MODULE DESCRIPTION | 2024-2025 |

University of Samarra

Faculty of Engineering

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

Modules Description First Year

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**		

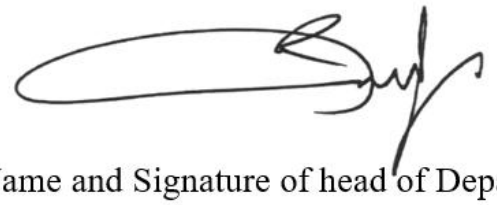
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Assignments**	10	30% (10)	Continuous	All
	Assignments	10	30% (10)	Continuous	All
	Projects	1	20% (40)	Continuous	All
	Quizzes	2	20% (20)	Continuous	All
Summative assessment	**Midterm 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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**	1	
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

	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 Creation of a portfolio showcasing the student's best architectural drawings

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.

Student Workload (SWL)			
Structured SWL (h/sem)	75	**Structured SWL (h/w)**	5
Unstructured SWL (h/sem)	45	**Unstructured SWL (h/w)**	3
Exam prepartion	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)		

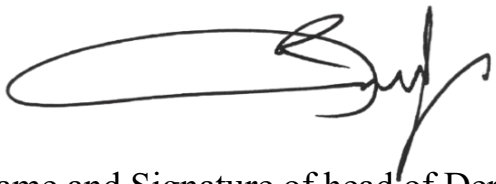
Delivery Plan (Weekly Syllabus)	
Semester 1	**Material Covered**
Week 1-2	- Introduction to Architectural Drawing - Importance of architectural drawing in engineering design - Overview of manual drafting tools and equipment
Week 3-6	- Drafting Techniques and Principles - Line types, weights, and styles - Sketching and freehand drawing - Geometric constructions and projections - Orthographic projection and Multiview drawings
Weeks 7-0	- 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.



Name and Signature of head of Department
Asst.Prof.Dr Raed Abdullah Hasan

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 Learning Outcomes	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 typs: a. One vanishing point b. Two vanishing point c. Three vanishing point

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.

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	امتياز	90 - 100	Outstanding Performance
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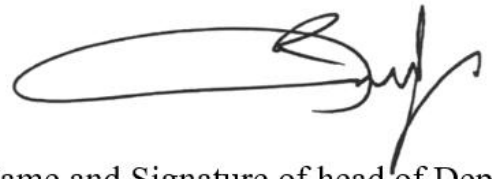


Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

MODULE DESCRIPTION
PRINCIPLES OF ART AND ARCHITECTURE

Module Information معلومات المادة الدراسة					
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 form 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**		

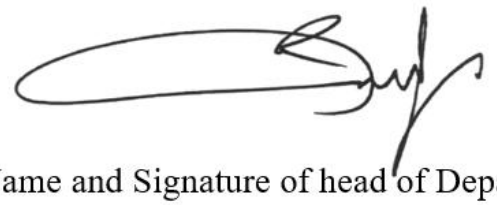
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	
	Assignments	2	10% (10)	2 and 12	
	Projects	1	10% (10)	Continuous	
	Report	1	10% (10)	13	
Summative assessment	**Midterm Exam**	3hr	10% (10)	8	
	Final 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 19-20th 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	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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**	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	---		**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**		

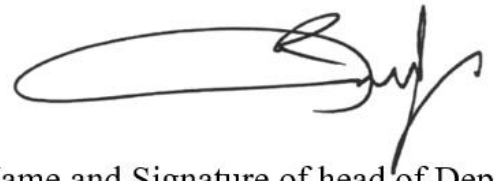
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 12	LO #1, #2 and #4
	Assignments	3	10% (10)	4,9 and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8&14	LO #5, #7and #6
	Midterm Exam	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, 15th 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	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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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."

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		

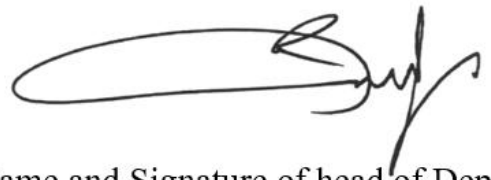
Module Evaluation					
		Time/number	**Weight (marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Tests**	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Verbal assignments	1	10% (10)	16	everyone
	laboratory.		10% (10)		everyone
	a report	15	10% (10)	continuous	everyone
Summative 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	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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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 Mukhlef 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.

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		

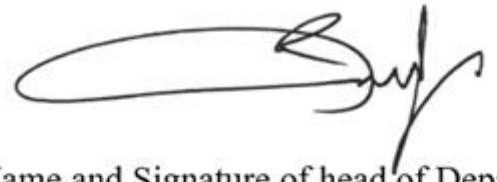
Module Evaluation					
		Time /Number	**Weight (marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5, 10, 12, 14	LO #1, 2, 3, 4
	Assignments	5	15% (15)	4,8,11,15	LO #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14
	Discussions	6	15% (15)	continuous	
Summative 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	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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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	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 (قد 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.

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**		2
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

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.

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)		

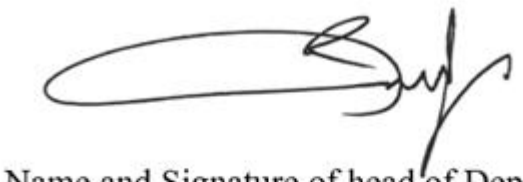
Delivery Plan (Weekly Syllabus)	
Weeks 1-4	- Advanced Orthographic Projection - Sectional views - Auxiliary views - Revolved and rotated views
Weeks 5-8	- Advanced Drawing Techniques - Pictorial drawings - Exploded views. - Assembly drawings - Mid-term Exam
Weeks 9-12	- Detailing and Annotation - Dimensioning 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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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.

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.

Name and Signature of head of Department
Asst.Prof.Dr Raed Abdullah Hasan

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**	2	
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
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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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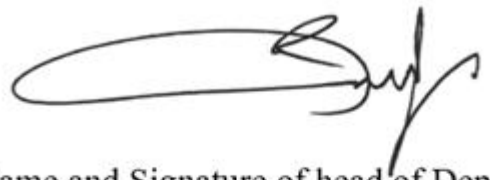


Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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.

Name and Signature of head of Department
Asst.Prof.Dr Raed Abdullah Hasan

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**	2	
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.

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**		

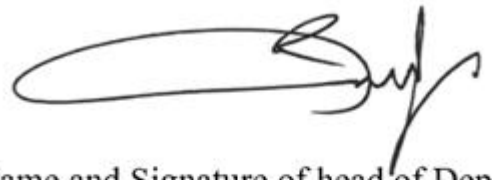
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 12	LO #1, #2 and #4
	Assignments	3	10% (10)	4,9 and 12	LO #3, #4
	Projects / Lab.	1	10% (10)	13	All
	Report	2	10% (10)	8&14	LO #5, #7and #6
Summative assessment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



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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. Part A – Windows 10 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] Part C – Learning Excel 2010 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.] Part C – Learning Power Point 2010 and Internet [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
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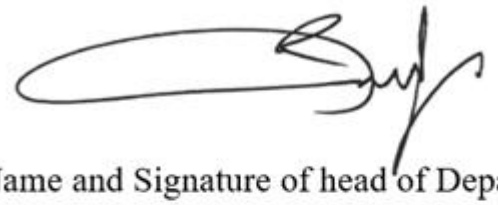
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

Modules Description Second Year

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**	3	
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.

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

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.

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**	3	
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

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 Prenzel 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.

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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. 5. Acquiring the skill of drawing axial, shear, and moment diagrams for beams and understanding their concepts. 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.

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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.** Part A – AutoCAD interfaces The use of CAD in engineering drawing, description of menu Bar and toolbars [6 hrs.] Part B – Drawing Drawing Ellipse, Rectangle, line, Ray, Circle, point, Arc, ---------- etc. [24 hrs.] Part C – Editing Commands and CAD Electrical 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
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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 required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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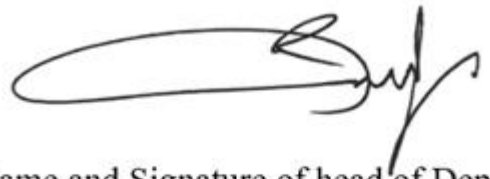


Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**	4	
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

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)		

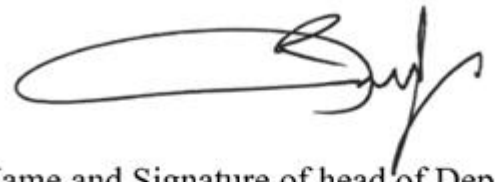
Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction - Definition of Engineering surveying and the relationship of theoretical representation to reality, fields that can be employed in the service of architecture.
Week 2	construction operations - construction methods
Week 3	Structural 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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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.

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**		

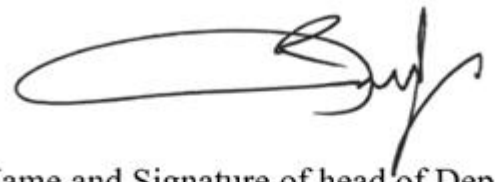
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	10	10% (10)	Continuous	All
	Assignments	2	10% (10)	5 and 10	All
	Report	1	10% (10)	14	All
	Seminar	1	10% (10)	15	All
Summative assessment	**Midterm Exam**	2hr	10% (10)	12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



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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	1. Determining space for activities such as classes, administration, library, auditorium and cafeteria. 2. Measured drawing of a large building such as, a large auditorium, etc. of a school, collage 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 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)	5and 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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Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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
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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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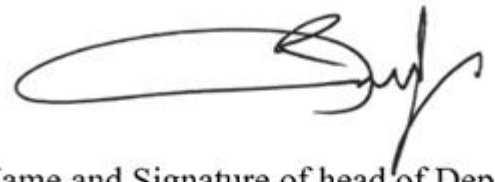


Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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 Pans. 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.

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.

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**	4	
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.

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		

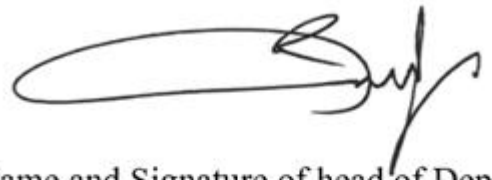
Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	3 and 13	LO #1, #2 and #11, #14
	Assignments	2	10% (10)	2 and 12	LO #2, #5
	Projects	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #6
Summative assessment	**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
	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 is 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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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**		4
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.

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

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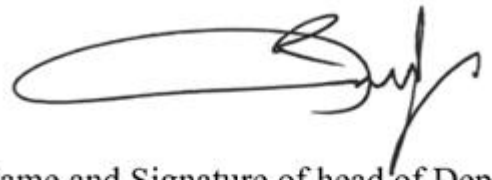

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

Module Information

Module Title	Computer II	**Module Delivery**	
Module Type	UOS-2304	☒**Theory**	
Module Code	Basic	☒**Lecture**	
ECTS Credits	3	**Lab** ☐	
SWL (hr/sem)	75	☐**Tutorial**	
		☐**Practical**	
		☒ **Seminar**	
Module Level	2	**Semester of Delivery**	1
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**
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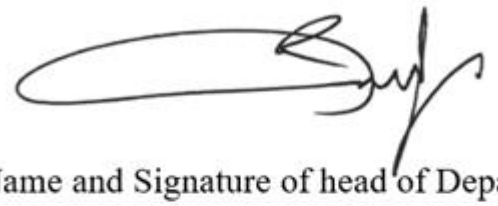
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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		

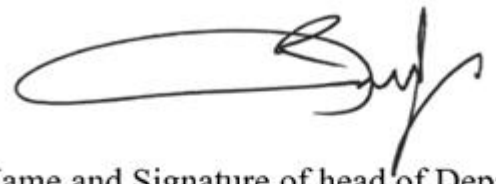
Module Evaluation					
		Time/number	**Weight (marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Tests**	2	10% (10)	5 and 10	LO #1, #2, #10, and #11
	Verbal assignments	1	10% (10)	16	everyone
	laboratory.		10% (10)		everyone
	a report	15	10% (10)	continuous	everyone
Summative 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	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.



Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

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		**Semester of Delivery**	4	
Administering Department	Architecture		**College**	**CENGS**	
Module Leader	Ghassan Dhahid		**e-mail**		
Module Leader's Acad. Title	Assistance lecturer		**Module Leader's Qualification**	MSc.	
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.

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**
	Quizzes	2	10% (10)	5 and 12	LO #1, #2 and #4
Formative assessment	**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
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	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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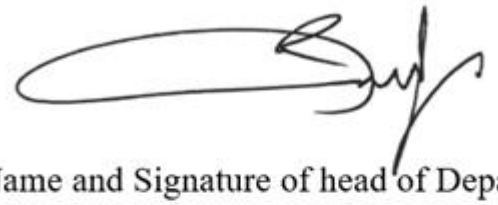

Name and Signature of head of Department

Asst.Prof.Dr Raed Abdullah Hasan

Curriculum of the Department of Architectural Engineering
College of Engineering / University of Samarra
Third Year / Credit-Based System

first semester					
No	Code	Course Title	Hour / Theoretical	Hour/Practical	Units
1	A301	Architectural Design III	1	8	10
2	A311	Building Construction V	2	2	2
3	A312	Structure III	2	-	2
4	A313	Planning principles	2	-	2
5	A314	History of Architecture III	2	-	2
6	A315	Computer V	1	2	2
7	A316	Sanitary Services	2	-	2
8	U311	English III	2	-	2
Total hours and units of the first semester			26		24

second semester					
No	Code	Course Title	Hour / Theoretical	Hour/Practical	Units
1	A301	Architectural Design III	1	8	-
2	A321	Building Construction VI	2	2	2
3	A322	Structure IV	2	-	2
4	A323	Air conditioning services	2	-	2
5	A324	History of Architecture IV	2	-	2
6	A325	Computer IV	1	2	2
7	A326	Logic and Design Methodology	2	-	2
Total hours and units of the second semester			24		12

Course Description / Stage III / Architectural Design III / A301

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:
Architectural Design III / Third Year
2. Course Code:
A301
3. Semester / Year:
First and Second Semester (Annual) 2024-2025
4. Date of preparation of this description:
2024-2025
5. Available attendance forms:
In-Person
6. Number of credit hours (total) / number of total units
1 Theoretical + 8 Practical / 270 Hours / 10 Units
7. Course Administrator Name and Scientific Title
Lect. Dr. Ali Majed Hameed ali.baghdadi@uosamarra.edu.iq
8. Course Objectives **The student develops a design concept for a multifunctional project that includes service, educational or recreational spaces.** **The student should determine the appropriate structural systems for the project (concrete or iron) with the inclusion of appropriate structural details.** **The student should integrate the engineering systems (sanitary, air conditioning, lighting) in an integrated manner within his project.** **The student evaluates his design work and presents them within a thoughtful architectural discussion during the summer vacation.** **The student should analyze the requirements of the project in terms of functional use and administrative, academic or residential multi-storey character.** **The student should use the results of the Building Installation Course III to incorporate precise operational details into his design project.**

Developing the student's design and construction skills through the implementation of a multifunctional architectural project that integrates the architectural, structural and technical aspects in an integrated applied framework.	**Course Objectives:**

9. Teaching and Learning Strategies:
1. Encourage students to engage in real design or simulation projects that require the application of theoretical knowledge on the ground. Through this approach, students can develop detailed architectural thinking skills by gaining valuable practical experience, especially with regard to detailed structures and at all levels (structural or environmental problems). **2. Students study the architectural details designs in front of the classroom and receive feedback from their colleagues and the teacher. • This helps to enhance the ability to constructive criticism and opens the door to in-depth discussions about the principles of sound thinking on how to deal with details scientifically, which improves students' general analysis and synthesis skills.**

Application: Practical application of design skills in real-life projects that simulate professional challenges Direct analysis of the architectural details and the special installation of each. Promote an interactive studio environment to display designs and exchange constructive feedback.	**Strategy:** **Learning through projects** **Field visits** **Design evaluation and feedback** **Use of optical media and technology**

10. Course Structure:

Required Learning Outcomes	Hours	**The week**
A small multi-activity project to identify the student's design ability during the first and second academic year with an extensive discussion of the students' work during the summer vacation.	36	**1-4**
A complex project that contains small and medium-sized spaces such as classrooms and multi-purpose halls (academic or commercial complexes, medium-sized industrial projects or recreational centers that are implemented through reinforced concrete structures or iron structures with the adoption of some structural details in the material of installing buildings III accompanying the current project.	117	**4-17**
Choosing a multi-story project of an administrative, academic or residential nature, containing repeated floors through which the student learns about the set of structural details adopted in such structural structures (reinforced concrete or iron) with an integrated application of sanitary engineering systems, air conditioning and interior lighting engineering.	117	**17-30**

11. Course Evaluation and Grade Divisions

Distribution of the grade out of 100 according to the tasks assigned to the student

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
R.H. Simons and A.R. Bean Author Donald, Watson:	**Main references**
Considered as student task	**Recommended books and references (scientific journals, reports) ...**
Considered as student task	**Electronic references, websites**
%8	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

lect. Dr. Ali Majed Hameed **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Building Construction V / A311

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Building Construction V / Third Year

2. Course Code:

A311

3. Semester / Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

2 Theoretical + 2 Practical / 60 Hours / 2 Units

7. Course Administrator Name and Scientific Title

Asst. lect. Safaa Yassin Safaa.yassin@uosamarra.edu.iq

8. Course Objectives

Introducing the student to the importance of the structural structure of the building and its close relationship to the design process, as choosing the appropriate structural structure for each building interacts directly with its function and the final external form. The lesson also touches on the importance of architectural details and the role they play when designing the building and their importance in the executive process for the purpose of ensuring the validity of implementation, as the designer increases the accuracy of highlighting the basic features of the building. The types of plans produced by the architect are also addressed, such as design, executive, laboratory, reality plans, etc. Each need it in order to be fit for the purpose for which it was found. The scientific aspect of the subject includes teaching the student how to produce and organize detailed executive plans in general and how to produce them and focus on multi-story structural buildings of reinforced concrete and medium structures bridges of steel material. As well as introducing the student to the system of arranging and coding plans, which is the system (CL / SFB) being one of the global systems in offices and engineering consultants.

