultural heritage, maintaining historical authenticity, and integrating sustainable practices into conservation efforts. 9. Knowledge of Conservation Techniques: The objective is to introduce students to the various conservation techniques used in architectural restoration. This includes

	familiarizing students with traditional building materials, conservation treatments, restoration practices, and sustainable conservation methods. 10. Documentation and Analysis Skills: The objective is to develop skills in documenting and analyzing historic buildings. Students will learn methods for conducting surveys, creating measured drawings, using digital technologies, and analyzing architectural features and materials. 11. Conservation Planning and Decision-Making: The goal is to equip students with the knowledge and skills required for effective conservation planning. This includes understanding the process of assessing the significance and condition of historic buildings, identifying conservation needs, and making informed decisions regarding interventions. 12. Conservation Ethics and Legislation: The goal is to educate students on the ethical considerations and legal frameworks associated with architectural conservation. They will become familiar with local and international legislation, conventions, and guidelines governing conservation practices. 13. Practical Conservation Skills: The goal is to develop practical skills related to architectural restoration. This may include hands-on experience with conservation techniques such as cleaning, repair, stabilization, and adaptive reuse. 14. Collaboration and Stakeholder Engagement: The goal is to emphasize the importance of collaboration and stakeholder engagement in conservation projects. Students will learn how to communicate and collaborate effectively with heritage authorities, local communities, and other stakeholders involved in conservation initiatives. 15. Critical Thinking and Problem Solving: The goal is to foster critical thinking and problem-solving skills specific to conservation approaches. Students will be encouraged to analyze complex conservation challenges, evaluate potential solutions, and develop innovative approaches to address them. 16. Research and Case Studies: The goal is to strengthen research skills and engage students in case studies related to architectural conservation. This includes exploring specific conservation issues, studying successful conservation projects, and understanding the impact of different conservation approaches. 17. Communication and Presentation Skills: The goal is to strengthen students' communication and presentation skills in the context of architectural conservation. They will learn how to effectively communicate conservation proposals, present research findings, and participate in public outreach activities.
Learning Outcomes for the Course	- Understand the principles and philosophies of architectural conservation and the importance of preserving cultural heritage. - Identify and assess the deterioration processes affecting historic structures and evaluate their condition. - Demonstrate knowledge of various conservation techniques and understand their application in architectural restoration. - Apply documentation and analysis skills to survey, measure, and analyze historic buildings and their architectural elements. - Develop conservation plans and make informed decisions regarding appropriate interventions and conservation strategies. - Demonstrate an understanding of ethical considerations and legal frameworks in architectural conservation. - Effectively manage conservation projects, including planning, budgeting, scheduling, and coordination with stakeholders. - Apply practical conservation skills, such as cleaning, repair, stabilization, and adaptive reuse techniques.

	- Demonstrate critical thinking and problem-solving skills when facing complex conservation challenges. - Conduct research and case studies related to architectural conservation, analyze successful conservation projects, and evaluate different conservation approaches. - Communicate effectively and present conservation proposals, research findings, and project outcomes to diverse audiences.
Syllabus	- Introduction to Architectural Preservation (2 hours) - o Definition and Importance of Architectural Preservation - o Overview of the history and evolution of conservation methods - o Ethical Considerations in Architectural Preservation - Principles and Methods of Preservation (3 hours) - o Understanding and Applying Conservation Principles - o Different Approaches to Architectural Restoration (e.g., Restoration, Rehabilitation, and Adaptive Reuse) - o Balancing Preservation with Modern Needs and Sustainability - Documentation Techniques in Architectural Preservation (3 hours) - o Survey methods and techniques for documenting historic buildings - o The Importance of Accurate Documentation for Conservation Planning and Decision-Making - o Digital tools and techniques used in architectural documentation - Material Analysis and Characterization (3 hours) - o Identification and Analysis of Building Materials Used in Historic Structures - o Techniques for Assessing Material Deterioration and Decay - o Conservation Considerations for Different Types of Materials (e.g., Masonry, Wood, and Metals) - Conservation Interventions and Treatments (4 hours) - o Understanding various conservation interventions and techniques - o Methods for preserving structural elements, facades, and interior decorations - o Conservation challenges and strategies for different types of buildings - Conservation Planning and Management (3 hours) - o Developing a Restoration Plan for Historic Buildings - o Considerations for sustainability Preservation and Long-Term Maintenance - o Legal and Regulatory Frameworks for Architectural Preservation - Case Studies in Architectural Preservation (5 hours) - o Analysis and Evaluation of Real-World Preservation Projects and Case Studies - o Learning from Successful Examples and Identifying Challenges and Lessons - o Examining Different Conservation Methodologies and Approaches - Preservation and Community Engagement (3 hours) - o Engaging local communities in conservation initiatives - o The importance of public awareness and participation in preserving architecture - o Collaborative approaches and strategies for community engagement - Ethics of Preservation and Decision-Making (2 hours) - o Exploring Ethical Considerations in Architectural Preservation - o Decision-Making Processes in Preservation Interventions

