

دليل وصف المواد الدراسية | 2026-2025 |

University OF MOSUL



*First Cycle – Bachelor's Degree (B.Sc.) – Architectural
Engineering*

بكالوريوس - هندسة العمارة



MODULE DESCRIPTION FORM

Bologna track

First Level

ARC 111 Architecture Design and Graphic (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Architecture Design and Graphic (1)	Module Delivery	
Module Type	C	<input checked="" type="checkbox"/> Theory	
Module Code	ARC 111	<input type="checkbox"/> Lecture	
ECTS Credits	12	<input type="checkbox"/> Lab	
SWL (hr/sem)	300	<input checked="" type="checkbox"/> Tutorial	
		<input type="checkbox"/> Practical	
		<input type="checkbox"/> Seminar	
Module Level	UG1	Semester of Delivery	Fall
Administering Department	Department of architecture	College	College of Engineering
Module Leader	Ahmed A. Alfakhry	e-mail	ahmed.alfakhry@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Prof.	Module Leader's Qualification	Msc.
Module Tutor	Nasma M. Thabet / Maha A. Sadella / Luma M. Yahya / Russul S. Aloabidi / Marwa Isam / Farah Jalo / Surour N. Thamer / Ghofran Mohammad / Sara Mohammed	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims

أهداف المادة الدراسية

- **Theoretical part: Introduction, Primary Elements, Visual proportion of form, Primary shapes, Platonic solid, Regular and irregular forms, Transformation of form, Additive forms, Formal collisions of geometry, Articulation of form, Defining space with horizontal & vertical elements, Closure, Qualities of Architectural Space, Openings in space / Lighting, Spatial Relationships, Spatial Organizations, Circulation, Proportion and Scale, Practice/ Preliminary Presentation Ordering Principles, Practice/ Development**
Introduce students to the concept of Architecture Design and Graphic in its general and applied context, highlighting its role in the field of architecture.
- Achieve a comprehensive understanding of Architecture Design and Graphic as an idea and its application in the context of architecture.
- Understand the relationship between Architecture Design and Graphic and the art of architecture, with a focus on ways to develop Architecture Design and Graphic through architectural work.
- Familiarize students with Architecture Design and Graphic, including their fundamentals, additionally, students become acquainted with the details related to Architecture Design and Graphic, especially modern systems used in contemporary architectural buildings.
- Explore a range of Architecture Design and Graphic
- Open new horizons for students to explore architectural ideas.
- Enhance the role of students and activate their participation by presenting reports on Architecture Design and Graphic, and buildings. These reports are discussed Architecture Design and Graphic
- Bridging the Gap between academic theories and practical applications and explore the details of Architecture Design and Graphic in architectural buildings and understanding, helping students enhance their practical and theoretical skills in this field.
- Inform students - by practice - about:
- Architectural elements (point, line, plane, & volume) and elements of design (line,
- direction, shape, size, texture, value, & color) to achieve Unity in design according to
- design principles.
- The concepts of mass & space in architectural design
- Influence of structural principles on architectural composition
- Influence of human scale and functions on architectural design
- Local identity in architecture

Module Learning Outcomes

مخرجات التعلم للمادة الدراسية

- Identify the concept of Design and Graphic and its role in Architecture.
- Understanding the relationship between Architecture Design, Graphic and art in architecture and ways to develop it.
- Familiarizing students with Architecture Design and Graphic form.
- Studying architectural projects and their use of Architecture Design and Graphic.
- Encouraging exploration of architectural ideas and Architecture Design and Graphic development.
- Enhancing student roles through report presentations and discussions.
- Linking academic theories with practical applications and providing hands-on exercises.
- Encouraging active learning and collaborative work among students.
- Effective communication with Architecture Design and Graphic.
- Functioning effectively as a team member, providing leadership, collaboration, and goal achievement.
- Encouraging active learning Architecture Design and Graphic and collaboration through group presentations showcasing students' skills and

	<ul style="list-style-type: none"> collective work. Acquiring and applying new knowledge using Architecture Design and Graphic learning strategies. Program skill goals: Practicing exercises and small projects in design studios, Design work in the design studio occupies the main part in the course with a significant role of high-quality. architectural rendering in presenting results
Indicative Contents المحتويات الإرشادية	<ul style="list-style-type: none"> Graphic and the concept of advanced Architecture Design and its relationship to architecture. The most important elements and principles of advanced Architecture Design and Graphic and their applications in contemporary global projects. The important elements and principles of advanced Architecture Design and Graphic and its significant classifications. Important elements and principles of advanced Architecture Design and Graphic materials and their applications in global projects. Elements and principles of advanced Architecture Design and Graphic, with international examples.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> Encouraging students' active participation through pre-lecture readings and class discussions about the important elements and principles of advanced Architecture Design and Graphic. Promoting an interactive learning important elements and principles of advanced Architecture Design and Graphic by implementing reverse learning, where students explore and research the Architecture Design and Graphic, contemporary building elements, and new architectural design principles, leading to discussions and a deeper understanding of the subject matter.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	123	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	8
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	177	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	11.8
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	300		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative	Quizzes	2	8%	2,5	
	Assignments	1	4%	6	
	Projects / Lab.	6	24%	1,2,4, 7,8,9	

assessment	Report	1	4%	3	
Summative assessment	Midterm Exam	1	10%	12	
	Final Exam	1	50%	15	
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Line (free hand drawing)
Week 2	Line (geometrical drawing)
Week 3	Texture
Week 4	Basic geometrical shapes
Week 5	Collage
Week 6	Collage representation exercise by drawing
Week 7	3D form design and composition
Week 8	3D form design and composition
Week 9	3D form design and composition
Week 10	3D form design and composition
Week 11	3D form design and composition
Week 12	3D form design and composition
Week 13	3D form design and composition
Week 14	3D form design and composition
Week 15	

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none">Architecture, Form, Space and Order, Franic Ching, Van Nostrand Reinhold Company, New York, 1996Time saver standardNeufert	
Recommended Texts		
Websites		

Grading Scheme

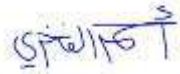
مخطط الدرجات

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.