Introducing the student to the basic concepts of structural systems and various structural elements, and developing his understanding of the behavior of buildings in terms of transferring loads and executive details, in a way that enhances his ability to integrate architectural design and structural requirements within accurate and integrated architectural outputs.	**Course Objectives:**

9. Teaching and Learning Strategies:

Application • **Promote an interactive environment for presenting lectures and exchanging discussions to reflect a realistic image that simulates professional challenges.** • **Enhance understanding through class assignments.** • **Enhance understanding through real-life projects.**	**Strategy:** • **Lecture-based learning** • **Field visits** • **Use of optical media and technology** • **Feedback** • **Preparation and discussion of reports**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Introducing the student to the objectives of the subject, its importance, its direct relationship to architectural design, the importance of architectural details, and the arrangement and output of plans in their final form.	4	**1**
The nature of the building, the units and structural elements of the building, the structural systems (construction), how to group the structural elements and the types of joints between them.	4	**2**

Concrete and reinforced concrete material, its types and structural specifications and how we can benefit from its properties and formability.	4	**3**
Structural behaviors of the basic structural parts and elements of the building in terms of the structural structure, the forces acting on it, and the nature of the loads to which the building is exposed	4	**4**
Types of stresses on the building, stress intensity, moments, and forces acting on the building and their impact	4	**5**
Foundations, requirements, selection principles and types, differential settlement, why it occurs and how to treat, with a focus on the Raft Foundation, tanking methods, and how to create multi-story building basements.	4	**6**
Systems of loads transmission in vertical buildings	4	**7**
Structural structures of roof structures Functional requirements of roofs, methods of classification, building materials, characteristics of each type and building materials Trusses and Girders	4	**8**
Frames (Portal) Rigid, types and methods of construction.	4	**9**
Shell roofs - their varieties - building materials and construction methods	4	**10**
Folded slab (plates) Roofs	4	**11**
Grid Roof structures	4	**12**
Shell roofs - their varieties - building materials and construction methods	4	**13**
Folded slab (plates) roofs Grid Roof structures – Complement	4	**14**
Tension roof structures	4	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
Building Installation Part III Authors : Anis Jawad	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%6	**Curriculum update rate or description**

Name and signature of the course holder Name and signature of the head of the department or Branch

Asst. lect. Safaa Yassin **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Structure III / A312

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Structure III / Third Year

2. Course Code:

A312

3. Semester / Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Number of hours 2 theoretical / 30 hours / number of units2

7. Course Administrator Name and Scientific Title

Prof. Mohammed Abbas Hussein mhmdabbas@uosamarra.edu.iq

8. Course Objectives

The first part of the construction topic for the third academic year specializes in general coverage of structural designs for buildings designed using reinforced concrete and through the introduction of general concepts in the origins of power distribution and the method of finding the static origin and calculations of stress and strain of iron and concrete used with an analysis of the origins of concrete sill designs, ceilings and columns, while the second part specializes in the origins of steel construction designs, analysis of iron columns and tensile parts in the teethers and designs of some types of lintels and includes theoretical coverage on some applications Scientific in a specialized laboratory for construction materials and through a group of experiments that include bricks, mosaic Kashi, concrete, rebar, stone (cladding and packaging), alabaster, wood and coarse fine aggregate

The student learns about the basic principles of analysis and design of reinforced concrete structures, by studying the forces acting on the structure, classifying it in terms of static determination, and identifying the behavior of reinforced concrete beams under the influence of moments and shear forces.	**Course Objectives:**

9. Teaching and Learning Strategies:

Using the methods of lectures, periodic scientific discussions, problem solving and field visits.	**Strategy**

10. Course Structure:

Required Learning Outcomes	Hours	The week
General introduction to the facilities, the distribution of forces and the types of forces imposed on them	6	**1-3**
Specific and non-static structures and the method of finding the degree of static origin	6	**3-6**
Introduction to reinforced concrete designs (concrete knock components and emotional stress diagrams for the rebound and concrete used)	6	**6-9**
Analysis of the design of reinforced concrete beams (reinforcement in the tensile zone and compression zone) for resisting flexural moments	6	**9-12**
Design of concrete sill for shear resistance.	6	**12-15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
strength of Materials Author: R.K. Rajput	**Main references**

none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%6	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Prof. Mohammed Abbas Hussein **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Planning Principles / A313
University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Planning Principles / Third Year

2. Course Code:

A313

3. Semester / Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Number of Hours2 Theoretical / 30 Hours / Total Number of Units: 2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Maysoon Mohi Hilal maysoon.hilal@uosamarra.edu.iq

8. Course Objectives

Introduce the student to the developments that have occurred in the history of the development of cities and their growth over time, including the social, economic, and technical influences that led to growth and change in cities. From ancient civilizations to contemporary cities.

The topic touches on some of the foundations and theories of planning, including the planning process, the main land uses, the principles of comprehensive plans, the development and maturation of students' concepts about the growth and physical development of cities according to regular contexts to achieve through which the principles of aesthetic and tourism and the historical sequence of development and the article also focuses on the principles of formal formations of urban architecture and the relationship of mass to space. In order to achieve this, it is necessary to first resort to understanding the principles of architectural and urban formation and the tool through which visual unity and sensory damage are achieved.

Providing the student with an integrated theoretical and analytical understanding of the development of planning thought, and identifying the components of contemporary cities, their problems, integrated urban planning mechanisms, and the foundations of preparing comprehensive plans, in a way that enhances his ability to contribute effectively to the formulation of urban development policies.	**Course Objectives:**

9. Teaching and Learning Strategies:

• Promote an interactive studio environment for presentation of lectures and exchange of discussions. • Enhance comprehension through classroom assignments including street network fees and town planning. • Enhance understanding during real-life projects.	**Strategy:**

10. Course Structure:

Required Learning Outcomes	Hours	**The week**
Utopias ideas proposed as city plans - the proposal of Buckingham - Owen - Le Corbusier Frank - Lude Wright-Sullivan Garden cities.	2	**1**
Contemporary cities - their problems and most important features - superficially touched on spatial and population expansion and social problems residential - transportation - service	2	**2**
Population studies The reasons for the increase in housing and the methods involved in calculating the population forecast, the population pyramid and its implications - its effects and the method of its establishment	2	**3**
Land uses, what they are, the correct methods of distribution, their percentage within the city, the mixtures of land uses in contemporary cities, the means used to control them.	2	**4**

Housing in contemporary cities is a problem, methods of housing survey, causes of the housing crisis, methods of prevention, methods of conducting survey and future housing estimation.	2	**5**
Commercial uses and ways of distributing them within cities - types of internal and external trade and their impact on the development of cities economically and physically.	2	**6**
Exam	2	**7**
Industrial uses, their requirements and their signature within the framework of the general plan of cities - recreational areas, their types, requirements and distribution within the city	2	**8**
Pollution in contemporary cities / types causes / ways to prevent visual pollution - air pollution - water pollution - social pollution.	2	**9**
Services in cities - their types - requirements - the criteria used to estimate them. Routes – Water – Sewers – Electricity – Telephone	2	**10**
The comprehensive plan of cities - their written contents and smiles and the most important features and specifications - with an explanation of some comprehensive plans for cities.	2	**11**
Planning Cycle - its structure - successive stages - its impact - its applications in various areas of life and planning	2	**12**
Planning transportation - an applied case using the planning wheel - causes of the transportation crisis - transportation system	2	**13**
Iraqi planning and building laws and regulations and their impact on controlling the growth of cities - the comprehensive plan of the census	2	**14**
Exam	2	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
Planning the Architectural Authors : Edward D. Mills	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%5	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Assoc. Prof. Dr. Maysoon Mohi Hilal **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / History of Architecture III / A314

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:
History of Architecture III / Third Year
2. Course Code:
A314
3. Semester / Year:
First Semester 2024-2025
4. Date of preparation of this description:
2023-2024
5. Available attendance forms:
In-Person
6. Number of credit hours (total) / number of total units
Credit Hours 2 Theoretical / 30 Hours / 2 Units
7. Course Administrator Name and Scientific Title
Lect. Dr. Zakaria Hashem Ahmed Zakria.ha.ah@uosamarra.edu.iq **Asst. lect. Raouf Abdul Razzaq Nouri rauoof.a.nori@uosamarra.edu.iq**
8. Course Objectives **Introduce the student to the development of early classical and Christian architecture, starting with Greek architecture in terms of origin, development, urban planning, and aesthetic theories such as the golden ratio and optical illusions. It also deals with Roman architecture and its structural development, especially in the construction of domes, with a study of its most prominent examples. The course then moves on to early Christian architecture, focusing on the transformation of Roman buildings into churches, and the evolution of the form of the basilica. It also deals with Byzantine architecture, which took the Greek cross as a model, and was characterized by the use of domes and mosaics. The course ends with Romanesque architecture, which was known for the use of semicircular arches and strong supports, and the spread of religious complexes in their design.**

Introduce the student to the development of early ancient, classical and Christian architecture, and analyze their architectural, structural and planning features, in a way that enhances his understanding of the historical and aesthetic influences on the formation and development of architecture through the ages.	**Course Objectives:**
9. Teaching and Learning Strategies:	
• Lectures and discussions of student education. • Field visits. • Use programs and means of presentation to support the educational process. • Focus on similar examples and discuss them for inspiration in future projects. • Preparing and discussing reports.	**Strategy:**

10.Course Structure

Required Learning Outcomes	Hours	The week
Greek architecture: origin and development	2	**1**
Greek architecture: the most important urban structures and construction methods	2	**2**
Greek architecture: Hippodamia urban planning	2	**3**
Greek architecture: architectural theories created by the Greeks (golden ratio and optical illusions) and model	2	**4**
Roman architecture: architectural features and their distinction from Greek architecture	2	**5**
Roman architecture: Roman domes and how to create them	2	**6**
Roman architecture: distinctive examples of Roman architecture	2	**7**
examination	2	**8**
Advanced Christian architecture: experiences and attempts to transform existing Roman buildings into churches in which Christian rituals were practiced	2	**9**
Advanced Christian architecture: the building of the Roman basilica and its transformation into a church	2	**10**
Byzantine architecture: taking the Greek cross as a model for the Byzantine church	2	**11**

Byzantine architecture: the construction of domes on the crossed arms of the cross and the use of mosaic, thus giving Byzantine architecture its distinctive style.	2	**12**
Romanesque architecture: The use of semicircular arches and huge supporting supports was in the features of this architecture	2	**13**
Romanesque architecture: the prevalence of building religious complexes (cathedral, monastery, and schools of monks and nuns).	2	**14**
Exam	2	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources

none	**Required textbooks methodology (if any)**
A History of Architecture Authors : Sir Banister Fletcher	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%5	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Lect. Dr. Zakaria Hashem Ahmed **Assoc. Prof. Raed Abdullah Hassan.**

Course Description / Stage III / Computer V / A315

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Computer V / Third Year

2. Course Code:

A315

3. Semester / Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Credit Hours 1 Theoretical + 2 Practical / 45 Hours / 2 Units

7. Course Administrator Name and Scientific Title

Assoc. Prof. Raed Abdullah Hassan raed.hasan@uosamarra.edu.iq

8. Course Objectives

Introduce the student to the basics of working on the 3D MAX program by familiarizing himself with the program's interface and its main components such as command menus, control panels, active scene, and motion and time controls. The student also acquires skills in interacting with scenes through zooming, browsing, and rotating tools, in addition to learning to choose elements and modify the way scenes are displayed. The course also includes practical applications on integrating models, replicating, importing and exporting objects, as well as creating basic geometric elements such as a ball, cube, cylinder, and the cone, as well as advanced geometric elements such as wave rings, reservoirs and composite models, which enables the student to build three-dimensional scenes in a systematic and technical way.

Provide students with the knowledge and skills necessary to use the computer in drawing and showing architectural projects. Develop practical skills in designing and showing architectural projects realistically. Promoting innovation and creativity and developing students' artistic taste by learning different demonstration techniques and employing them in the work of architectural compositions.	**Course Objectives:**

9. Teaching and Learning Strategies:

• Project-based learning: Students can work on real projects or simulate the architectural design process. This allows them to apply theoretical concepts in real-world contexts, and gain the necessary practical experience. • Criticism and problem solving: Provide real-world problems or case studies for students to solve using acquired skills and knowledge. This enhances critical thinking and problem-solving abilities. • Provide interactive lectures that include open discussions and questions aimed at stimulating students' critical thinking. • Students can work on real projects or simulate the architectural design process.	**Strategy:**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Running the program (3D Studio Max) and identifying its components (command list, command boards, element platoon, active scene, movement and time control zone,	6	**1-2**

viewer display control keys, jump control keys, determining the stage of selecting the element		
Change the distribution of simple screen scenes on the viewer, zooming, browsing, spinning (rotating) and selecting the element .	3	**3**
Simple editing tools, form merge, form merging applications	6	**4-5**
Duplicate objects and materials, import forms (import) Export forms (Export)	9	**6-9**
Construction of standard geometric elements Geosphere, Sphere cone, Box, Tube, cylinder, plane. Applications, Teapot, pyramid, tours	9	**10-13**
Advanced Engineering Elements	9	**11-14**
Hydra, Oil Tank, Chamber, cylinder, Chamber box, Tours Knot, Gengen, L – Ext, Spindle, Capsule, Prism, Ring wave, C – Ext Ring wave creation	3	**15**

11. Course Evaluation and Grade Divisions

Distributing the grade out of 100 according to the tasks assigned to the student such as monthly exams, daily submissions and practical classroom tests .

12. Learning and Training Resources

none	**Required textbooks methodology (if any)**
- Autodesk 3D Max Design- The Designer's Handbook. By Marcello Femi, AIA	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
https://www.autodesk.com	**Electronic references, websites**
%7	**Curriculum update rate or description**

Name and signature of the course holder Name and signature of the head of the department or branch

Assoc. Prof. Raed Abdullah Hassan **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Sanitary Services / A316

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Sanitary Services / Third Year

2. Course Code:

A316

3. Semester / Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Number of hours 2 theoretical / 30 hours / number of units2:

7. Course Administrator Name and Scientific Title

Prof. Abbas Hadi Abbas abbas.hadi@uosamaeea.edu.iq

8. Course Objectives

Introducing the architectural student to the basic principles of health services design (design of cold and hot water networks, drainage of ordinary and heavy water and rainwater, as well as the principles of waste collection and disposal for low-lying and multi-story buildings)

The student also learns about the origins of swimming pools, bathrooms and sanitary facilities, the origins of their orthogonal projection, mechanically water recharge methods, and water drainage systems in them with different possibilities and through a set of live examples selected for this purpose.

Enable students to design and plan various sanitary installation systems such as water networks, rainwater drainage, ventilation, and sewage pipes, in addition to studying the design of swimming pools, feeding and drainage systems, sterilization methods, and designing sanitary facilities and bathrooms in accordance with the quality of building use, taking into account architectural and environmental aspects.	**Course Objectives:**

9. Teaching and Learning Strategies:

• Lectures and discussions of student education. • Field visits. • Use programs and means of presentation to support the educational process. • Preparing and discussing reports.	**Strategy**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Design of cold and hot water networks for single-story and multi-story buildings Plumbing: - - Water supply pipe sizing. (Hot and cold water) Health Foundation Structures, Types, Expenses - Fixture Rainwater drainage networks for buildings Drainage system- Ventilation networks for sewer pipes for buildings Vent system – - Types of pipes used in pips material networks All these paragraphs study their relationship to the architectural design of buildings of different uses.	14	**1-7**
Swimming pools: - • Types • Architectural design, feeding and drainage networks • Sterilization methods • Bathroom and sanitary set design	6	**8-10**
The different methods of collecting waste in residential buildings and multi-story buildings and their relationship to the architectural design of those buildings	4	**11-12**
Proposed designs for the range of sanitary facilities and bathrooms for buildings with special uses: - • comps	4	**13-14**

• Comfort station • parking area		
Exams	2	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
Logistics Engineering and Health Authors : Hayfa Zgaya and Slim Hammadi	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%7	**Curriculum update rate or description**

Name and signature of the course holder Name and signature of the head of the department or branch

Prof. Abbas Hadi Abbas **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / English Language III / U311

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:
English Language III / Third Year
2. Course Code:
U311
3. Semester / Year:
First Semester 2024-2025
4. Date of preparation of this description:
2023-2024
5. Available attendance forms:
In-Person
6. Number of credit hours (total) / number of total units
Number of Hours 2 Theoretical / 30 Hours / Number of Units2
7. Course Administrator Name and Scientific Title
Asst. Lect. Ghassan Zahid
8. Course Objectives **Review and apply previous English grammar principles such as conditional sentences, binary verbs, and conversion between direct and indirect speech. He also learns to formulate passive sentences and use different question styles, including "how" and tag questions. Acquire skills in the formation of traits in degrees of comparison and preference, and understand different types of adverbs such as adverbs of place, time, repetition, and method, and the use of prepositions related to time and place. In addition, he learns to use words Quantity such as some-any, much-many, and too-enough, and applies these rules in practical conversation and prepares for the semester exam.**

Develop the student's basic and advanced English grammar skills, including understanding and using conditions, binary verbs, direct and indirect speech formulation, passive construction, question and answer structure, correct use of adjectives and adverbs, as well as enhancing the ability to speak and speak confidently and fluently.	**Course Objectives:**
9. Teaching and Learning Strategies:	
Use the methods of lectures, periodic scientific discussions and reporting. Use the style of reading, building sentences and writing.	**Strategy:**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Definition: A Review of Previous Principles	2	**1**
Conditions and results: if, whether, unless	2	**2**
Two-word verbs	2	**3**
Direct and indirect speech	2	**4**
Passive voice	2	**5**
Passive voice(continued)	2	**6**
How: question and answers patterns	2	**7**
Tag questions	2	**8**
Adjective: formation of the comparative and superlative	2	**9**
Types of adverbs: place, time, frequency, manner	2	**10**
Prepositions of time and place	2	**11**
Word of quantity: some-any; much-many; too-enough	2	**12**
Semester Exam	2	**13**

Conversation	2	**14**
Review	2	**15**
11. Course Evaluation and Grade Divisions		
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.		
12. Learning and Training Resources:		
English around the World – Book Five – (Lessons 1, 2, 3, 4, & 5) By; Camille Tebsherani Sequence – A Course in basic writing – (Chapters 2, 4, 6, 8)		**Required textbooks methodology (if any)**
Longman Author: Debroha Phillips		**Main references**
none		**Recommended books and references (scientific journals, reports) ...**
none		**Electronic references, websites**
%5		**Curriculum update rate or description**
Name and signature of the course holder **Name and signature of the head of the department or branch** **Asst. Lect. Ghassan Zahid** **Assoc. Prof. Raed Abdullah Hassan**		

Course Description / Stage III / Building Construction VI / A321

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Building Construction VI / Third Year

2. Course Code:

A321

3. Semester / Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

2 Theoretical + 2 Practical / 60 Hours / 2 Units

7. Course Administrator Name and Scientific Title

Asst. Lect. Safaa Yassin Hamad Safaa.yassin@uosamarra.edu.iq

8. Course Objectives

The student learned about the different types of stairs, especially reinforced concrete, their construction methods and structural behavior, as well as the ramps used for people and wheels and their slope angles. The student learns various building systems and services such as heating and cooling (HVAC), electrical systems, lighting, health services and communications, while understanding the symbols used in the plans. It also studies the steel material, its properties, the types of steel structures and basic structural sections, and ways to connect and strengthen these structures against different forces. Learns Methods of packaging steel structures with environmental, thermal and sound insulation, in addition to studying internal chipping, types of floors and their structures. Finally, the student is introduced to structural structures composed of steel and concrete, SFB and CI systems and how to apply them to engineering plans.