	- o Balancing Preservation Goals with Practical and Economic Factors 10. Assessment and Evaluation in Preservation (2 hours) - o Methods for Assessing the Condition and Significance of Historic Structures - o Assessing the Impact and Effectiveness of Conservation Interventions Monitoring and Maintenance Strategies for Preserved Buildings.
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Learning and Teaching Strategies	
Strategies	- Lectures: Traditional lectures can be used to introduce key concepts, theories, and historical background related to conservation methods. - Lectures can provide a foundation of knowledge and present information in a structured manner. - Case Studies: Analyzing and discussing real-world conservation case studies allows students to understand the practical application of conservation methods. Case studies provide opportunities to explore challenges, decision-making processes, and successful outcomes in conservation projects. - Group Discussions: Encouraging group discussions and debates fosters critical thinking and allows students to share their perspectives on conservation methods. It promotes collaborative learning and facilitates the exchange of ideas and opinions among students. - Field Trips and Site Visits: Organizing visits to historic buildings, conservation sites, or museums gives students the opportunity to observe conservation techniques and practices firsthand. This helps bridge the gap between theory and practice, allowing students to see conservation methods in action. - Guest Lectures: Inviting conservation experts, architects, or other professionals to give guest lectures provides students with insights from industry practitioners. Guest lectures can offer real-world experiences, practical advice, and expertise on specific conservation methods or projects. - Workshops and Hands-On Activities: Conducting workshops and hands-on activities allows students to acquire practical skills related to conservation methods. These activities can include documentation techniques, material analysis, or mock conservation interventions, providing a more interactive and experiential approach to learning. - Research Projects: Assigning research projects related to conservation methods allows students to delve deeper into specific topics of interest to them. It encourages independent thinking, data collection, and critical analysis, fostering a deeper understanding of conservation methods. - Multimedia and Visual Resources: The use of multimedia resources, such as videos, images, and virtual tours, can enhance the learning experience. Visual representations of conservation methods and techniques help students visualize concepts and examples. - Assessment Methods: Using a variety of assessment methods—such as written assignments, presentations, group projects, or exams—allows students to demonstrate their understanding of memorization methods from different perspectives. Assessments can include theoretical knowledge, practical skills, and critical thinking abilities.

The student's course load is calculated for 15 weeks (SWL)			
(h/sem) Structured SWL Student's regular course load during the semester	48	(h/w) Structural SWL Student's regular weekly course load	3
(h/sem) Unstructured SWL Student's irregular course load during the semester	27	(h/w) Unstructured SWL Student's irregular weekly course load	2
/ SEM) SWL hours (Total The student's total course load for the semester	75		

Unit Grade					
		Time / Number	Weight (Points)	Week Due	Related Learning GB
Formative Assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4, #6, and #7
	Projects	1	10% (10)	Ongoing	All
	Report	1	10% (10)	13	LO #5, #8, and #10
Final Grade	Midterm Exam	2 hours	10% (10)	7	LO #1–#7
	Final Exam	3 hours	50% (50)	16	Total
Total Grade			100% (100 points)		