Providing the student with theoretical and practical knowledge of the basics of designing and implementing various structural elements such as stairs and upgrades, understanding building systems and services (air conditioning, electricity, sanitary, communications), in addition to enabling him to identify the characteristics of steel structures, their systems, methods of implementation, linking and isolating them, with a focus on composite systems such as the SFB/CI system, and qualifying him to read and analyze the relevant executive and detailed plans.	**Course Objectives:**

9. Teaching and Learning Strategies:

Application • **Promote an interactive environment for presenting lectures and exchanging discussions to reflect a realistic image that simulates professional challenges.** • **Enhance understanding through class assignments.** • **Enhance understanding through real-life projects.**	**Strategy:** • **Lecture-based learning** • **Field visits** • **Use of optical media and technology** • **Feedback** • **Preparation and discussion of reports**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Stairs and ramps ypes of stairs, especially reinforced concrete stairs, on-site and precast and various construction methods and their structural behavior. Ramps for people, wheels, slope angles and turning radius.	4	**1**
Building Services: Heating and cooling services H V A C and their systems and accessories within the building	4	**2**
lectrical services, lighting, installations and identification of some of the symbols used in the schemes of health services Water supply and drainage	4	**3**
Telecommunications services and special services.	4	**4**

Steel structures / iron material extraction, components, types, properties and disadvantages.	4	**5**
Types of basic structural structures of steel and its basic structural sections.	4	**6**
Methods of connecting the basic elements and sections of steel structures and methods of connecting the basic sections with each other.	4	**7**
Methods of strengthening steel structures against lateral and horizontal forces (Bracing)	4	**8**
Methods of sheathing steel structures from the outside of ceilings and walls, methods of connecting and environmentally insulating them and thermally and acoustically with the details of the openings.	4	**9**
Internal cutting, types of floors, intermediate floors, structures and finishing materials	4	**10**
Steel stairs, types and methods of construction, concrete and their details	4	**11**
Composite structural structures of steel and concrete and their details	4	**12**
S F B / CI system and rolling tables	4	**13**
Application of the S F B / C I system to the charts and types of diagrams that this system deals with	4	**14**
Exams	4	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
Building Installation Part III Authors : Anis Jawad	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%6	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Asst. Lect. Safaa Yassin Hamad **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Structure IV / A322

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Structure IV / Third Year

2. Course Code:

A322

3. Semester / Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Number of hours 2 theoretical / 30 hours / number of units2:

7. Course Administrator Name and Scientific Title

Prof. Mohammed Abbas Hussein mhmdabbas@uosamarra.edu.iq

8. Course Objectives

The student was introduced to the types of concrete ceilings and the principles of their design, especially ceilings with one-way mobile loads. It also studies the types and specifications of concrete columns, with a focus on axial force diagrams, bending moments, and short concrete column design. In addition, he learns about the general basics of steel structures, and acquires the skills of designing and analyzing individual steel columns, designing tensile parts in gears, and designing steel columns using the R - M method.

Introducing the student to the principles of designing and implementing concrete roofs, concrete and iron columns, with a focus on analyzing different loads and designing structural elements in a practical and effective manner, which provides him with the necessary knowledge to understand structural behavior and choose the appropriate design in engineering projects.	**Course Objectives:**

9. Teaching and Learning Strategies:

Using the methods of lectures, periodic scientific discussions, problem solving and field visits.	**Strategy**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Introduction to concrete ceilings and their types	6	**1-3**
Design of concrete ceilings with one-way mobile loads	6	**4-6**
Concrete columns types and specifications. A- Axial force diagrams – bending moments of columns B- Design of short concrete columns	6	**7-9**
General introduction to steel structures	6	**10-12**
A- Design and analysis of individual iron columns B- Design of tensile parts in the toothbags C- Design of iron lintels by (R - M) method	6	**13-15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:

none	**Required textbooks methodology (if any)**
strength of Materials Author: R.K. Rajput	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**

none	**Electronic references, websites**
%6	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Prof. Mohammed Abbas Hussein **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / Air Conditioning Services / A323

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:
Air Conditioning Services / Third Year
2. Course Code:
A323
3. Semester / Year:
Second Semester 2024-2025
4. Date of preparation of this description:
2023-2024
5. Available attendance forms:
In-Person
6. Number of credit hours (total) / number of total units
Number of hours 2 theoretical / 30 hours / number of units2:
7. Course Administrator Name and Scientific Title
Asst. Lect. Maha Rahman
8. Course Objectives **The student learns the principles of thermal environmental comfort and how to calculate the heating load and cooling load required for buildings. Gain an understanding of different heating and cooling systems, and apply this to the design of air conditioning systems for residential, medium and large buildings. It also learns how air is distributed, duct design, and hot and cold-water pipes used in heating and cooling systems. The course also includes the study of approximate areas needed for conditioning work, with practical examples to enhance practical understanding of the subject.**

Provide the student with the basic concepts of thermal environmental comfort, understand the basics of heating and cooling load calculations, in addition to identifying the principles and different heating and cooling systems, and how to design air conditioning systems for residential, medium and large buildings, with a focus on air distribution and design of hot and cold-water ducts and pipes.	**Course Objectives:**

9. Teaching and Learning Strategies:	
• Using the methods of lectures, periodic scientific discussions, problem solving and field visits • Lectures and discussions of student education. • Field visits. • Use programs and means of presentation to support the educational process. • Preparing and discussing reports.	**Strategy**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Principles of thermal environmental comfort	2	**1**
Calculations of heating load and cooling load	2	**2**
Principles of heating and heating systems	2	**3**
Principles of refrigeration	2	**4**
Air conditioning residential floor	2	**5**
Air conditioning for medium and large buildings	2	**6**
Air distribution and duct design	2	**7**
Design of hot and cold-water pipes for heating and cooling purposes	2	**8**
Approximate main areas of air conditioning works in buildings	2	**9**
Elected examples through which the student learns about the principles of applied work	10	**10-14**
Exams	2	**15**

11. Course Evaluation and Grade Divisions
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources:	
none	**Required textbooks methodology (if any)**
Air Conditioning Engineering Authors: W.P. Jones, MSc, CEng, FInstE, FCIBSE, MASHRAE	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%6	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Asst. Lect. Maha Rahman **Assoc. Prof. Raed Abdullah Hassan**

Course Description / Stage III / History of Architecture IV / A324

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

History of Architecture IV / Third Year

2. Course Code:

A324

3. Semester / Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Credit Hours 2 Theoretical / 30 Hours / 2 Units

7. Course Administrator Name and Scientific Title

Lect. Dr. Zakaria Hashem Ahmed Zakria.ha.ah@uosamarra.edu.iq
Asst. Lect. Raouf Abdul Razzaq Nouri rauoof.a.nori@uosamarra.edu.iq

8. Course Objectives

The student learns about the emergence and development of Gothic architecture, studying the details of the architectural design of churches such as the Latin cross and the problems of natural lighting, and their solutions using plane, quadrilateral and hexagonal arches, with prominent examples of French and English churches. The student also examines the reasons for the emergence of the Renaissance style, the characteristics of the Florence Cathedral and the works of the architect Prolonschi, the spread of the style in Europe, the influence of Palladio's writings on world architecture, the emergence of public buildings and pivot planning, as well as famous architectural examples and later developments such as Baroque and Rococo.

Introducing the student to the history of architecture and its basic developments, with a focus on the Gothic and Renaissance styles, to understand the architectural and artistic characteristics of each style, the most important design solutions that characterized each period, and the impact of these styles on global architecture.	**Course Objectives:**

9. Teaching and Learning Strategies:

• Lectures and discussions of student education. • Field visits. • Use programs and means of presentation to support the educational process. • Focus on similar examples and discuss them. • Preparing and discussing reports.	**Strategy:**

10.Course Structure

Required Learning Outcomes	Hours	The week
Gothic architecture: evolution and development	2	**1**
Gothic architecture: Latin cross and church form.	2	**2**
Gothic architecture: integration of the meaning of the church with content and content.	2	**3**
Gothic architecture: the problem of lack of natural light in the chapel.	2	**4**
Gothic architecture: finding solutions resulting from the use of flying arches in facades and quadrilateral and hexagonal arches in the chapel.	2	**5**
Gothic architecture: distinct examples of French and English churches.	2	**6**
examination	2	**7**
Renaissance architecture: reasons for the emergence of the Renaissance style.	2	**8**
Renaissance architecture: Florence Cathedral and Prolonski architecture.	2	**9**
Renaissance architecture: the spread of the style in Rome, Venice and Europe.	2	**10**
Renaissance architecture: Palladio's writings and their impact on the New World.	2	**11**
Renaissance architecture: the emergence of public buildings and pivot planning.	2	**12**

Renaissance architecture: examples of Renaissance buildings and its most famous architects.	2	**13**
Renaissance architecture: the decline and decline of the style and the emergence of the Baroque and Rococo movement later.	2	**14**
Exams	2	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and Training Resources

none	**Required textbooks methodology (if any)**
A History of Architecture Authors: Sir Banister Fletcher	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%5	**Curriculum update rate or description**

Name and signature of the course holder **Name and signature of the head of the department or branch**

Lect. Dr. Zakaria Hashem Ahem **Dr. Prof. Raed Abdullah Hassan**

Course Description / Stage III/ Computer IV / A325

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:

Computer IV / Third Year

2. Course Code:

A325

3. Semester / Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available attendance forms:

In-Person

6. Number of credit hours (total) / number of total units

Credit Hours 1 Theoretical + 2 Practical / 45 Hours / 2 Units

7. Course Administrator Name and Scientific Title

Assoc. Prof. Raed Abdullah Hassan raed.hasan@uosamarra.edu.iq

8. Course Objectives

Learn the basics of 3D MAX software for designing and modeling 3D geometric shapes, focusing on the use of various tools to create and modify models, applying lighting and camera operations, and understanding the principles of movement and shading

Give the student a general idea of the 3D MAX program and its basic principles with advanced exercises in the program and its common applications, which benefit a student in its advanced stages and develop practical skills in designing and showing architectural projects realistically.	**Course Objectives:**

9. Teaching and Learning Strategies:

• Project-based learning: Students can work on real projects or simulate the architectural design process. This allows them to apply theoretical concepts in real-world contexts, and gain the necessary practical experience. • Criticism and problem solving: Provide real-world problems or case studies for students to solve using acquired skills and knowledge. This enhances critical thinking and problem-solving abilities. • Provide interactive lectures that include open discussions and questions aimed at stimulating students' critical thinking. • Students can work on real projects or simulate the architectural design process.	**Strategy:**

10. Course Structure:

Required Learning Outcomes	Hours	The week
• Line, Circle, Spline, Ellipse, Arc, Daunt, Ngon))	3	**1**
• Text	3	**2**
• Helix Screw, Section, Modifications, Copying, Arrays, Melodic, Bend, Mirror	12	**3-6**
• Boolean (Union, Intersection, Subtraction)	3	**7**
• Perspective, Cameras, Lighting, Material Addition, Principles of Movement and Shading	15	**8-12**
• Give initial principles for advanced architectural systems	6	**13-14**
• Exams	3	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as monthly exams, daily submissions and practical classroom tests.	
12. Learning and Training Resources	
none	**Required textbooks methodology (if any)**
- Autodesk 3D Max Design- The Designer's Handbook. By Marcello Femi, AIA	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
https://www.autodesk.com	**Electronic references, websites**
%7	**Curriculum update rate or description**
Name and signature of the course holder Name and signature of the head of the department or branch **Assoc. Prof. Raed Abdullah Hassan** **Assoc. Prof. Raed Abdullah Hassan**	

Course Description / Stage III / Logic and Design Methodology / A326

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Stage of Study:		
Logic and Design Methodology / Third Year		
2. Course Code:		
A326		
3. Semester / Year:		
Second Semester 2024-2025		
4. Date of preparation of this description:		
2023-2024		
5. Available attendance forms:		
In-Person		
6. Number of credit hours (total) / number of total units		
Credit Hours 2 Theoretical / 30 Hours / 2 Units		
7. Course Administrator Name and Scientific Title		
Prof. Dr. Rana Ibrahim Khalil rana.ibrahim@uosamarra.edu.iq		
8. Course Objectives **The student can understand the design process as a rational thought and approach, and learn about the importance of logical thinking in design work and how to evaluate ideas in a systematic way. It also studies the impact of the geographical and physical environment on design and its reflection on humans. Learn about the classical Greek cultural heritage and its influence on design thinking, and learn about the basic principles of Vitruvius in architecture. Acquire skills in the use of elements of order, arrangement, ratio, symmetry, fit, economy in design. He also learns the importance of criticism as a tool for evaluating design work and recognizes that design reflects a combination of subjective desires and objective requirements. Finally, he explains the different stages of design work, preparing the student to work in an organized and systematic manner.**		
Make the student aware of the multiple disciplines and topics that play an important role in the design process while clarifying the basic design principles, processes and factors included in the design act, as well as teaching the student to apply logic for a purpose that enables him to think clearly and reach sound conclusions and inferences to avoid incorrect and wrong thinking in his design work.	**Course Objectives:**	
9. Teaching and Learning Strategies:		
• Promote an interactive studio environment for presentation of lectures and exchange of discussions to reflect a realistic image that simulates professional challenges. • Enhance understanding through classroom assignments including the process of gathering and analyzing information to solve problems • Enhance understanding during real-life projects by making visits and interviewing designers to expand the understanding of design approaches. • Relying on brainstorming to solve a Tamimia problem and give and develop design solutions and alternatives.	**Strategy:**	
10. Course Structure:		
Required Learning Outcomes	**Hours**	**The week**
Clarify the objectives of the lectures and define and interpret terms	2	**1**
Design as a rational and intellectual process	2	**2**
The importance of rational thinking and its effectiveness in design work	2	**3**
The mechanism of logical thinking and the methods used in logical evaluation	2	**4**

Design phenomena and reflections as they exist in nature	2	**5**
Design as a reflection of geographical and physical conditions and their impact on humans	2	**6**
Design as a reflection of geographical and physical conditions and their impact on humans Ancient Greek civilization and classical influences on design thinking	2	**7**
examination	2	**8**
Vitruvius and the concept of his translation of architecture and the six main and basic elements in design work	2	**9**
System and arrangement elements and their reflections in the design	2	**10**
Elements of ratio and symmetry and their reflections in design	2	**11**
Elements of convenience and economy and their implications in design	2	**12**
Use the method of criticism as a means of evaluating design work	2	**13**
Design work reflections of subjective desires and objective requirements An explanation of the different stages required by the design work	2	**14**
examination	2	**15**

11. Course Evaluation and Grade Divisions

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12. Learning and training resources.

none	**Required textbooks methodology (if any)**
none	**Main references**
none	**Recommended books and references (scientific journals, reports) ...**
none	**Electronic references, websites**
%7	**Curriculum update rate or description**

Name and signature of the course holder Name and signature of the head of the department or branch

Prof. Dr. Rana Ibrahim Khalil **Assoc. Prof. Raed Abdullah Hassan**

Curriculum of the Department of Architectural Engineering

College of Engineering / University of Samarra

Fourth Year / Credit-Based System

First semester					
No	**Code**	**Course Title**	**Hour/Theoretical**	**Hour/Practical**	**Units**
1	**A401**	**Architectural Design IV**	2	8	**12**
2	**A411**	**Interior Design**	2	2	**2**
3	**A412**	**Lighting Services**	2	-	**2**
4	**A413**	**Housing I**	2	-	**2**
5	**A414**	**Theories of Architecture I**	2	-	**2**
6	**A415**	**Arab-Islamic Architecture I**	2	-	**2**
7	**U411**	**English IV**	2	-	**2**
Total First Semester Hours and Units			**24**		**24**

Second semester					
No	**Code**	**Course Title**	**Hour/Theoretical**	**Hour/Practical**	**Units**
1	**A401**	**Architectural Design IV**	**2**	**8**	**-**
2	**A421**	**Outdoor Space Design**	**2**	**2**	**2**
3	**A422**	**Housing II**	**2**	**-**	**2**
4	**A423**	**Architectural Theories II**	**2**	**-**	**2**
5	**A424**	**Arab-Islamic Architecture II**	**2**	**-**	**2**
6	**A425**	**Architectural Acoustics**	**2**	**-**	**2**
Total hours and units of the second semester			**22**		**10**

Course Description / Stage IV / Architectural Design / A401

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:
Architectural Design / Fourth Year
2. Course Code:
A401
3. Semester/Year:
First and Second Semester 2024-2025
4. Date of preparation of this description:
2023-2024
5. Available Forms of Attendance:
In-Person
6. Number of study hours (total) / number of total units
Total hours = 300/12
7. Course Administrator Name and Scientific Title
Assoc. Prof. Dr. Maysoon Mohi Hilal Email maysoon.hilal@uosamarra.edu.iq:
8. Course Objectives:

The fourth-year architectural design curriculum aims to expand the architectural student's horizons, transitioning them from designing a single-function, standalone building to understanding how to integrate such a project within the broader urban context. The student is introduced to the principles of urban design, including how to connect individual projects to the urban fabric of the city through the study of visual and movement axes and the impact of the urban characteristics specific to the chosen project area. This is accomplished through a series of progressively scaled design projects, divided into three main projects: two during the first semester and one urban-scale, planning-focused residential project in the second semester, in addition to a series of quick assessments.

The main project in the first semester involves a complex with multiple components organized under a unified central system, such as a hospital, an academic complex, or a multi-production industrial complex. In this project, the student learns the fundamental principles of planning such facilities and how to integrate various engineering service systems, with a particular focus on centralized air conditioning, health and electrical services, and environmental integration, all while considering future expansion and design decisions.

The second semester is dedicated to familiarizing the student with basic concepts and principles related to the master planning of a residential complex. It also includes a detailed exploration of the housing problem in the country and attempts to offer practical solutions to the housing shortage by designing a fully serviced residential project, represented by a neighborhood with a population capacity of 2,400 residents. This allows the student to understand all housing requirements and essential support services. The design project is divided into two phases: the first is a group project, while the second focuses on a specific part of the project, with each group member responsible for designing an individual portion.

□ Developing **the student's awareness of the relationship between the building and the urban fabric.** □ Enabling **the student to transition from partial architectural thinking to a comprehensive understanding of the urban site and its integration with the surrounding environment.** □ Enhancing **urban design and spatial analysis skills.**	**Course Objectives:**

 Training **the student to analyze visual and movement axes within the city and to understand the characteristics of the selected urban fabric.**

 Preparing **the student to design complex, multi-functional projects.**

 Empowering **the student to design large-scale projects (such as hospitals, academic, or industrial complexes) that require integrated functional and planning solutions.**

 Deepening **the understanding of integrated engineering service systems.**

 Teaching **the student how to effectively integrate HVAC, electrical, sanitary, and other service systems within architectural design.**

 Fostering **environmental awareness and future planning in design projects.**

 Training **the student to consider future expansion and environmental integration in the design process.**

 Understanding **housing problems and offering design solutions.**

 Enabling **the student to analyze housing realities and propose practical design solutions through a comprehensive residential project.**

 Developing **teamwork and individual design capabilities.**

 Enhancing **collaborative work during the initial project phases, followed by developing advanced individual solutions in later phases.**

 Acquiring **integrated residential urban planning skills.**

 Training **the student to design a fully serviced residential neighborhood (for 2,400 inhabitants), considering all functional and social needs.**

9. Teaching and Learning Strategies:

Project-Based Learning: Implemented through assigning students comprehensive urban and residential design projects, enhancing practical learning and connecting theoretical concepts to real-world applications.

Presentations and Critique: Students regularly present their projects to faculty and peers, receiving critical feedback that helps improve their design performance and develop their architectural vision.

Collaborative and Group Learning: Applied in the first phase of the residential project, where students work in teams to design a residential neighborhood, fostering teamwork and the exchange of ideas and experiences.

Problem-Based Learning: Used when addressing issues such as housing shortages and future urban expansion, encouraging students to engage in critical thinking and seek innovative solutions.

Interactive Theoretical Lectures: Delivered to explain concepts related to urban fabric, planning, and services through open discussions and active student–instructor engagement.

□ Field or Virtual Site Visits: May include visits to urban areas or actual housing projects, strengthening applied understanding and linking coursework to environmental and social contexts.

Application:	**Strategy:**
□ The **student is assigned three main design projects throughout the year**, ranging from complex architectural projects (such as a hospital or an academic complex) to an urban planning project (a residential neighborhood). The project progresses through several stages (analysis, planning, design, presentation), helping the student develop a deep and comprehensive understanding of each phase of the design process. □ This **is an essential part of learning architectural design**, where the student is required to present their project periodically (both interim and final presentations) in front of the instructor, peers, or a jury panel. The student explains their concept, site analysis, and design decisions. After the presentation, they receive constructive feedback and critique, which helps them improve the project and develop skills in communication, critical thinking, and accepting professional comments. This process simulates real-world architectural practice and enhances self-confidence. □ In **the third project (the residential neighborhood), students work in groups** to develop an integrated plan for the residential district. The work is distributed based on collaboration in analysis and general proposals, then each student is assigned an individual portion to develop one component of the project in detail. □ The **student tackles real architectural issues**, such as housing shortages, service organization, or connecting the project to the urban fabric. They are required to analyze the problem and propose practical design alternatives with justification for the chosen solution, thus enhancing critical thinking skills. □ Field **visits aim to familiarize students with real architectural projects** similar to the design topic. Through direct observation, the student explores methods of functional distribution, massing and facade treatments, and user circulation, enriching their practical understanding and enhancing the design experience.	**□ Project-Based Learning** **□ Presentations and Critique** **□ Collaborative and Group Learning** **□ Interactive Theoretical Lectures** **□ Field Visits**

10. Course Structure:

Required Learning Outcomes	Hours	**The week**
The first design project aims to provide the student with experience in dealing with single, multi-story, multi-functional buildings, with a variation in space sizes, i.e. including small, medium, and large spaces, with a group of individual activities, and in a dictation style. This is done by designing a commercial building in the middle of an integrated urban	110	**First – Eleventh**

fabric. The project includes a group of commercial stores (marketing activities) to identify the shopping activity in the city and how this activity is linked to the city's movement (from an urban fabric with a high population density) and combining it with other medium-sized activities – a bank branch, event halls, etc., in addition to the presence of a multi-story building block for a group of commercial apartments within their existing specifications in the city. The student learns how to deal with the controls and specifications of the Samarra Municipality regarding the urban fabric as a distinctive building feature in the region. It deals with a project consisting of a group of parts with complex and repetitive functional characteristics. It is a typical complex project, whether a health project (for example, a hospital) or an academic educational project (a college or university, or part thereof). The project is divided into two parts: The first stage includes a basic plan for the main components (basic sections) and how to design the spatial blocks. The program aims to introduce the student to the importance of integrated design for the spatial block, so that space represents the basic and organizing part of the basic block and project components. It also aims to deal with the basic plan as part of the city's composition and link it to the urban fabric of the city, interacting with the project's specific area determinants. Then, it moves on to designing the section plans and their functions. The project contains a group of small-sized office spaces (administrative), a group of medium-sized spaces such as hospital departments with clear typical repetition, and a group of large spaces (such as classrooms, for example), in addition to basic services and a large hall. It deals with different structural dimensions, from small, medium, large, and very large, taking into account services, joints, etc., with a study of their entire service systems.		
The second project - a complex project that includes small and medium-sized spaces such as classrooms and multi-purpose halls (academic or commercial complexes, medium-sized industrial projects, or entertainment centers) implemented through reinforced concrete structures or steel structures, with the adoption of some construction details in the III building construction material that is in line with the current project.	110	**Twelfth-Twenty-third**
The third project: choosing a multi-story project of an administrative, academic, or residential nature, containing repeated floors through which the student becomes familiar with the set of construction details adopted in such construction structures (reinforced concrete or steel), with an integrated application of sanitary engineering systems, air conditioning, and interior lighting engineering.	80	**XXXIII – XXXIII**
11. Course Assessment and Grade Divisions		
Exams (day sketch), reports, and evaluation sessions are individual and group with the participation of design professors in the department.		
12. Learning Resources Training:		
Source Books, Architectural Documents & Plans, Similar Projects **R.H. Simons and A.R. Bean Author Donald, Watson**		
Name and signature of the course holder Name and signature of the head of the department or branch **Assoc. Prof. Dr. Maysoon Mohi Hilal** **Assoc. Prof. Dr. Raed Abdullah Hassan**		

Course Description / Stage IV / Interior Design / A411

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Interior Design / Fourth Year

2. Course Code:

A411

3. Semester/Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 60/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Raed Abdullah Hassan **Email: raed_hasan@uosamarra.edu.iq**

8. Course Objectives:

Introducing students to the more specialized design aspects of interior space than to architectural design in general. This is done on two levels: the level of the thought guiding the design and the level of the human sensory perception of space.

Course Objectives:

1. Understanding the Basics of Interior Design:
Enables the student to understand the basic principles of organizing interior space, such as function, comfort, movement, lighting, and the proportion between masses and spaces.
2. Analyzing Interior Spaces:
Training the student to analyze different spaces (residential, commercial, office, recreational, etc.) in terms of function, environment, style, and user requirements.
3. Mastering the Elements and Components of Interior Design:
Introducing the student to basic elements such as furniture, colors, materials, natural and artificial lighting, surfaces, floors, ceilings, and finishing details.
4. Developing Visual and Spatial Composition Skills:
Enhancing the student's ability to coordinate aesthetic and functional elements to achieve a visually balanced and functionally comfortable interior space.
5. Drawing and Documenting Interior Spaces:
Enables the student to prepare the necessary drawings (plans, facades, sections, interior perspectives) using manual and digital means.
6. Use of Interior Design Software:
Introducing students to digital modeling and visual rendering tools for interior spaces, such as AutoCAD, 3ds Max, SketchUp, and others.
7. Linking Interior Design to Cultural and Community Identity:
Deepening students' understanding of the influence of culture, climate, and social context on interior design.

8. Developing Critical and Design Thinking:
Enhancing students' ability to think analytically and make informed design decisions based on functional and aesthetic requirements.

9. Teaching and Learning Strategies:

1. **1. Project-Based Learning:**
2. **The student is tasked with designing a realistic interior space (such as a living room, showroom, office, etc.) with the provision of plans and details, helping them apply theoretical knowledge practically.**
3. **2. Presentations and Critiques:**

4. **The student presents their project to professors and peers and receives constructive feedback to improve the design and develop their approach to defending their design decisions.**
5. **3. Interactive Theoretical Lectures:**
6. **Interior design principles are presented with visual examples, and students are encouraged to discuss and ask questions to connect theory to practice.**
7. **4. Use of Visual and Digital Media:**
8. **PowerPoint, images, videos, and 3D software (such as SketchUp and 3ds Max) are used to illustrate interior design concepts and analyze successful projects.**
9. **5. Field or Virtual Visits:**
10. **Visits are organized to hotels, exhibitions, malls, or distinctive interior spaces for field analysis and observation, or through virtual tours.**
11. **6. Problem Solving:**
12. **Students are tasked with solving real-life problems in interior spaces, such as improving lighting or addressing cramped spaces, which enhances critical thinking**

Application: • Students are required to design a complete interior space (e.g., a showroom, an office, or a residential apartment), focusing on the selection of colors, materials, furniture, lighting, and psychological and visual comfort. • Each student presents their project at the end of each design phase, followed by an architectural critique session in front of their peers and professors, where they receive feedback to improve their work and develop their understanding. • Concepts such as proportion, visual hierarchy, and functional distribution are introduced, and discussions are opened to connect them to real-life examples. Students are required to analyze designs presented during the lecture. • PowerPoint presentations, short videos, and specialized websites are used to showcase international projects. Students are also encouraged to use interior design software (such as AutoCAD, SketchUp, and 3ds Max) in their projects. • Visits are organized to buildings with distinctive interior designs (hotels, showrooms, and restaurants) to examine details, and students are then required to submit an analytical report. Alternatively, Google Earth or 360° virtual tours can be used to view spaces remotely. • The student is required to modify an existing interior design to solve a functional or visual problem (e.g., poor lighting distribution, poor sound insulation, or use of inappropriate materials), which stimulates analytical thinking and finding alternatives.	**Strategy:** • **Project-Based Learning** • **Presentations and Criticism** • **Interactive Theoretical Lectures** • **Reporting and discussion** • **Field visits** • **Design Problem Solving**

10. Course Structure:

Required Learning Outcomes	Hours	**The week**
Theoretical Section The first level examines cultural and artistic intellectual trends, particularly those intertwined with industrial design, craft production, and materials, as well as those intertwined with the artistic thought of decoration, service systems, lighting, and furniture. This course provides a general historical overview and a detailed account of the development of these ideas and trends during the twentieth century. This aims to crystallize the various aspects of contemporary interior design ideas and clarify their meaning. This ensures that students understand the various circumstances in	20	**Divided into weeks**

which these ideas emerged and their context. This enables them to distinguish between the various aspects that can be utilized in designs proposed by students, in harmony with the unique characteristics of Iraqi society and specific environmental and regional circumstances, while distancing themselves from Western approaches that are socially, environmentally, and culturally inappropriate. The second level examines the human sensory perception and acceptance of the surrounding indoor space, as well as the human variables at the individual and societal levels, in terms of cognitive and aesthetic values in understanding and using spaces and their functional standards. It also examines the characteristics of the succession of spaces, the transition between them, and the moral and symbolic influences they have on humans.		
- The practical part The course includes two projects: one, lasting four to five weeks, aims to expand students' imagination and creativity at the intellectual level, utilizing the basic elements of interior design—shape, color, lighting, and furniture—and their role in focusing on realistic aspects. The second project, lasting two months, takes a realistic and local context with a unique flavor of thought and practical application in real spaces. It presents a design problem at its functional and executive levels, as well as at the intellectual, moral, and philosophical levels, and expresses the nature and uniqueness of Iraqi society. Between the two projects, there is a quick practical design test. During the theoretical part, students take a semester exam in addition to the final exam. Students may be given other (unscheduled) assignments to complete the course requirements.	40	**Divided into weeks**
11. Course Assessment and Grade Divisions		
Exams, reports, and evaluation sessions are individual and group with the participation of design professors in the department		
12. Learning Resources Training:		
Name and signature of the course holder Name and signature of the head of the department or branch **Assoc. Prof. Dr. Raed Abdullah Hassan** **Assoc. Prof. Dr. Raed Abdullah Hassan**		

Course Description / Stage IV / Lighting Services /A412

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Lighting Services / Fourth Year

2. Course Code:

A412

3. Semester/Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Asst. Lect. Bakr Saeed Email:

8. Course Objectives:

The course aims to introduce the student to the most important basic principles of electrical systems, such as the lighting system, the electrical power distribution system, the fire system, the telephone system, the internal recall system, and others, and the methods of calculating the electrical power in relation to covering the requirements of buildings in lighting, air conditioning, health services, and other requirements. The student also learns about the requirements of central electrical services and how to calculate the areas necessary to contain them. and the principles of its installments in the building.

1. Introduce the student to the basic principles of electrical systems used in buildings, such as the lighting system, power distribution, fire, telephone, and internal calling. 2. Enable the student to understand the methods of calculating the electrical capacity needed to meet the requirements of lighting, air conditioning, health services, and other building systems. 3. Introducing the student to the central electrical services and their operational and technical requirements. 4. Qualifying the student to calculate the spaces allocated for the electrical systems inside the building and the methods of distributing and distributing them appropriately within the architectural space. 5. Enhancing the student's ability to link architectural design with the requirements of electrical systems to ensure functional and technical integration within the project.	**Course Objectives:**

9. Teaching and Learning Strategies:

1. **Interactive Theoretical Lectures: During which the basic principles of building lighting, such as the types of lighting (natural, industrial), lighting calculations, and their impact on architectural design, are presented, while engaging students in the discussion and providing practical examples to stimulate understanding and participation.**
2. **Comparative Analysis: Students are asked to compare different lighting systems in architectural projects (e.g., comparing the lighting system in an office building and an apartment building), or comparing traditional and modern lighting techniques, enhancing their ability to evaluate and choose the most appropriate one**
3. **Presentation, Critique, and Report-Based Learning: Students are tasked with preparing presentations or reports on topics such as "LED Technologies in Modern Buildings" or "The Impact of Lighting on Visual Comfort," and then discussing them in class with feedback from colleagues and the principal**
4. **Field or Virtual Visits: Visits are organized to buildings that contain advanced or various lighting systems, where students observe the distribution of lighting units, the type of lamps, and their aesthetic and functional impact, or use the virtual alternative through videos and diagrams to apply theoretical concepts in a realistic context.**

5. Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.

Application:	**Strategy:**
• The teacher explains the basic concepts of lighting using pictures and diagrams, and engages students by asking questions and discussing examples from real projects. • Students are asked to compare lighting systems in different buildings or between different lighting technologies, and provide a summary or presentation that shows the difference in terms of performance and efficiency. • Students prepare a report or presentation on a specific topic in lighting, then present it to their classmates with a critical discussion to enhance analytical thinking and presentation skills. • Students visit a building with a physical lighting system, or watch a virtual tour, then observe the distribution of the lighting fixtures and analyze how effective they are in meeting lighting requirements. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application	• **Interactive Theoretical Lectures** • **Comparative Analysis** • **Presentation-based learning, critique, and reports** • **Field or virtual visits** • **Interim Assessment**

10. Course Structure:

For the required learning outcomes	**Hours**	**The week**
Basic Principles of Electrical Systems Electrical Power, Fire Systems and Equipment and Telephone And the summons, the elevator and its types. etc	2	**I-III**
Lighting Methods of Calculation, Requirements, Details, ... etc	2	**Second**
Principles of calculating power in relation to the requirements of different buildings, electrical transformer, electrical panels ..... etc	2	**Third**
Monthly exam	2	**Fourth**
Central services and calculating the spaces needed to contain them	4	**V**
The principles of interior lighting design, the integration of natural lighting, interio lighting, and integration with the Adaptation through a set of selected examples	8	**Sixth**
Rapid Practical Exam	2	**Seventh**
General Discussion	2	**Eighth**
Exams	2	**Ninth**

11. Course Assessment and Grade Divisions

Distribution of the score out of 100 according to the tasks assigned to the student, such as daily and monthly exams, classroom and homework, reports, and the final exam.

12. Learning and Training Resources: R.H. Simons and A.R. Bean , Author Lighting Engineering.

Name and signature of the course holder **Name and signature of the head of the department or branch**

Asst. Lect. Bakr Saeed **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / Housing I / A413

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Housing I/ Fourth Year

2. Course Code:

A413

3. Semester/Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Maysoon Mohi Hilal **Email: maysoon.hilal@uosamarra.edu.iq**

8. Course Objectives:

The first semester of the Housing course introduces students to the principles of housing in general and its various types, such as single-family and multi-family housing, and the planning and design variables affecting each. Students also learn the principles of housing design based on density, through the concepts of spatial spatiality, privacy, and non-orientation, as well as the concept of public and private within the boundaries of a single residential complex. Students also learn about some of the housing standards and determinants associated with final design decisions for residential buildings, such as vertical movement determinants, immediate evacuation, fire determinants, and some of the specificities of housing in hot, arid regions

Course Objectives:

1- 1. Introduce students to the concept of housing, its basic principles, and its various types, such as single-family and multi-family housing, and distinguish between the characteristics of each type.
2- 2. Understand the planning and design variables that influence the formation of housing projects and how they are reflected in architectural decisions.
3- 3. Understand the concepts of spatiality and privacy, and link them to the needs of residents within different residential communities.
4- 4. Identify the concepts of public and private within a residential community and how they affect architectural and spatial distribution.
5- 5. Understand the impact of population density on residential design and address it through architectural solutions that take comfort and efficiency into account.
6- 6. Identify the climatic characteristics of housing in hot, dry environments and how architectural responses to these characteristics are appropriate.

Teaching and Learning Strategies:

1. Interactive Theoretical Lectures: Used to introduce basic concepts about housing patterns, density, privacy, and design factors. They provide foundational information supported by diagrams and illustrative architectural images, with discussions linking theoretical content to real-life examples.

2. Presentation-Based Learning, Critique, and Reports: Presenting and critically discussing planning ideas, proposals, and global projects in class enhances critical thinking and visual communication.

3. Analytical Field Visits: Visiting actual housing sites (neighborhoods, complexes, apartment buildings) to observe how theoretical concepts are applied in practice, such as orientation, ventilation, movement, and public spaces.

4. Formative Assessment: Adopting a form-based assessment system that continuously monitors student performance through tests and reports to improve understanding and applicati

Application:

• Interactive theoretical lectures in the Housing course are applied by presenting concepts in a dialogical manner that combines theoretical explanation with discussion and open-ended questions, supported by visual media such as maps and presentations.