Weekly Theoretical Syllabus

	Topics Covered
Week 1	- Introduction to Architectural Conservation - The Importance of Preservation in Architecture - Historical Background of Conservation Methods
Week 2	- Principles and Approaches to Preservation - Theoretical Foundations of Architectural Preservation
Week 3	- Case Studies of Successful Preservation Projects - Analysis of Conservation Challenges and Solutions
Week 4	- Documentation Techniques in Architectural Preservation - Survey Methods for Historic Buildings
Week 5	- Analysis and Characterization of Materials - Understanding Deterioration Processes in Historic Structures
Week 6	- Conservation Interventions and Treatments - Principles of Restoration and Architectural Rehabilitation
Week 7	- Adaptive Reuse and Sustainable Preservation - Balancing Preservation and Modern Requirements
Week 8	- Midterm Exam.
Week 9	- Field trips to historic buildings or conservation sites - Observation and Analysis of Conservation Techniques in Practice
Week 10	- Guest lecture by a conservation expert or professional - Exchange of experiences and insights from the field of conservation
Week 11	- Workshop on conservation documentation and drawing techniques - Hands-on exercises in recording and documenting historic structures
Week 12	- Group discussions and debates on conservation ethics and controversies - Examining Different Perspectives on Conservation Decision-Making
Week 13	- Sustainable conservation practices and green technologies - Integrating energy-efficient solutions into historic buildings
Week 14	- Student seminar presentations on conservation case studies - Analysis and Evaluation of Conservation Approaches and Outcomes
Week 15	- Review and revision of fundamental concepts and theories - Preparation for final assessments and assignments
Week 16	- Preparation Week Before the Final Exam

Learning and Teaching Resources		
	Text	Are you available at the library?
Required Texts	"Architectural Preservation: Principles and Practice" by Eileen Orbachli "Preserving Historic Buildings" by Bernard Filden	No
Recommended Texts	"The Conservation of Artifacts Made of Plant Materials" by Marie-Louise Florian "Preserving History: An Introduction to Its History, Principles, and Practice" by Norman Tyler	Yes
Websites	https://www.icomos.org/en https://arck-project.org	

Grade Chart			
Range	Grade	Grades (%)	Definition
Passing Range (50–100)	Excellent	90–100	Outstanding Performance
	Very Good	80–89	Above average with some errors
	Good	70–79	Passes with noticeable errors
	Average	60–69	Fair, but with significant shortcomings
	Acceptable	50–59	The work meets minimum standards
Failure Group) 49 – 0(	Fail (under review)	(45–49)	More work is needed, but credit has been awarded
	Fail	(0–44)	Requires a significant amount of work
Note: Grades will be rounded to the nearest whole number above or below 0.5 (for example, a grade of 54.5 will be rounded up to 55, while a grade of 54.4 will be rounded down to 54. The university has a policy of not overlooking "near misses," so the only adjustment to grades awarded by the original grader(s) will be the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi



MODULE DESCRIPTION (*Structures II*)

Course Information			
Course Title	Structures II	Course Submission	
Module Type	Supporting Educational Activity	☒ Theory ☐ Lecture ☒ Lab ☐ Instructional ☐ Practical ☐ Seminar	
Unit Code	AE327		
ECTS Credits	6		
Course Load (SWL) (hours/semester)	150		
Unit Level	3	Semester in Which the Course Is Offered	6
Department	Architectural Engineering	College	Engineering
Course Instructor	Prof. Muhammad Abbas Hussein	Email	mhmdabbas@uosamarra.edu.iq
Academic Title of the Course Coordinator	Professor	Academic Qualifications of the Course Coordinator	Master's Degree
Course Instructor		Email	
Name of Academic Evaluator		Email	
Date of Scientific Committee Approval		Issue Number	

Relationship to Other Units			
Core Requirements Unit	No	Semester	
Common Requirements Module	No	Semester	

Course Objectives, Learning Outcomes, and Suggested Content	
Course Objectives	1. To provide students with the fundamentals of the behavior and stability of structures under various loads. 2. To teach students the fundamentals of reinforced concrete structures. 3. To provide students with the fundamentals of the design of reinforced concrete lintels, slabs, and columns. 4. To teach students the fundamentals of steel structures and the principles of analysis and design of basic steel members.

Learning Outcomes	9. To understand the types of loads on structures and their calculations. 10. To understand the concept of load transfer and load paths in structures. 11. Understand the fundamentals of structural systems and their components. 12. To understand the principles of structural stability and how to determine it. 13. Enhance knowledge of reinforced concrete. 14. Understand the design principles of reinforced concrete lintels, slabs, and columns. 15. Understand the fundamentals of steel structures. 16. Understand the design principles of major steel structural members.
Contents Teaching	This course establishes the fundamental principles of structural analysis and design and their relationship to architectural design. The course begins by presenting the types of loads and their effects on structures, then explores the principle of load transfer and load paths, followed by a discussion of structural systems and their components, and then focuses on stability, rigidity, and determination in structures. It then delves into the details of structural analysis and design for basic elements in reinforced concrete and steel construction by presenting the principles and theories of structural analysis and design, and deepens students' structural knowledge through an overview of fundamental practical applications.