- **Strategy:**
- **Interactive theoretical lectures.**

This helps students understand housing and connect theory to urban reality in an interactive and critically stimulating way. • Presentation-based and critical learning is applied in the Housing course by assigning students to prepare presentations on housing issues or models, then presenting them to peers and the instructor for discussion and critical evaluation. This develops analytical, presentation, and critical thinking skills and enhances a deep understanding of concepts through the exchange of ideas and feedback. • • Planning field visits are applied in the Housing course by taking students to selected housing sites to analyze the urban fabric, land use, and spatial organization elements. This aims to connect theoretical concepts to urban reality and enhance students' ability to observe, interpret, and evaluate in a real-world setting. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests, presentations, and reports to improve the level of understanding and application	• **Learning based on presentations, critiques, and reports.** • **Analytical field visits.** • **Progressive valuation.**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Definition of housing, housing, the concept of single-family and multi-family housing.	2	**First**
Definition of dwelling and the moral concept of dwelling.	2	**Second**
Horizontal and vertical housing has evolved with models of the horizontal/vertical local environment.	2	**Third**
Horizontal and vertical residential (formal) patterns.	2	**Fourth**
Population density – definitions of correlations and influences.	2	**V**
Family and Family in Housing Planning.	2	**Sixth**
The concept of spatial space in housing.	2	**Seventh**
Privacy, Lack of Honor, and the Concept of Protected Space (Private and Public in Single and Multi-Family Housing).	2	**Eighth**
The philosophical concept of housing and (trends, their relationship to them, extensions, and their relationship to urban space in housing).	2	**Ninth**
Place in residence, threshold, boundaries, and their relationship to privacy, protected space, private and public hierarchy, identity and personality.	2	**X**
The comprehensive plan of the cities - their written contents, drawings, and its most important features and specifications - with an explanation of some of the comprehensive plans of the cities.	2	**Eleventh**
Planning Cycle - Its Structure - Its Successive Stages - Its Impact - Its Applications in Various Areas of Life and Planning	2	**Twelfth**
Transportation Planning – An Applied Case Using the Planning Wheel – Causes of the Transportation Crisis – The Transportation System	2	**Thirteenth**
Iraqi Planning and Building Laws and Regulations and Their Impact on Controlling the Growth of Cities – The Comprehensive Plan of the Census	2	**Fourteenth**
Exams	2	**Fifteenth**

11. Course Assessment and Grade Divisions

Distribution of a score of 100 according to the tasks assigned to the student such as daily preparation, daily and monthly exams, presentations, reports, and final exam

12. Learning Resources Training:

Name and signature of the course holder Name and signature of the head of the department or branch

Assoc. Prof. Dr. Maysoon Mohi Hilal **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / Theories of Architecture I/A414

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Theories of Architecture I/ Fourth Year

2. Course Code:

A414

3. Semester/Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Lect. Dr. Ali Majed Humaid **Email: ali.baghdadi@uosamarra.edu.iq**

8. Course Objectives:

To discuss and study the development of architecture, both theoretical and practical, in the period following the Industrial Revolution and the French Revolution, based on influences such as engineering and planning, scientific and technological developments in construction and building materials, economic developments, profound changes in the social structure, and significant developments in the visual and applied arts, as well as the significant development in the influence of theoretical construction as a background for the architectural product. Important social, political, and cultural events will also be constantly recalled. All of the above will be presented as Western theory (primarily European and secondarily American), with a review of the experiences of other countries such as Japan and South America. We will also review the current state of Iraqi architecture (past and present) and discuss it based on what has been mentioned and what has been achieved in the West for their benefit, as well as what is fundamental and important for our benefit in formulating a common understanding of the newly adopted relationships mentioned above, emphasizing the importance of localism and individual experience.

Course Objectives:

1. 1. Understand the development of architecture from both theoretical and practical perspectives during the post-Industrial Revolution and post-French Revolution periods, with a focus on the impact of engineering, planning, and scientific and technological developments in construction and materials.
2. 2. Analyze the profound economic and social influences on architecture and construction, examining changes in social structures and their impact on architectural design.
3. 3. Identify developments in the visual and applied arts and their role in shaping the architectural product and developing theoretical construction as a background for architecture.
4. 4. Discuss these developments in the context of Western theories (primarily European and American), reviewing the experiences of other countries such as Japan and South America.
5. 5. Link these concepts and developments to Iraqi architectural reality by examining the past and present, and discussing the extent to which Western experiences can be used to develop a local and specific architectural understanding.
6. 6. Promote awareness of the importance of local and specific experiences in the development of Iraqi architecture, and build a shared understanding based on modern relations and global changes.

9. Teaching and Learning Strategies:

1. Interactive Theoretical Lectures: These lectures introduce the basic principles of building lighting, such as types of lighting (natural, artificial), lighting calculations, and their impact on architectural design. Students are engaged in discussion and presented with practical examples to stimulate understanding and participation.

2. Comparative Analysis: Students are asked to compare different lighting systems in architectural projects (such as comparing the lighting system in an office building and a residential building), or to compare traditional and modern lighting technologies, enhancing their ability to evaluate and select the most appropriate.

3. Presentation-Based Learning, Critique, and Reports: Students are assigned to prepare presentations or reports on topics such as "LED Technologies in Modern Buildings" or "The Impact of Lighting on Visual Comfort," and then discuss them in class with feedback from peers and the instructor. 4. Field or virtual visits: Visits are organized to buildings containing advanced or diverse lighting systems, where students observe the distribution of lighting units, the type of lamps, and their aesthetic and functional impact. Alternatively, a virtual alternative is used through videos and diagrams to apply theoretical concepts in a real-world context.

5. Progressive assessment: A progressive assessment system is adopted to continuously monitor student performance through tests and reports to improve understanding and application.

Application:	**Strategy:**
• The teacher explains the basic concepts of lighting using pictures and diagrams, and engages students by asking questions and discussing examples from real projects. • Students are asked to compare lighting systems in different buildings or between different lighting technologies, and provide a summary or presentation that shows the difference in terms of performance and efficiency. • Students prepare a report or presentation on a specific topic in lighting, then present it to their classmates with a critical discussion to enhance analytical thinking and presentation skills. • Students visit a building with a physical lighting system, or watch a virtual tour, then observe the distribution of the lighting fixtures and analyze how effective they are in meeting lighting requirements. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.	• **Interactive Theoretical Lectures** • **Comparative Analysis** • **Presentation-based learning, critique, and reports** • **Field or virtual visits** • **Interim Assessment**

10. Course Structure:

For the required learning outcomes	**Hours**	**The week**
Basic Principles of Electrical Systems Electrical Power, Fire Systems and Equipment and Telephone And the summons, the elevator and its types. etc	6	**I-III**
Lighting Methods of Calculation, Requirements, Details, ... etc.)	2	**Fourth**
Principles of calculating power in relation to the requirements of different buildings, electrical transformer, electrical panels, ... etc	2	**V**
Monthly exam	2	**Sixth**
Central services and calculating the spaces needed to contain them	4	**VII-VII**
The Principles of Interior Lighting Design , the Integration of Natural Lighting, Interior Lighting, and Integration with the Air Conditioning System through a Set of Selected Examples for This Purpose	8	**IX-XII**
Rapid Practical Exam	2	**Thirteenth**
General Discussion	2	**Fourteenth**
Exams	2	**Fifteenth**

11. Course Assessment and Grade Divisions

Distribution of a score of 100 according to the tasks assigned to the student such as daily preparation, daily and monthly exams, presentations, reports, and final exam

12. Learning and Training Resources:

Name and signature of the course holder Name and signature of the head of the department or branch

Lect. Dr. Ali Majed Humaid **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / Arab-Islamic Architecture I /A415

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:
Arab-Islamic Architecture I/ Fourth Year
2. Course Code:
A415
3. Semester/Year:
First Semester 2024-2025
4. Date of preparation of this description:
2023-2024
5. Available Forms of Attendance:
In-Person
6. Number of study hours (total) / number of total units
Total Hours = 30/2
7. Course Administrator Name and Scientific Title
Asst. Lect. Laheeb Bahgat Email: Laheebbahjat199@gmail.com
8. Course Objectives: **Our inherited Islamic architecture has a lot to be inspired by as we create our contemporary architecture to achieve its connection with its roots, the subject of Arab-Islamic architecture aims to cover this architecture and its products in the extension of the Islamic world from China to Spain and over the long centuries and from the mission of the Holy Prophet (PBUH) to our modern era, which requires introducing the student to many aspects of this architecture embodied in distinct and diverse architectural models, starting from the city through the individual buildings to the smallest details Islamic Art and Decoration The development of vocabulary that emphasizes the importance of horizontal and vertical civilizational communication and the impact of pre-Islamic architecture on Islamic architecture, as well as neighboring architectures, which paves the way for entering into the study of the form, its patterns, sources, and factors of creation, which were embodied in the distinctive features of Arab-Islamic architecture, and these are covered in the first six weeks of the course, and then we deal with the students' reports with reports on topics related to Arab-Islamic architecture**

1. Introducing the student to the rich heritage of Arab-Islamic architecture in terms of geographical extension (from China to Andalusia) and temporal (from the mission of the Prophet (peace be upon him) to the modern era. 2. Enable the student to understand the historical and cultural context in which Islamic architecture originated, and to link it to political, religious, and social changes. 3. Analyze the various architectural models in Islamic architecture, from city planning to individual buildings, to decorations and artistic details. 4. Understand the influence of pre-Islamic architecture and neighboring buildings (such as Byzantine and Sassanid) on the development of Islamic architecture, thus enhancing the perception of civilizational communication. 5. Introducing the student to the styles of Islamic architecture and its formal characteristics, such as: the inner courtyard, iwan, domes, minarets, and decorative elements. 6. Enhancing the student's awareness of the importance of horizontal (between Islamic peoples) and vertical (through the ages) communication in shaping the Islamic architectural character. 7. Developing the student's ability to extract the design vocabulary that can be employed in contemporary architecture in a way inspired by Islamic roots. 8. Encourage research and analysis through student reports on topics related to Islamic architecture, which deepens individual understanding and enhances critical writing skills.	**Course Objectives:**

9. Teaching and Learning Strategies:

1. **Interactive Theoretical Lectures: It is an educational method that combines the presentation of theoretical information about Islamic architecture with the involvement of students in discussion and reflection during the lesson, enhancing their understanding and encouraging them to interact with the content.**
2. **Comparative Analysis: This method is based on the study of the differences and similarities between different Islamic architectural models, with the aim of deepening the critical understanding of the cultural and temporal diversity within Islamic architecture.**
3. **Presentation-based learning, critique, and reports: It focuses on developing students' research and analysis skills by presenting specific architectural topics to their peers, then discussing and critiquing them, as well as preparing written reports that support the knowledge content.**
4. **Field or virtual visits: Aim to enhance the visual and realistic perception of the student through direct or digital exposure to the models of Islamic architecture, and to link theoretical knowledge with actual architectural practices through the**
5. **Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.**

Application: • It is used to present the basic concepts of Islamic architecture, such as the evolution of the mosque or decorative elements, but in a way that integrates student engagement through questions, discussions, and the presentation of images and maps, which helps to have a deeper understanding and lively interaction with the content. • Students are asked to compare Islamic architectural models from different regions or eras, or to compare previous influences on Islamic architecture, such as Persian or Byzantine architecture. This exercise deepens awareness of the differences and connections within Islamic architecture • Students are tasked with preparing presentations on specific topics such as minarets, decorations, or the layout of the Islamic city, and presenting them to their peers, followed by a critique and discussion session, as well as writing research reports that enhance academic analysis and writing skills. • Visits to Islamic heritage buildings or sites are organized, and if this is not possible, virtual tours are used, and students are asked to analyze those buildings in terms of architectural and decorative elements, linking theoretical study to reality and enhancing practical understanding. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.	**Strategy:** • **Interactive Theoretical Lectures** • **Comparative Analysis** • **Presentation-based learning, critique, and reports** • **Field or virtual visits** • **Interim Assessment**

10. Course Structure:

For the required learning outcomes	Hours	The week
Islamic civilization, horizontal and vertical civilizational communication, and the sources of Islamic art and architecture.	2	**First**
The concept of form, its origin, its sources and the impact of the cultural and natural environment in the formation of Arab-Islamic architecture.	2	**Second**
Spatial and Formative Styles in Arab-Islamic Architecture, Formal Styles in Islamic Architecture.	2	**Third**
Distinctive features of Arab-Islamic architecture.	2	**Fourth**
Openness to the inward/dialectic of form and function.	2	**V**
The unity and diversity of architecture.	2	**Sixth**
Urbanization in Islam – The First Islamic Cities – Its Origin.	2	**Seventh**
Characteristics of the Islamic City	2	**Eighth**
Religious Architecture – The Mosque in Islam – The Basic Components of the Mosque	2	**Ninth**
Mosque Styles by Geographical Environment / By Axes ... Etc.	2	**X**
Worldly Architecture/Palaces and Houses of the Emirate.	2	**Eleventh**

The Arab-Islamic Residence.	2	**Twelfth**
Monthly exam.	2	**Thirteenth**
Schools. Mausoleums, soils, and burials. Markets in the Arab Islamic City.	2	**Fourteenth**
Final Exam		**Fifteenth**
11. Course Assessment and Grade Divisions		
Distribution of the score out of 100 according to the tasks assigned to the student, such as daily and monthly exams, classroom and homework, reports, and the final exam.		
12. Learning and Training Resources:.		

Name and signature of the course holder **Name and signature of the head of the department or branch**

Asst. Lect. Laheeb Bahgat **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / English IV /U411

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

English IV / Fourth Year

2. Course Code:

U411

3. Semester/Year:

First Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Asst. Lect. Ghassan Zahid

8. Course Objectives:

In this stage, the student completes what he was exposed to in the first stage, emphasizing the need to encourage the student to dialogue, use language, and construct terminology. In the second stage, a broader focus is placed on writing and reading texts, especially architecture, by selecting some simplified architectural articles that are read, and then asking the student to write a summary, a special opinion, or a discussion of the topic.

1. Develop architectural reading and comprehension skills through specialized texts and articles in architecture and urban design. 2. Enhance the ability to write technical reports, summaries, and articles in English, using precise architectural terminology. 3. Enable the student to present clear and structured architectural presentations in English in front of his colleagues or judging panels. 4. Enhance listening skills and understanding of architectural content from various sources such as lectures or foreign educational videos. 5. Expanding the student's vocabulary of architectural vocabulary and technical terms used in the profession globally. 6. Prepare the student for professional and architectural communication in English in international environments or multinational teams. 7. Qualifying the student to use the English language in preparing research or postgraduate studies in the field of architecture.	**Course Objectives:**

9. Education and Education Strategies

1. Task-based learning: It focuses on giving the student real tasks such as writing an architectural report, or making a presentation, which helps him practice the language in contexts close to his specialization.

2.Collaborative learning: Students work in small groups to prepare dialogues or architectural projects in English, which enhances communication and teamwork skills.

3.Project-Based Learning: Students are required to prepare a complete project such as analysing a building or designing an architectural idea and explaining it in English, integrating the language with the specialized aspect.

4.Interactive Activities: Activities such as conversations, role-playing, language games, and brainstorming are used to develop language skills in a fun and interactive way.

5.Use of audiovisual resources: Architectural videos or lectures are played in English, with students trained in listening, comprehension, and note-taking.

6. Presentations: Students are tasked with preparing oral presentations on architectural topics, which helps them to express themselves artistically and technically in English with confidence.

7. Guided Reading: Students are given specialized architectural texts to read and comprehend, discussing key ideas and new vocabulary, to develop the ability to read academic sources.

8. Interim Assessment: Adopting a phased evaluation system through which the students' performance is continuously monitored through tests and reports to improve the level of understanding and application.

Application: • The student is required to carry out a real task such as writing an architectural description of a building or preparing a technical report in English. • Students work in groups to discuss an architectural topic or create an artistic dialogue, enhancing language through interaction • Students carry out a complete architectural project (building analysis, design idea) and present it in written and oral English. • Short activities are carried out in the classroom such as free discussions, role-playing, or architectural language games to activate vocabulary and skills. • Instructional videos or architectural lectures are played, and students are asked to summarize or discuss their content. • Students are tasked with preparing an oral presentation on a specific architectural topic using correct technical language • Students read selected texts (e.g. architectural essays) and then discuss the main idea and terminology with the teacher • Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.	**Strategy:** • **Task-Based Learning** • **Collaborative Learning** • **Project-Based Learning** • **Interactive Activities** • **Audiovisual Resources** • **Presentations** • **Guided reading** • **Interim Assessment**

10. Course Structure:

For the required learning outcomes	**Hours**	**The week**
Frequently confused word	2	**First**
Either… or; neither…. Nor; so, and neither	2	**Second**
Word order	2	**Third**
Numbers: cardinal, adverbial, fraction.	2	**Fourth**
Composition: how to write a composition.	2	**V**
Letter writing: personal and business letters (continued)	2	**Sixth**
Letter writing: personal and business letters	2	**Seventh**
Vocabulary: engineering and architectural terms	2	**Eighth**
Working with vocabulary (continued)	2	**Ninth**
Reading and discussing architectural passages	2	**X**
Reading and discussing architectural passages (continued)	2	**Eleventh**
Reading and discussing architectural passages (continued)	2	**Twelfth**
Monthly Exam	2	**Thirteenth**
Review	2	**Fourteenth**
Semester Exam	2	**Fifteenth**

11. Course Assessment and Grade Divisions

Distribution of the score out of 100 according to the tasks assigned to the student, such as daily and monthly exams, classroom and homework, reports, and the final exam.
12. Learning and Training Resources: **English around the World – Book Five – (Lessons 1, 2, 3, 4, & 5) By; Camille Tebsherany** **Sequence – A Course in basic writing – (Chapters 2, 4, 6, 8)** **By; Rory D. Stephens.**
Name and signature of the course holder **Name and signature of the head of the department or branch** **Asst. Lect. Ghassan Zahid** **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / Outdoor Space Design /A421

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Outdoor Space Design / Fourth Year

2. Course Code:

A421

3. Semester/Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 60/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Raed Abdullah Hassan **Email: raed.hasan@uosamarra.edu.iq**

8. Course Objectives:

Introducing the basic principles in the design of outdoor spaces or what can be called the garden landscape and its integration with the building and the general urban landscape. The foundations and principles required in the selection of the site and the projection of the building within it shall be discussed. Addressing the problems of the site and investing its characteristics and components to serve the integrated landscape, and exposure to the requirements of natural and structural treatment complementary to the garden landscape. The topic includes a study of the development of gardens throughout history, with a focus on the temporal and spatial aspects related to the thought of designing gardens and producing them, the topic has two theoretical and applied aspects – practical, the student prepares detailed designs for one of the productive outdoor spaces, and from the other requirements, the student presents the practical aspect by preparing the detailed designs of one of the productive outdoor spaces, and from the other requirements, the student submits a report on one of the related topics specified by the professor of the subject in advance, and the distinguished projects are selected for the purpose of Presenting it to students in the form of a lecture or discussion with student participation.

1. Introducing the student to the basic principles in the design of outdoor spaces, and their relationship to the building and the general urban landscape. 2. Developing the ability to choose the appropriate location and drop the building within it in order to achieve a balance between natural and built elements. 3. Introducing the student to how to analyze the site, address its problems, and invest its environmental and spatial characteristics in order to serve the comprehensive design of the scene. 4. Understand the natural and structural treatment requirements that complement the garden landscape, such as: walkways, materials, plant distribution, and visual attractions. 5. Providing the student with historical knowledge about the development of gardens across different civilizations, and understanding the temporal and spatial dimensions of their design thought. 6. Integrating the theoretical and practical aspects by training the student to prepare detailed designs for real or virtual outdoor spaces. 7. Developing architectural research and writing skills through the preparation of a scientific report related to the topics of outdoor spaces. 8. Encourage critical thinking and exchange of experiences among students by presenting and discussing outstanding projects in the classroom.	**Course Objectives:**

9. Teaching and Learning Strategies:

1. Interactive Theoretical Lectures

It is used to introduce basic concepts about the design of outdoor spaces, such as site selection, relationship with the building, and integration with the environment, while engaging students in discussion and asking questions.

2. Project-Based Learning

Students are required to design a real or virtual outdoor space using studied design criteria, linking theoretical knowledge with practical application.

3. Comparative Analysis

Students compare famous garden projects or design patterns from different historical periods to understand the diversity of garden thought and its temporal and spatial evolution.

4. Presentations and project discussion

Students present their final projects to their colleagues with an explanation and analysis of the design, followed by an architectural discussion and criticism that promotes critical thinking and the exchange of experiences.

5. Field or virtual visits

It is used to observe and analyze realistic outdoor gardens and spaces, helping students understand the application of design principles in a practical context.

6. Research-based and report-based learning

Students are tasked with writing a report on a specific topic such as the evolution of Islamic gardens or architectural agriculture techniques, which enhances research and analysis skills.

• The teacher explains the basic concepts with real pictures and examples, asks questions to students to stimulate discussion, and encourages them to express their opinions on how to integrate outdoor spaces with buildings. • Students are tasked with designing a detailed outdoor space for a specific site, applying the principles studied, and the teacher follows up the work step by step, providing feedback and guidance. • Students are required to study and analyze different garden designs from different periods or cultures, and then write a report or make a presentation that compares the methods and techniques used. • Students present their final projects in front of colleagues and the teacher, and then an open discussion is held to exchange views and provide constructive criticism, which enhances presentation skills and critical thinking. • The instructor organizes visits to actual garden sites or uses virtual tours, and asks students to note design elements, take photos or take notes for subsequent analysis. • Students are tasked with preparing a written report on a specific topic in the design of outdoor spaces, researching scientific sources and analyzing information, and then presenting the report to the teacher.	**Strategy:** • **Interactive Theoretical Lectures** • **Project-Based Learning** • **Comparative Analysis** • **Presentations and project discussion** • **Field or virtual visits** • **Research-based and report-based learning**

10. Course Structure:

For the required learning outcomes	**Hours**	**The week**
Introductory lecture / Explanation of the nature of the lesson and its pillars / Resources, basic principles in design: the site and its components, building and dealing with the idea. Use of water in the garden landscape.	4	**First**
Design project, presentation and site visit.	4	**Second**
Plants in the garden landscape.	4	**Third**
Studies Phase: Initial Submission. General Introduction.	4	**Fourth**
Plants and rocks....	4	**V**
Studies... Final Introduction, General Criticism.	4	**Sixth**

Day Sketch Exam**.**	4	**Seventh**
Presentation of the initial design idea, general criticism.	4	**Eighth**
Initial idea development/reporting.	4	**Ninth**
Initial introduction of 1st prelim.	4	**X**
Criticism and development of ideas.	4	**Eleventh**
Introducing the second 2nd Prelim.	4	**Twelfth**
Individual development and critique.	4	**Thirteenth**
Pre-Final Submission .	4	**Fourteenth**
Final Submission	4	**Fifteenth**
11. Course Assessment and Grade Divisions		
Exams, reports, and evaluation sessions are individual and group with the participation of design professors in the department		
12. Learning and Training Resources:		
Name and signature of the course holder Name and signature of the head of the department or branch **Assoc. Prof. Dr. Raed Abdullah Hassan** **Assoc. Prof. Dr. Raed Abdullah Hassan**		

Course Description / Stage IV / Housing II /A422

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Housing II/ Fourth Year

2. Course Code:

A422

3. Semester/Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Maysoon Mohi Hilal **Email: maysoon.hilal@uosamarra.edu.iq**

8. Course Objectives:

The housing course in its second semester is considered complementary to thehousing course in the first semester

The student will learn about some housing standards and determinants related to the final design decisions of the residential building, such as vertical movement limiters, immediate evacuation, fire determinants, and some characteristics of housing in hot and dry areas.

Course Objectives:

1. Deepen the student's understanding of the basic housing standards and determinants that affect the final design of the residential building, such as vertical movement and immediate evacuation.
2. Develop the student's knowledge of safety requirements, especially fire determinants and how to integrate them into the architectural design of the residence.
3. Identify the peculiarities of living in hot, dry climate environments, and how to apply appropriate design strategies for those conditions.
4. Qualifying the student to make design decisions based on practical and security criteria that ensure the comfort and safety of users in residential buildings.
5. Enhance the student's ability to analyze housing problems and provide effective design solutions that meet the requirements of the job and the environment.

9. Teaching and Learning Strategies:

Interactive Theoretical Lectures: Used to present basic concepts about housing patterns, density, privacy, and design factors. Used to provide foundational information supported by diagrams and illustrative architectural images. With discussions to link theoretical content to real-world examples.

2. Presentation-based learning, criticism, and reports: Presenting and discussing ideas, planning proposals, and global projects critically in the classroom promotes critical thinking and visual communication.

3. Analytical Field Visits: Visiting actual housing sites (neighborhoods, complexes, residential buildings) to observe how theoretical concepts are applied on the ground such as orientation, ventilation, movement, and public spaces.

4. Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.

Application: • Interactive theoretical lectures are applied in the subject of housing by presenting concepts in a dialogical way that integrates theoretical explanation with discussion and open questions, supported by visual media such as maps and presentations, which helps students understand housing and link theory to the urban reality in an interactive and stimulating way for critical thinking. • Presentation-based and critical learning is applied in housing by assigning students to prepare presentations on housing issues or models, and then presenting them to colleagues and the teacher for discussion and critical evaluation, which develops the skills of analysis, presentation, and critical thinking, and enhances a deep understanding of concepts through the exchange of opinions and feedback. • Planning field visits are applied in the housing subject by taking students to selected housing sites to analyze the urban fabric, land uses, and spatial organization elements, with the aim of linking theoretical concepts to the urban reality, and enhancing the student's ability to observe, interpret, and evaluate in a real environment. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests, presentations, and reports to improve the level of understanding and application	**Strategy:** • **Interactive Theoretical Lectures.** • **Learning based on presentations, critique, and reports.** • **Analytical field visits.** • **Interim assessment.**

10. Course Structure:

Required Learning Outcomes	Hours	The week
Housing Demographics.Housing planning and methods of designing residential shops	2	**First**
Housing Community.	2	**Second**
Components of the residential complex.	2	**Third**
Standards of Residential Units.	2	**Fourth**
Concepts of Neighborhood Unit. Neighborhood, Residential Sector	2	**V**
Public Service Standards.	2	**Sixth**
Daily exam	2	**Seventh**
Urban Housing Standards	2	**Eighth**
Newman's Theory of the Housing Unit	2	**Ninth**
Housing costs and methods of calculating them	2	**X**
Housing Policies and Sustainable Development	2	**Eleventh**
Residential Style.and the styles of residential buildings	2	**Twelfth**
Social and Educational Services in Residential Complexes	2	**Thirteenth**
Discussion of students' research	2	**Fourteenth**
Exams	2	**Fifteenth**

11. Course Assessment and Grade Divisions

Distribution of a score of 100 according to the tasks assigned to the student such as daily preparation, daily and monthly exams, presentations, reports, and final exam

12. Learning and Training Resources:

Name and signature of the course holder Name and signature of the head of the department or branch

Assoc. Prof. Dr. Maysoon Mohi Hilal **Assoc. Prof. Dr. Raed Abdullah Hassan**

Course Description / Stage IV / Theories of Architecture II/A423

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Architectural Theories II / Fourth Year

2. Course Code:

A423

3. Semester/Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Maysoon Mohi Hilal **Email: maysoon.hilal@uosamarra.edu.iq**

8. Course Objectives:

Discussing and studying the development of architecture in its theoretical and applied aspects in the post-industrial and French Revolution period on the basis of influences such as engineering, planning, scientific and technological developments in construction, construction materials, economic developments, profound changes in social construction, and the developments of large plastic and applied arts, as well as the great development in the impact of theoretical construction as a background for the architectural product. The most important social, political and cultural events will also be constantly recalled, and all of the above will be presented as a Western theory (primarily European and American second, with the experiences of other countries such as Japan and South America). We will also recall the reality of Iraqi architecture (past, present) and discuss it on the basis of what has been said and what has been achieved in the West in their favor and what is the basis and importance for us in crystallizing a common understanding of the newly adopted relations mentioned above to emphasize the importance of locality and special experience.

Course Objectives:

1. Understand the theoretical and practical development of architecture during the post-Industrial Revolution and French Revolution, with a focus on the impact of engineering, planning, and scientific and technological developments on construction and materials.
2. Analyze the profound economic and social impacts that have occurred on architecture and construction, while studying the changes in social construction and their impact on architectural design.
3. Identify the developments of plastic and applied arts and their role in shaping the architectural product and developing theoretical construction as a background for architecture.
4. Discuss these developments in the context of Western theories (mainly European and American) while reviewing the experiences of other countries such as Japan and South America.
5. Linking these concepts and developments to the Iraqi architectural reality by studying the past and present, and discussing the extent to which Western experiences can be used to develop local and architectural understanding.
6. Promote awareness of the importance of locality and special experience in the development of Iraqi architecture, and build a common understanding based on modern relationships and global changes.

9. Teaching and Learning Strategies:

1. **Interactive Theoretical Lectures: In these lectures, the role of the professor is not limited to explaining, but encourages students to participate by asking open-ended questions, discussing ideas of architectural theories, and analyzing real-life examples. Visual presentations and historical examples are combined to stimulate dialogue and develop a critical understanding of different theories.**
2. **Comparative Analysis: Students are encouraged to compare different architectural theories or compare the applications of particular theory in different places and times. For example, comparing classical and**

modern architecture, or studying the difference in the influence of Western theories versus architectural experiments in other countries. This enhances critical and deep analysis skills.

3. **Presentation-based learning, critique, and reports: Students are required to prepare presentations on specific theories or influential architects, while providing critique and analysis of the extent to which those theories have influenced contemporary architecture. Students are also encouraged to write reports that reflect their understanding and analysis, enhancing research and written expression skills.**
4. **Field or virtual visits: Organize visits to important historical or contemporary architectural sites, or use virtual tours of famous buildings to examine how architectural theories have materialized in practice. These visits help students connect theories to real-world context, and understand how theoretical ideas can be applied to design.**
5. **Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.**

Application:	**Strategy:**
• The professor begins by explaining an architectural concept or theory, and then asks an open-ended question to students about the impact of that theory or their opinion on it. Students are encouraged to participate in discussion, and tools such as electronic voting or small group conversations can be used in class. The presentation is combined with real-life images and examples to make it easier to understand. • Students are tasked with studying two different architectural theories or projects, and then writing a comparison that highlights the similarities and differences in terms of philosophy, style, and social and cultural influences. This can be done through written reports or group presentations, with a discussion session to exchange ideas. • Each student or group is asked to prepare a presentation on a particular theory or famous architect, in which they explain the main ideas and their impact. After the presentation, the rest of the students and the teacher provide constructive criticism and questions, which develops presentation skills and critical thinking. Collect written reports to deepen research. • The teacher organizes a visit to a historic or modern building that demonstrates the application of architectural theory. During the visit, students are encouraged to take notes, take notes, and take pictures. If a physical visit is not available, you use virtual online tours. After the visit, students discuss how theories have manifested themselves in practical design. • Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application	• **Interactive Theoretical Lectures** • **Comparative Analysis** • **Presentation-based learning, critique, and reports** • **Field or virtual visits** • **Interim Assessment**

10. Course Structure:

For the required learning outcomes	**Hours**	**The week**
Post-World War II Town Planning.	2	**First**
Developments in the 1960s and the discussion of Venturi's book (Complexity and Contradiction).	2	**Second**
Developments in the 1960s and the discussion of Venturi's book (Complexity and Contradiction).	2	**Third**
Discussing the Death of Modernity: Postmodernist Architecture and Neo-Rationalism in Italy.	2	**Fourth**
Late Modernist Architecture	2	**V**
Late Postmodern Architecture (High Technology)	2	**Sixth**
Deconstruction/Philosophy and Application.	2	**Seventh**
Daily exam	2	**Eighth**
Folding architecture.	2	**Ninth**
The era of false reality and the impact of information technology.	2	**X**
Globalization and Architecture	2	**Eleventh**
Ethics and Architecture	2	**Twelfth**

Future Architecture (Vision for the Future.)	2	**Thirteenth**
Discussion of students' research	2	**Fourteenth**
Final Exam	2	**Fifteenth**
11. Course Assessment and Grade Divisions		
Distribution of a score of 100 according to the tasks assigned to the student such as daily preparation, daily and monthly exams, presentations, reports, and final exam		
12. Learning and Training Resources:		
Name and signature of the course holder Name and signature of the head of the department or branch **Assoc. Prof. Dr. Maysoon Mohi Hilal** **Assoc. Prof. Dr. Raed Abdullah Hassan**		

Course Description / Stage IV / Arab-Islamic Architecture II /A424

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Arab-Islamic Architecture II/ Fourth Year

2. Course Code:

A424

3. Semester/Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Asst. Lect. Lahib Bahgat **Email: Laheebbahjat199@gmail.com**

8. Course Objectives:

The student will be introduced to the vocabulary that deals with the architectural schools of Rashidiya, Umayyad, Abbasid, Tulunid, Fatimid, Ayyubid and Mamluk schools. and the Ottomans... In addition to the products of the twentieth century, to cover the concepts of contemporaneity and heritage through contemporary architectural models that are continuous with inherited architecture, and these vocabulary aims to draw lessons from them to draw inspiration and employ them in contemporary architecture.

1. Introduce the student to the basic architectural vocabulary of historical Islamic schools such as Rashidiya, Umayyad, Abbasid, Tulunid, Fatimid, Ayyubid, Mamluk, and Ottoman. 2. Presenting contemporary architectural models that link Islamic heritage with modern design to enhance applied understanding. 3. Enable the student to analyze inherited architectural elements and methods and draw lessons from them. 4. Encouraging students to draw inspiration from Islamic heritage and employ them in contemporary architecture projects. 5. Promoting cultural and historical awareness of Islamic architecture and its ongoing impact on modern design.	**Course Objectives:**

9. Teaching and Learning Strategies:

1. **Interactive Theoretical Lectures: It is an educational method that combines the presentation of theoretical information about Islamic architecture with the involvement of students in discussion and reflection during the lesson, enhancing their understanding and encouraging them to interact with the content.**
2. **Comparative Analysis: This method is based on the study of the differences and similarities between different Islamic architectural models, with the aim of deepening the critical understanding of the cultural and temporal diversity within Islamic architecture.**
3. **Presentation-based learning, critique, and reports: It focuses on developing students' research and analysis skills by presenting specific architectural topics to their peers, then discussing and critiquing them, as well as preparing written reports that support the knowledge content.**

4. **Field or virtual visits: Aim to enhance the visual and realistic perception of the student through direct or digital exposure to the models of Islamic architecture, and to link theoretical knowledge with actual architectural practices through the**
5. **Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.**

Application:	**Strategy:**
• It is used to present the basic concepts of Islamic architecture, such as the evolution of the mosque or decorative elements, but in a way that integrates student engagement through questions, discussions, and the presentation of images and maps, which helps to have a deeper understanding and lively interaction with the content.	• **Interactive Theoretical Lectures**
• Students are asked to compare Islamic architectural models from different regions or eras, or to compare previous influences on Islamic architecture, such as Persian or Byzantine architecture. This exercise deepens awareness of the differences and connections within Islamic architecture	• **Comparative Analysis**
• Students are tasked with preparing presentations on specific topics such as minarets, decorations, or the layout of the Islamic city, and presenting them to their peers, followed by a critique and discussion session, as well as writing research reports that enhance academic analysis and writing skills.	• **Presentation-based learning, critique, and reports**
• Visits to Islamic heritage buildings or sites are organized, and if this is not possible, virtual tours are used, and students are asked to analyze those buildings in terms of architectural and decorative elements, linking theoretical study to reality and enhancing practical understanding.	• **Field or virtual visits**
• Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.	• **Interim Assessment**

10. Course Structure:

Required Learning Outcomes	**Hours**	**The week**
Islamic architectural schools (Rashidiya, Umayyad, Abbasid).	2	**First**
Mausoleums, soils, and burials.	2	**Second**
Markets in the Arab Islamic City.	2	**Third**
Bathrooms and Khans.	2	**Fourth**
Military Architecture/Hospitals..... Etc.	2	**V**
Daily Exam	2	**Sixth**
Islamic architectural schools (Fatimid, Seljuk...).	2	**Seventh**
Islamic architectural schools (Ayyubid, Mamluk, Ottoman).	2	**Eighth**
The Architecture of the Maghreb and Andalusia.	2	**Ninth**
The Architecture of the Islamic Orient.	2	**X**
Discussion of students' reports (contemporaneity and preservation).	2	**Eleventh**
Discussion of students' reports (Islamic City in the Islamic East and West).	2	**Twelfth**
Arab-Islamic architecture in the twentieth century.	2	**Thirteenth**
Islamic Art and the Islamic Religion's Attitude towards it.	2	**Fourteenth**
Final Exam		**Fifteenth**

11. Course Assessment and Grade Divisions

Distribution of the score out of 100 according to the tasks assigned to the student, such as daily and monthly exams, classroom and homework, reports, and the final exam.

12. Learning and Training Resources:

Name and signature of the course holder Name and signature of the head of the department or branch

Asst. Lect. Laheeb Bahgat

Assoc. Prof. Dr. Raed Abdullah Hassan

Course Description / Stage IV / Architecture Acoustics /A425

University of Samarra - College of Engineering - Department of Architectural Engineering

1. Course Name and Grade:

Architecture Acoustics / Fourth Year

2. Course Code:

A425

3. Semester/Year:

Second Semester 2024-2025

4. Date of preparation of this description:

2023-2024

5. Available Forms of Attendance:

In-Person

6. Number of study hours (total) / number of total units

Total Hours = 30/2

7. Course Administrator Name and Scientific Title

Assoc. Prof. Dr. Zainab Majeed Email:

8. Course Objectives:

Identify the principles of acoustic behavior in the closed space and the nature of the sound phenomenon in it through the concepts of sound reflection, absorption, propagation, and influence, as well as the concepts of auditory response to it. The most important acoustic principles and standards adopted in the evaluation of audio-speech and musical spaces, the most important acoustic defects and their treatment, and the methods of designing sound halls are discussed.