Teaching and Learning Strategies	
Strategies	1. Lectures: Presentation of theoretical knowledge and fundamental concepts related to structural engineering topics. 2. Assignments: Assigning students homework to apply the theories they have learned in class. 3. Supplementary Resources: Providing useful resources to deepen understanding. 4. Virtual (Online) Classes: Provide an opportunity to discuss and present basic and supplementary information. 5. Practical Sessions: Discussion and application of theoretical topics. 6. Visits to laboratories and engineering sites: Linking theory to practice.

Student Workload (SWL)			
Structured (number of hours per semester)	90	Structure (Number of Hours/Week)	6
Unstructured (number of hours per semester)	60	Structure (Number of hours per week)	4
Total	150		

Course Evaluation					
		Number	Percentage	Week	Related Learning Outcomes
Formative Assessment	Short Tests	2	10%	15	All
	Homework	2	15%	15	Total
	Classwork	2	10%	15	Total
	Report	1	5%	15	Total
Final Grade	Midterm Exam	1	10%	15	Total
	End of Semester	1	50%	15	Total
Overall Rating			100%	16	Total

Weekly Plan	
Week	Topics
Week 1	Course Description, Introduction to Structures, Types of Loads on Structures
Week 2	Calculations of Self-Weight and Dead Loads for Various Structural Elements
Week 3	Structural systems, load paths, and load transfer in structures
Week 4	Stability and Determination of Beams, Structures, and Braces
Week 5	Review and Exam
Week 6	Introduction to Reinforced Concrete and the Properties of Concrete and Reinforcing Steel

Week 7	Analysis and Design of Reinforced Concrete Lintels
Week 8	Reinforced Concrete Slabs and Their Types; Design of Unidirectional Reinforced Concrete Slabs
Week 9	Reinforced Concrete Columns and Their Types; Internal Forces in Structural Columns; Design of Short Reinforced Concrete Columns
Week 10	Review and Exam
Week 11	General Introduction to Steel Structures, Types of Steel Sections, Design Methods
Week 12	Analysis and Design of Steel Tension Members
Week 13	Analysis and Design of Steel Compression Members
Week 14	Analysis and Design of Steel Sills
Week 15	Review

Learning and Teaching Resources		
	Details	Is it available in the library?
Required Textbooks	<i>Structural Analysis</i> , R.C. Hibbeler, Pearson, 8 th edition, 2012.	Yes
	<i>Design of Concrete Structures</i> , Arthur H. Nilson et al., McGraw Hill, 14 th edition, 2010.	No
	<i>Design of Reinforced Concrete</i> , Jack C. McCormac and Russell H. Brown, Wiley, 9 th edition, 2014.	No
	<i>Structural Steel Design</i> , by Jack C. McCormac and Stephen F. Csernak, Pearson, 5 th edition, 2012.	Yes
	<i>Manual of Steel Construction</i> , LRFD, AISC (13 th ed., 2005).	No
Recommended Resources	<i>Statics and Strength of Materials for Architecture and Building Construction</i> , Barry Onouye and Kevin Kane, Pearson, 4 th edition, 2012.	No
	<i>-Building Structures Illustrated</i> , F. D. K. Ching et al., Wiley, 2 nd edition, 2014	No
	<i>Architectural and Structural Topics</i> , G. S. Salvan and J. F. Buhangin, JMC Press, 1 st edition, 1996.	No
Websites	https://mechanicsmap.psu.edu/index.html	

Grading System			
Group	Grade	Percentage	Grading
Passing Range (50–100)	Excellent	100–90	Outstanding Performance
	Very Good	89–80	Above-average performance with some errors
	Good	79–70	Acceptable work with noticeable errors
	Average	69–60	Poor, with significant shortcomings
	Acceptable	59–50	Meets the minimum requirement
Failure Group (49–0)	Fail (under review)	(49–45)	Fail (with the possibility of a retake)
	Fail	(44–0)	Failed by a wide margin
Note: Decimal parts of grades above or below 0.5 will be rounded to the nearest whole number (for example: a grade of 54.5 is rounded up to 55, while a grade of 54.4 is rounded down to 54). The university has a policy of not making exceptions for “failing by a narrow margin,” and therefore the only adjustment allowed to the grades given by the original grader is the automatic rounding described above.			

head of Department
Lect.Dr Mohammad Jameel Mahdi