Course Objectives:

1. **Understand the basic principles of acoustic behavior** in enclosed architectural spaces, such as reflection, absorption, diffusion, and permeability.
2. **Introducing the student to the concept of auditory response** and how it affects the quality of vocal performance within the space.
3. **Studying** the acoustic standards adopted to evaluate the efficiency of audio-speech and musical spaces.
4. **Identify common acoustic defects** (such as echo and tinnitus) and learn about ways to address their design.
5. **Providing students with the skills of designing acoustic halls** to achieve an auditory performance suitable for the functional purpose.
6. **Analysis of noise sources and types** in urban and residential environments.
7. **Applying noise reduction methods** in the design of public and private buildings to ensure the comfort of users.

9. Teaching and Learning Strategies:

1. **Theoretical lecture-based learning: Explain key concepts with questions and discussions to stimulate reflection and deeper understanding**
2. **Problem-Based Learning: Giving students real-world audio problems to work on innovative design solutions**
3. **Interim Assessment: Adopting a phased evaluation system through which students' performance is continuously monitored through tests and reports to improve the level of understanding and application.**

Strategy:

- **Theoretical Lecture-Based Learning**
- **Problem-Based Learning**
- **Interim Assessment**

Application:

- It is based on the explanation of scientific concepts and principles by the professor directly within the classroom. In the course of architectural acoustics, theoretical lectures are used to clarify scientific foundations such as reflection, absorption, properties of acoustic materials, auditory performance standards, and others.
- Engages students in the analysis of real or hypothetical problems related to the subject of the material, and asks them to think of logical and design solutions to them. In the subject of architecture acoustics

• Adopting a phased evaluation system through which the students' performance is continuously monitored through tests and reports to improve the level of understanding and application.	

10. Course Structure:

For the required learning outcomes	Hours	The week
Basic concepts that explain the characteristics of the acoustic phenomenon (frequency, wavelength, intensity, sound pressure).	2	**First**
Sound intensity and sound pressure levels, acoustic power and its ratio... (Exercise).	2	**Second**
Sound phenomena that illustrate the behavior of sound in enclosed space (absorption, reflection, penetration, diffusion, diffraction).	2	**Third**
How to employ reflection in the design of a reflective ceiling and absorption in the treatment of acoustic defects.	2	**Fourth**
The standard of repeating time, the definition of this standard, its calculation methods, and its importance in sound design and evaluation.	2	**V**
Exercises on calculating the actual and ideal frequency time for audio and music halls	2	**Sixth**
Exam.	2	**Seventh**
Definition of acoustic defects (echo, reverberation, focusing, resonance, coloration, murmur...)	2	**Eighth**
Acoustic defects, methods of diagnosing them mathematically, sensorily, and methods of treatment.	2	**Ninth**
The basic classification of auditory halls, their design criteria, and the geometric determinants of their specifications (size, shape, lining materials, proportions, dimensions)... Examples.	2	**X**
Speech halls have their specifications (size, shape, lining materials, proportions, dimensions)... Examples.	2	**Eleventh**
Musical halls have their specifications (size, shape, lining materials, proportions, dimensions)... Examples.	2	**Twelfth**
Definition of noise, its types, sources, and modes of transmission. Noise Processing in Residential Complexes at the Planning, Design and Detail Level	2	**Thirteenth**
. Acoustic Isolation Methods and Calculation Equations – Examples.	2	**Fourteenth**
Final Exam		**Fifteenth**

11. Course Assessment and Grade Divisions

Distribute the score out of 100 according to the tasks assigned to the student such as daily preparation, daily and monthly exams, reports, and final exams.

12. Learning Resources Training:

Name and signature of the course holder **Name and signature of the head of the department or branch**

Assoc. Prof. Dr. Zainab Majeed **Assoc. Prof. Dr. Raed Abdullah Hassan**

Curriculum of the Department of Architecture

University of Samarra / College of Engineering

Fifth Stage / Course System

First semester					
units	Practical hours	Theoretical hours	Course name	Course code	no
18	14	2	Architectural Design v	A501	1
2	-	2	Contemporary Iraqi Architecture	A511	2
2	-	2	Specification and Estimation	A512	3
2	-	2	Philosophy of Architecture	A513	4
2	-	2	Architecture and climate	A514	5
26	14	10	Total hours / unite first semester		
	24				

Second semester					
units	Practical hours	Theoretical hours	Course name	Course code	no
-	14	2	Architectural Design v	A501	1
2	-	2	Contemporary Arabic Architecture	A521	2
2	-	2	Professional Practice	A522	3
2	-	2	Advance Design Theories	A523	4
2	-	2	Architectural Criticism Theories	A524	5
8	14	10	Total hours / unite second semester		
	24				

Course description/ Fifth Stage / Architectural Design V /A501

University of Samarra College of Engineering Department or Branch:
Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Architectural Design
2. Course Code
A501
3. Semester / Year:
First and second semester (Annual) 2024-2025
4. Date of Preparation of the Study Description:
2025-2024
5. Available Attendance Forms.
In- person
6.Total Hours/ Total Unite
Total Hours 480/ Unite 18
7.Name and Academic Title of the Course Coordinator
1. lect. Dr. Suhail Najim Abdullah suhail.najim@uosamarra.edu.iq **2. Asst. lect. Laheeb Bahgat Saab Laheebbahjat199@gmail.com** **3. Asst. lect. Rawa Fadhil Hamdi**
8.Objectives:
This course represents the final stage for the architecture student in their design practice throughout the years of study. The thesis is considered the ultimate outcome and synthesis of the student's accumulated knowledge, intellectual maturity, foundational design skills, and sense of belonging to place, as well as their connection to the values, deep-rooted traditions, and culture of their country, nation, and society. **The student is given the opportunity to express all these values through their intellectual and design proposals for the selected project. It is emphasized that the project must be a real-world proposal, suggested by various governmental departments with a clear and approved program, or proposed by faculty members to address a specific problem. It may also be a project distinguished by its environmental or topographical characteristics, or one that entails high-end capital investment requirements.** **Additionally, the project could address a significant architectural issue or crisis, such as housing, industrial developments, or a distinguished conservation project. In the case of large-scale projects, the participation of more than one student is permitted for its implementation**

Course Objectives	• **The course aims to develop the student's ability to address issues in urban design. The application of both traditional and contemporary urban design theories and methods forms the backbone of the semester.** • **it seeks to enable the student to work as a member of a multidisciplinary team to create better urban spaces and environments through urban design. In addition, it provides opportunities for research and specialized learning in environmental policy and advanced methods for addressing urban problems.** • **it enhances the ability to develop urban design solutions, analyze alternatives with precision, and provide expert guidance and recommendations in the growing field of urban design.** • **the course includes student-led discussions to enrich the learning experience.** • **All design stages are subject to open discussion with faculty and peers, and there are short evaluations to monitor the student's progress.**

9. Teaching And Leering Strategies

- **Project-based learning:**
  this strategy encourages students to engage in real or simulated architectural design projects that require the application of theoretical knowledge in real-world contexts. Through this approach,

students can develop detailed architectural thinking skills by solving problems while gaining valuable hands-on experience — particularly in relation to construction details and across various levels (structural or environmental).

- **Analysis:**
  in this strategy, students study architectural detail designs in front of the class and receive feedback from peers and the instructor. This helps enhance constructive criticism skills and opens the door to in-depth discussions about the principles of sound thinking in how to approach details scientifically. As a result, it improves students' overall analytical and compositional abilities.

Strategy:	**Application:**
• Project-based learning • Field visits • Design evaluation and feedback • Use of visual media and technology	• **Practical application of design skills in real-world projects that simulate professional challenges.** • **Direct analysis of architectural details and their specific construction.** • **Enhancing an interactive studio environment for presenting designs and exchanging constructive feedback.** • **Utilizing drawings and cad tools to support the educational process.**

10. Course Structure.

weeks	**hours**	**Required Learning Outcomes**
1-2	**25**	**Discussion of the preliminary report draft for the thesis project, which was approved and researched during the summer break.**
3-5	**41**	**Completion of information gathering and extraction of core values, fundamental principles, and intellectual orientations derived either through direct dialogue with professors or through reliance on credible references and the historical context related to the chosen project.**
6-8	**41**	**An attempt to reflect the findings of the previous study through a conceptual presentation that provides an initial vision of the overall design idea, without delving into detailed execution aspects.**
9-11	**41**	**Preparation of the final report, accompanied by a set of drawings derived from the comprehensive database compiled throughout the project.**
12-14	**41**	**The student revisits the proposal, presenting a comprehensive conceptual model in the form of a physical model and illustrative drawings that provide a preliminary visualization of the proposed project.**
15-18	**55**	**Engagement in the general application phase of the project, implementing the approved program, followed by the identification of engineering systems, circulation networks, and detailed components of the project.**
19-22	**55**	**Detailed studies of the key components of the project, solving individual design elements to achieve a clear architectural expression of both the exterior facades and internal features of the project.**
23-30	**121**	**Final preparation of the thesis and project**

11.course assessment and grade distribution

Daily exams and evaluation sessions are conducted both individually and in groups, with the participation of the design faculty members in the department

12. Learning And Training Resources

Required textbook methodology (if any)	**Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Architects' Data (2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).**
Main References (Sources)	**none**
Recommended Supplementary Books and References (Scientific Journals, Reports)	**none**
Electronic References and Websites	**none**
Curriculum or Course Description Update Rate	**%10**

Name And Signature of The Course Instructor	Name and Signature of The Head of Department
Lect. Dr. Suhail Najim Abdullah	Assoc. Prof. Dr. Raed Abdullah Hasan

Course description/ Fifth Stage/ Contemporary Iraqi Architecture/ A511

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Contemporary Iraqi Architecture
2. Course code
A511
3. semester / year:
First semester - 2024-2025
4. date of preparation of the study description:
2024-2025
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Nname and academic title of the course coordinator
Asst. lect. Rawa Fadhil Hamdi
8.Objectives:
"The subject focuses on the study of Iraqi architecture from the late 19th century to the end of the 20th century, with an emphasis on the major conceptual and practical transformations that occurred throughout the different decades of this period, as well as identifying the most significant civilizational and cultural influences that accompanied these transformations.

Course Objectives	• **The ability of students to draw inspiration from the design characteristics of Iraqi buildings and apply them in their future designs.** • **Analyzing models of local (Iraqi) buildings according to architectural methodologies to enhance students' understanding of architectural design.** • **Preparing architecture graduates based on scientific principles that enable them to practice the profession of architecture in architectural design.** • **Urban planning, interior and exterior spatial planning, and preservation of heritage and monuments according to scientific principles and methods.**

9. Teaching and learning strategies:
1- Lecture-based learning: The course includes lectures, discussions, and teaching and learning strategies for students to become familiar with Iraqi architecture. The course begins with an introduction to Iraqi architecture from the late 19th century until the end of the 20th century. Topics are discussed weekly, and the lessons last two hours per week. **2- This lecture presents the general characteristics of the traditional architectural style in Iraq and identifies the most significant civilizational and cultural influences that accompanied it.**

Strategy: • Lecture-based learning • Field visits • Use of visual media and technology • Feedback • Preparation and discussion of reports	**Application:** • **lectures and discussions aimed at teaching students about local architecture.** • **Field visits to architectural projects from local Iraqi architecture in general, with a particular focus on Samarra.** • **Use of software and presentation tools to support the educational process.** • **Exploration of local traditional architecture through focused discussion of selected examples, with the aim of drawing inspiration for future design projects.** • **Preparation of reports on buildings and elements of local architecture, followed by group discussions.**

	• **The semester includes quizzes, discussions, and a monthly10. Course Structure. exam**

10. Course Structure.

Weeks	hours	Required Learning Outcomes
1	2	Baghdad from the End of the Abbasid Era to the Ottoman Occupation – Key Remaining Monuments
2	2	The Ottomans in Iraq – Architecture in Iraq under Ottoman Rule
3	2	Baghdad in the Late 19th Century – Reformist Governors in Baghdad
4	2	Architectural and Structural Formations in Ottoman-era Architecture in Iraq
5	2	The Germans in Iraq and Their Architectural Influence
6	2	The British in Iraq – Baghdad at the Beginning of the Occupation – Urban Development in the Early 20th Century
7	2	Colonial Architecture in Iraq
8	2	Exam
9	2	Iraqi Architecture under National Rule – Architecture in the 1930s
10	2	The Evolution of the Concept of the Iraqi House
11	2	Iraqi Architectural Missions Abroad – The First Generation of Pioneer Iraqi Architects
12	2	Iraqi Architecture in the 1950s
13	2	Pioneer Iraqi Architects – Continued
14	2	The 1960s and 1970s – Iraqi Architecture Between Internationalism and Heritage Inspiration
15	2	Iraqi Architecture in the Context of the "Explosive" Era – Architecture of the 1980s

11.Course Assessment And Grade Distribution

Grade Distribution (out of 100): Grades will be allocated based on the tasks assigned to the student, including daily preparation, quizzes, oral and written exams (daily and monthly), reports, and other assigned activities

12 . Learning And Training Resources

Required textbook methodology (if any)	**Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).**
Main References (Sources)	**none**
Recommended Supplementary Books and References (Scientific Journals, Reports)	**none**
Electronic References and Websites	**none**
Curriculum or Course Description Update Rate	**%10**

Name And Signature Of The Course Instructor **Name And Signature Of The Head Of Department**

Asst. lect. Rawa Fadhil Hamdi **Assoc. Prof. Dr. Raed Abdullah Hasan**

Course description/ Fifth Stage / Specification and Estimate/ A512

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Specification and Estimate
2. Course code:
A512
3. semester / year :
First semester 2024-2025
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Asst. lect.. Safaa Yassin hamad Safaa.yassin@uosamarra.edu.iq
8.Objectives:
coordinator of all disciplines involved in construction works in general, and as a producer of design work—from the initial conceptual ideas and their economic evaluation, to the preparation of detailed designs. The student will also become familiar with the types of construction contracts, the methods and principles used in estimating and calculating preliminary construction costs, as well as the fundamentals of preparing and organizing bills of quantities, general and specific specifications, and detailed contract conditions.

Course Objectives	• **Understanding Estimation Standards: Equip students with the necessary knowledge to estimate the preliminary cost of architectural projects based on factors such as materials used, required tools, labor, and construction techniques.** • **Technical Specifications Preparation: Introduce students to methods for preparing detailed technical specifications for projects, including defining technical requirements for materials, construction processes, and quality standards.** • **Cost Analysis and Budgeting: Train students to analyze the components of total project cost, prepare project budgets, and estimate costs at various project stages.** • **Achieving Execution Efficiency and Quality: Develop students' understanding of the importance of adhering to technical specifications to ensure high-quality and efficient execution, while avoiding errors and delays.**
9. Teaching And Learning Strategies:	
Strategy:	• **Linking Theory to Practice: Provide a blend of theoretical lectures covering fundamentals and core concepts, during which students prepare realistic cost estimates and develop specifications for hypothetical or actual projects.** • **Collaborative Learning: Organize students into working groups to estimate costs for real projects and prepare technical specifications, fostering teamwork and professional interaction.** • **Progressive Assessment: Implement a continuous assessment system that monitors students' performance through regular quizzes and short projects, aimed at enhancing understanding and practical application.**

10. Course Structure:

Week	Hours	Required Learning Outcomes
1	2	Introductory Lecture on Cost Estimation

2	2	Stakeholders in Engineering Projects
3	2	Legal Documents for Tenders and Construction Contracts
4	2	Components of the Construction Field and Work Phases
5	2	Types of Construction Contracts
6	2	Discussions
7	2	Exam
8	2	Construction Cost Estimation Principles
9	2	Cost Overruns and Bill of Quantities Preparation
10	2	Preparing and Organizing Bills of Quantities
11	2	Material and Labor Cost per Standard Duration
12	2	Detailed Calculation of Raw Material Costs
13	2	Technical Conditions and Specifications
14	2	Discussions
15	2	Final Exam

11.Course Assessment And Grade Distribution

Grade Distribution (out of 100): Grades will be allocated based on the tasks assigned to the student, including daily preparation, quizzes, oral and written exams (daily and monthly), reports, and other assigned activities, Weekly Lectures, Critique Sessions, and Review of Similar Case Studies and Projects

12. Learning And Training Resources

Required textbook methodology (if any)	none
Main References (Sources)	Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).
Recommended Supplementary Books and References (Scientific Journals, Reports)	none
Electronic References and Websites	none
Required textbook methodology (if any)	8%

Name And Signature Of The Course Instructor Name And Signature Of The Head Of Department

Asst. lect. Safaa Yassin hamad Assoc. Prof. Dr. Raed Abdullah Hasan

Course description/ Fifth Stage / Philosophy of Architecture / A513

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Philosophy of Architecture
2. Course code:
A513
3. semester / year :
First semester 2024-2025
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
lect. Dr. suhail najim abdullah suhail.najim@uosamarra.edu.iq
8.Objectives:

First Axis: Philosophy of Architecture

The first part aims to provide students with a foundational understanding of architectural philosophy through several key learning objectives tailored to fifth-year undergraduate students:

1. **Introduction to the Fundamentals of Philosophical Thinking**
   Students will be introduced to the general principles of philosophical inquiry, focusing on its three main branches: epistemology (knowledge), ontology (existence), and axiology (value), with architecture positioned as a field of knowledge that can be explored through these branches.
2. **Key Philosophical Perspectives on Architecture**
   The course will explore the principal views of philosophers, thinkers, and architects on core architectural themes, emphasizing their connections to concepts in the philosophy of history, civilization, city, and society.
3. **Overview of Major Philosophical Traditions**
   Students will become familiar with the key ideas from Islamic-Arabic philosophy, Greek philosophy, and modern/contemporary European philosophy. These traditions will serve as general indicators to help organize architectural knowledge historically and intellectually, while also highlighting the place of Islamic-Arabic philosophy among other traditions to reinforce its significance and activate its presence in contemporary discourse.
4. **Conceptual Philosophy and the Architectural Concept**
   The course will introduce students to the foundations of the philosophy of concepts and the "architectural concept" as the primary unit of architectural production.
5. **Philosophical Positions in Contemporary Architecture**
   The course aims to build awareness of philosophical perspectives within contemporary architecture, including contemporary Iraqi architecture, to promote intellectual continuity and preserve the distinctiveness of Arab-Islamic architectural thought.

This axis is closely linked to other courses offered in the same academic year, such as *Architectural Theory*, *Architectural Criticism Theories*, and *Contemporary Arab and Iraqi Architecture*.

Second Axis: Design Theories

The second part of the course introduces students to major design theories—particularly those intersecting with other disciplines such as industry and applied arts—and traces their development from the early 20th century to the early 21st century, with a special focus on architectural design theories.

Topics include:

- **The evolution of the concept of "design" and the shift from fine arts to integrated design schools such as the Bauhaus and the emergence of Universal Design approaches.**
- **The influence of the philosophy of science and types of logic on the development of scientific methodology in architectural research and design.**
- **The emergence and development of design strategies in architectural schools, particularly the theories of Christopher Alexander.**
- **Influences from the humanities, linguistics, structuralism, post-structuralism, deconstruction, and folding theory, examining how architecture has drawn from language structures and organization.**
- **The development of computational design methods, including:**
  - **The analysis and implementation of key software tools used in architectural design.**
  - **Exploration of virtual reality concepts and applications.**
- **The study of the contemporary Iraqi experience in architectural design, with the goal of shaping and affirming a distinct identity for contemporary Iraqi architecture.**

Course Objectives	• **Philosophy and the Relationship Between Architecture and Thought Focus on existence, knowledge, and value.** • **Philosophers' and Thinkers' Perspectives and Their Influence on Urban and Civilizational History** • **Comparative Philosophies: Islamic-Arabic, Greek, and European (Modern and Contemporary)** • **Theories of Modern Design and Their Development Since the 20th Century** • **Contemporary Iraqi and Arab Architecture and Its Connection to Cultural Identity** • **Concepts of Separating Design from Traditional Arts.**
9. Teaching And Learning Strategies:	
Strategy:	**□ Monthly Quizzes: Periodic assessment of conceptual understanding.** **□ Class Discussions: Interactive dialogues on philosophical and urban topics.** **□ Interdisciplinary Integration: Coordination with related courses such as *Architectural Theory* and *Iraqi Architecture*.**

10. Course Structure:

Week	Hours	Required Learning Outcomes
1	2	General Introduction to the Subject
2	2	Foundations and Branches of Philosophy
3	2	History of Greek and Modern/Contemporary European Philosophy
4	2	History of Islamic-Arabic Philosophy
5	2	Monthly Quiz
6	2	Value Theory and Architectural Values
7	2	Philosophy of Architectural History
8	2	Philosophy of Civilization and Architecture
9	2	Philosophy of the Concept
10	2	Philosophy of the Architectural Concept
11	2	Monthly Quiz
12	2	Philosophy of Design Methodology
13	2	Philosophical Stance in Contemporary Architecture
14	2	Philosophical Stance in Contemporary Iraqi Architecture

15	2	Monthly Quiz

11.Course Assessment And Grade Distribution

Grade Distribution (out of 100): Grades will be allocated based on the tasks assigned to the student, including daily preparation, quizzes, oral and written exams (daily and monthly), reports, and other assigned activities, Weekly Lectures, Critique Sessions, and Review of Similar Case Studies and Projects

12. Learning And Training Resources

Required textbook methodology (if any)	**none**
Main References (Sources)	**Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).**
Recommended Supplementary Books and References (Scientific Journals, Reports)	**none**
Electronic References and Websites	**none**
Required textbook methodology (if any)	**6%**

Name And Signature Of The Course Instructor **Name And Signature Of The Head Of Department**

lect. Dr. suhail najim abdullah **Assoc. Prof. Dr. Raed Abdullah Hasan**

Course description/ Fifth Stage / Architecture and climate / A514

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Architecture and climate
2. Course code:
A514
3. semester / year:
First semester 2024-2025
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Prof. Dr. Rana Ibrahim Khalil rana.ibrahim@uosamarra.edu.iq
8.Objectives:
Introducing The Student to A Vast Informational Database Of The Fundamental Concepts Of The Reciprocal Relationship Between The Natural Environment And Architecture. This Begins With The Natural Climatic Factors And Their Physical Realities, Both On A Regional Level In General And On A Local Level For The Areas Of Iraq In Particular, As An Example Of Hot And Arid Regions. The Study Then Delves into The Concepts Of The Ongoing Interaction Between These Factors And The Physiological Needs Of Humans. Additionally, The Student Is Presented With Both The Negative And Positive Aspects Of The Climate, And The Ways Of Protection In Order To Achieve Planning And Design Values That Could Serve As The Foundation For Determining The Local Climate For Architecture And The Microclimate Within Interior Spaces. The Study Primarily Focuses On Identifying The Basic Treatment Lines In Residential And Public Buildings, Enabling The Student To Apply These In Their Design Work, Whether At The Academic Level Or In Practical Application.

Course Objectives	• **Enhancing the student's understanding of environmental protection policies, laws related to sustainable development, and how to integrate them into professional practices** • **Encouraging the student to develop applied research projects that contribute to the innovation of sustainable solutions for addressing local and global environmental issues**

9 . Teaching And Learning Strategies:

- **Lecture Strategy**
- **Discussion Strategy**
- **Problem-Solving Strategy**
- **Collaborative Learning Strategy.**

Strategy:	• **Using Visual Media and Technology** • **Classroom Assignments** • **Discussion Circles**

10. Course Structure:

Week	Hours	Required Learning Outcomes
1	2	General Environmental Concepts and familiarizing the student with the main climatic characteristics of different world regions, with a focus on hot, humid, and arid climates.
2-4	4	Understanding the main climatic variables that affect living organisms and plant life, as well as the ongoing impact of these variables and the adaptive responses of living beings and vegetation over time.

5	2	Principles of bioclimatic assessment and deriving the most important planning and general design decisions to control both external and internal environmental conditions.
6	2	Solar radiation and orientation concepts in hot and arid regions, through an extensive review of the fundamental relationship between the intensity of solar heat loads and building orientation across all compass directions.
7	2	Heat load calculations based on the orientation of building facades, including applications through selected example cases.
9-8	4	Urban form concepts relative to the characteristics of the surrounding natural environment, and identifying the most important decisions influenced by climatic conditions.
10-11	4	Principles of heat transfer through the building envelope and their architectural detailing foundations aimed at reducing thermal transmission through thermal insulation.
12	2	General concepts regarding the characteristics of open spaces in hot-dry and hot-humid regions, along with a review of traditional Arab solutions and the potential for integrating them into contemporary urban fabric.
13	2	General concepts in natural lighting and the fundamentals of its use in traditional architecture, as well as natural lighting calculations and its specific considerations in hot and dry areas.
14-15	4	Principles and behaviors of air movement and its impact on reducing thermal loads in hot and arid regions.

11.Course Assessment And Grade Distribution

Grade Distribution (out of 100): Grades will be allocated based on the tasks assigned to the student, including daily preparation, quizzes, oral and written exams (daily and monthly), reports, and other assigned activities, Weekly Lectures, Critique Sessions, and Review of Similar Case Studies and Projects

12. Learning And Training Resources

Required textbook methodology (if any)	none
Main References (Sources)	Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).
Recommended Supplementary Books and References (Scientific Journals, Reports)	none
Electronic References and Websites	none
Required textbook methodology (if any)	8%

Name And Signature Of The Course Instructor — Name And Signature Of The Head Of Department

Prof. Dr. Rana Ibrahim Khalil — Assoc. Prof. Dr. Raed Abdullah Hasan

Course description/ Fifth Stage/ Contemporary Arabic Architecture / A521

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage/ Contemporary Arabic Architecture
2. Course code:
A521
3. semester / year :
Second semester 2024-205
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Assoc. Prof. Dr. Maysoon mohy hilal maysoon.hilal@uosamarra.edu.iq
8.Objectives:
The course aims to develop and expand the student's knowledge base regarding contemporary Arab-Islamic architecture, both in terms of theory and practice. Over the span of a single (very concise) academic semester, the student is introduced to the theories of contemporary Islamic architecture, the modern approaches of Arab architects, and an analysis of current urban and architectural challenges in the Islamic context. The course explores methods of bridging the gap between heritage and modernity to achieve an architecture that reflects historical, cultural, and intellectual legacy while embracing contemporary technologies and evolving societal dynamics within the Arab-Islamic world.

Course Objectives	• **Gaining knowledge and awareness of the most important architectural trends in the Arab world.** • **Bridging heritage and modernity to achieve architecture that embodies historical, cultural, and intellectual legacy while keeping pace with contemporary technologies and modern transformations in Arab-Islamic society.** • **Developing the student's intellectual and cognitive understanding of the characteristics of contemporary Arab architecture.**
9 . Teaching And Learning Strategies:	
Strategy	• **Assigning the student a research project focused on one contemporary architectural work in an Arab country, to be discussed at the end of the course.** • **Assigning the student periodic short quizzes aimed at stimulating critical thinking and reviewing the lecture topic at the end of each session.**

10. Course Structure:

Week	Hours	Required Learning Outcomes
1	2	Introductory lecture on the nature and scope of the course
2	2	Analysis of contemporary trends in Arab and Islamic architecture
3	2	Discussion of various intellectual and philosophical approaches adopted by contemporary architects in general
4	2	Analysis of the concept of heritage and modernity, and exploration of what defines the traditional Arab-Islamic city and Arab-Islamic architecture

5	2	The traditional-conservative approach at both theoretical and practical levels, including urban-scale projects
6	2	The traditional-popular approach in architecture, highlighting pioneering architects in this trend
7	2	The classical approach: leading architects, their ideas, and critical discussions
8-11	8	The contemporary approach (bridging heritage and modernity), examining various modern trends and the architects and projects that represent them
12-15	8	The purely modern approach, including formal, conceptual, and environmental directions, with a range of architectural outputs from across the Arab world

11.Course Assessment And Grade Distribution:

The semester includes individual and group daily quizzes, discussions, and a monthly exam.

12. Learning And Training Resources:

Required textbook methodology (if any)	**none**
Main References (Sources)	**Behrens-Abouseif, D. (2007). Cairo of the Mamluks: A History of the Architecture and its Culture, I.B. Tauris & Co. Ltd, Salem Road, London.** **Berkey, J. P. (2003). The Formation of Islam: Religion and Society in the Near East, 600-1800. Cambridge University Press, Cambridge, United Kingdom.**
Recommended Supplementary Books and References (Scientific Journals, Reports)	**none**
Electronic References and Websites	**none**
Required textbook methodology (if any)	**6%**

Name and Signature Of The Course Instructor **Name And Signature Of The Head Of Department**

Assoc. Prof. Dr. Maysoon mohy hilal **Assoc Prof. Dr. Raed Abdullah Hasan**

Course description/ Fifth Stage / Professional Practice / A522

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage/ Professional Practice
2. Course code:
A522
3. semester/ year :
Second semester 2024-205
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Prof. Dr. Rana Ibrahim Khalil rana.ibrahim@uosamarra.edu.iq
8.Objectives:
"The aim of the course is to introduce the student to the fundamentals of professional practice and the responsibilities of the architect towards this profession, first through their design proposals as a thinker and creator, and then through their field practice as a coordinator and leader of the executive team. Secondly, the student will also become familiar with the key responsibilities of the architect as an executor and participant in architectural competitions or in research and design work, by deepening collaboration with various sectors. Additionally, the student will learn about the principles of professional progression through the regulations in place at the Iraqi Engineers' Syndicate.

Course Objectives	• **The ability to provide each student with awareness and understanding of the conceptual framework."** • **The ability to use the practical knowledge base and facilitate the transition from professional school to professional practice."** • **The ability to handle the role of the architect in society and understand it.**
9 . Teaching And Learning Strategies:	
Strategy	**It is an organized plan aimed at achieving specific educational objectives. This strategy involves selecting the most effective methods and tools for delivering knowledge (such as lectures, discussions, and project-based learning), assessing students (through exams, presentations and assignments), and guiding them towards critical thinking and practical application of the subject. The goal is to promote deep understanding and encourage active learning among students.**

9. Course Structure:

Week	Hours	Required Learning Outcomes
1	2	The Architect and the Architectural Profession
2	2	Architectural Consultancy Services
3	2	Professional Career Ladder / Hierarchy of Professional Advancemen
4	2	Engineering and Architectural Professional Organizations / Regulations
5	2	Practice and Professional Conduct System According to the Law of the Engineers' Syndicate
6-7	4	Criteria for the Selection / Election of the Architect
8-9	4	Architectural Competitions
10-11	4	Architectural Consultancy Contract
12-13	4	Architect's Fees
14-15	4	Building Codes / Legislation Related to Construction Works

11.Course Assessment And Grade Distribution:	
The semester includes individual and group daily quizzes, discussions, and a monthly exam.	
12. Learning And Training Resources:	
Required textbook methodology (if any)	none
Main References (Sources)	Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).
Recommended Supplementary Books and References (Scientific Journals, Reports)	none
Electronic References and Websites	none
Required textbook methodology (if any)	7%

Name and Signature of The Course Instructor **Name And Signature of The Head Of Department**

Prof. Dr. Rana Ibrahim Khalil **Assoc. Prof. Dr. Raed Abdullah Hasan**

Course description/ Fifth Stage / Advance Design Theories / A523

University of Samarra College of Engineering Department or Branch: Department of Architecture Engineering

1.Course Name and Academic Stage
Fifth Stage / Advance Design Theory
2. Course code:
A523
3. semester/ year :
Second semester 2024-205
4. date of preparation of the study description:
2025-2024
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Assoc. Prof. Dr. Maysoon mohy hilal maysoon.hilal@uosamarra.edu.iq
8.Objectives:
The course aims to acquaint students with the most prominent design theories (in general), which intersect with various fields such as industry, applied arts, and others. It involves studying their development from the early 20th century to the early 21st century, with a focus on theories and schools of architectural design, and the emergence of the idea and concept of "design separation." The course traces the transition from fine arts concepts through several movements and schools to the Bauhaus School and the principles of comprehensive design. **It also addresses the influence of the philosophy of science and types of logical thinking employed in the development of scientific research methodologies and how these were transferred to architectural design approaches. This includes the emergence and development of design strategies in architectural schools and the propositions of Christopher Alexander.** **Furthermore, the course explores influences from the humanities, language, and structuralist theory, and the emergence of design concepts that benefit from linguistic structural and organizational relationships. It examines post-structuralist thinking, deconstructivist theory, the movement of the spectrum, and the evolution of design methods through computer use.** **The course will be further developed to include the presentation and analysis of key software in the field of computer-aided design, the concept of virtual reality, and a discussion of the contemporary Iraqi experience in architectural design, with the goal of achieving a contemporary Iraqi architectural identity.**

Course Objectives	**Reshaping contemporary buildings with a modern architectural identity.**
9 . Teaching And Learning Strategies:	
Strategy	• ***Historical Development and Critical Analysis*** • **Interdisciplinary Integration** • **Analysis of Theories and Fundamental Concepts** • **Study of Leading Case Studies and Proposals** • **Integration of Technology** • **Exploration and Analysis** • **Local Context and Application**
10. Course Structure:	

Week	Hours	Required Learning Outcomes
1-5	10	It is a study of the act of design (in general, and architectural design in particular) as it emerged in the early 20th century, focusing on the influence of rational thought and scientific methodology. The course explores the types of logical reasoning employed in design and emphasizes identifying the underlying philosophy that leads to specific design approaches, particularly the impact of the philosophy of science on rationalist tendencies.
6-10	10	The second part of the course focuses on the study of design (in general and architectural design in particular) under the influence of the humanities, including the effects of aesthetics, metaphysics, and linguistics—especially structuralist, semantic, and deconstructivist theories. It explores the strong relationship with critical theory (which is continued in the second semester through the course on Criticism Theory). The course also examines the shift between the two approaches that occurred around the mid-20th century, providing a broader perspective on both traditional and modern worldviews and scientific paradigms.
11-14	8	In the final part of the semester, the course addresses the variables affecting design (in general and architectural design in particular) resulting from the evolution of information technology, communication tools, and computer use. It analyzes the type of computer technology and the underlying philosophy related to its influence, and how these relate to the two previous approaches.
15	2	Exam

11.Course Assessment And Grade Distribution	
The semester includes individual and group daily quizzes, discussions, and a monthly exam.	
12. Learning And Training Resources	
Required textbook methodology (if any)	none
Main References (Sources)	Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).
Recommended Supplementary Books and References (Scientific Journals, Reports)	none
Electronic References and Websites	none
Required textbook methodology (if any)	8%

Name and Signature of the Course Instructor

Assoc. Prof. Dr. Maysoon mohy hilal

Name and Signature of the Head of Department

Assoc. Prof. Dr. Raed Abdullah Hasan

Course description/ Fifth Stage / Architectural Criticism Theories / A524

University of Samarra College of Engineering Department or Branch:
Department of Architecture Engineering

1.اسم المقرر والمرحلة الدراسية :
Fifth Stage / Theories of Architectural Criticism
2. Course code:
A524
3. semester / year :
Second semester 2024-205
4. date of preparation of the study description:
2024-2025
5. available attendance forms.
In- person
6.total hours / total unite
30/2
7.Name And Academic Title Of The Course Coordinator
Asst. lect. Rawa Fadhil Hamdi
8.Objectives:
This material focuses on acquainting students with the most influential theories of criticism in the field of architecture and clarifying the nature of the relationship between "criticism theory," "theory," "architecture theory," and "philosophy." It also analyzes the relationships among these three aspects and explains how they influence the production actions: "authorship, composition, design, and focus," and their impact on architectural design.

Course Objectives	• **Understanding classification concepts.** • **Mastering educational leadership tools.** • **Analyzing design drawbacks.** • **Applying evaluation criteria.**
9 . Teaching And Learning Strategies:	
Strategy	• **Project-based learning.** • **Boundary division.** • **Presentations.** • **Interactive learning.**

10. Course Structure:

week	hours	Required Learning Outcomes
1-5	**10**	**The first part of the curriculum clarifies the basic concepts and definitions in the subject and analyzes them: theory / theory of criticism / philosophy / architectural theory / design and criticism / the act of choice / the act of reception / major theories of sensory perception / the impact of humanities on architectural theory orientations.**
15-6	**20**	**The second and main part focuses on studying the most prominent theories of criticism, especially those influential in architecture and intertwined with architectural theory. These include semantic theories (semiotics), structuralism and post-structuralism (particularly deconstruction and folding in architecture), and phenomenology. The material will be further developed toward presenting contemporary critical ideas in Iraq.**

11.Course Assessment And Grade Distribution:
The semester includes individual and group daily quizzes, discussions, and a monthly exam.
12. Learning And Training Resources:

Required textbook methodology (if any)	**none**
Main References (Sources)	**Reference Book: Matthew Frederick 101 Things I Learned in Architecture School (2007). Ernst Neufert Neufert Architects' Data(2010). Andrea**

	Simitch The Language of Architecture: 26 Principles Every Architect Should Know (2014).
Recommended Supplementary Books and References (Scientific Journals, Reports)	**none**
Electronic References and Websites	**none**
Required textbook methodology (if any)	**8%**
Name And Signature Of The Course Instructor **Asst. lect. Rawa Fadhil Hamdi**	**Name And Signature Of The Head Of Department** **Assoc. Prof. Dr. Raed Abdullah Hasan**