أ.م.د. عمر حازم خروفة



اسم وتوقيع صاحب المادة

أ.م. احمد عبد الوهاب الفخري

ARC 112 Descriptive geometry & Engineering Drawing

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Descriptive geometry & Engineering Drawing		Module Delivery		
Module Type	S		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar		
Module Code	ARC112				
ECTS Credits	6				
SWL (hr/sem)	150				
Module Level	UGI	Semester of Delivery			1
Administering Department	ARC	College	COE		
Module Leader	Reem Ali Talib Alothman		e-mail	reemalothman@uomosul.edu.iq	
Module Leader's Acad. Title	Teacher	Module Leader's Qualification	Ph.D.		
Module Tutor	Maha Akram	e-mail	E-mail		
Peer Reviewer Name	Name	e-mail	E-mail		
Scientific Committee Approval Date		Version Number	1.0		
Relation with other Modules العلاقة مع المواد الدراسية الأخرى					
Prerequisite module	None		Semester		
Co-requisites module	None		Semester		
Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية					
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none"> • Descriptive Geometry provides training of the students' intellectual capability of space perception and spatial reasoning. • Training the student's mind to visualize imaginary objects and represent them. • The subject aims at developing the skills needed for documenting designs using drawings and for performing graphical analysis of two dimensional and three-dimensional problems. <p>This course develops the ability of the students to understand geometric projection and learn the types of geometric projection. Students will learn how to use deferent drawing scales. The course develops the basic engineering drawing skills in one plane of the students and use drawing tools.</p>				
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. Remember and understand the most ways to draw different shapes. 2. Comparing the different methods of drawing. 3. Describe different ways that are used for drawing the same object. 4. Naming and describing the different scales. 5. Carrying out the final 2d and 3d drawing of any project. 6. The use of different architectural drawing tools. <p>Benefit from the ways of drawing in engineering and architectural work after graduation.</p>				
Indicative Contents المحتويات الإرشادية	<ul style="list-style-type: none"> • Indicative content includes the following. • Introducing the engineering drawing subject. • How to draw different shapes. • How to draw 3d models. <p>How to draw projection.</p>				

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

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 practical sessions and homework.

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	93	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	57	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	4.1
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

Module Evaluation

تقييم المادة الدراسية

As	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	10% (10)	5
	Projects / Lab. Class work	12	15% (10)	1,3,7,10,12, 14
	Projects / Homework	12	15% (10)	2,4,6,9,11,13,15
Summative assessment	Midterm Exam	2 hr	20% (20)	8
	Final Exam	3 hr	40% (40)	16
Total assessment			100% (100 Marks)	

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Monge's Orthographic Projection. Defining points for Monge's descriptive geometry analysis
Week 2	Defining lines for Monge's descriptive geometry analysis
Week 3	Solve for various projections (1) such as: True size and shape projections, True angles, Distances between points and lines.
Week 4	Solve for various projections (2) such as: True size and shape projections, True angles, Distances between points and lines.
Week 5	Midterm exam
Week 6	Auxiliary Views. Defining principal views relative to spatial analysis and expanding the principles of basic views to auxiliary view application

Week 7	<p>Introduction and definition of engineering drawing for students, including the following: Learn about engineering tools and how to use them.</p> <ul style="list-style-type: none"> * Types of pens used in drawing geometric shapes. * Billboard layout and addresses field numbers. * How to deal with the engineering board and the engineering board and how to install it on the board. <p>Types of lines in engineering drawing: visible lines, hidden lines, center lines, dimension lines, cutting lines.</p>
Week 8	<p>Various engineering operations:</p> <ul style="list-style-type: none"> * Introducing the drawing scale and its types: civil, mechanical, zoom-in and zoom-out scale. <p>Teach students how to apply and draw the following engineering operations:</p> <ul style="list-style-type: none"> * Drawing a straight line parallel to a known straight line from a point outside it. * Drawing a perpendicular bisector of a known straight line <p>Draw tangents and learn about tangent points and how to locate them</p>
Week 9	<p>Various engineering operations</p> <ul style="list-style-type: none"> * Draw a known arc so that it touches two known lines between which there are angles: right, acute and obtuse. * Finding the center of a known arc tangent to a known straight line and a known circle arc, inner circle arcs, and outer circle arcs. * Finding the center of a known arc that touches the arc of a known circle and passes through a point outside it. <p>Draw the inverted shape</p>
Week 10	Quiz
Week 11	<p>Perpendicular projection theory of objects</p> <ul style="list-style-type: none"> * Types of projection in drawing and its practical importance * Projections with vertical rays * Types of projections resulting from vertical projection and approved in the projection of various engineering objects <p>The front, vertical, right side and left side view</p> <ul style="list-style-type: none"> * How to arrange and draw the projections required for any object on the drawing board
Week 12	<p>Drawing three-dimensional figures</p> <ul style="list-style-type: none"> * Types of three-dimensional figures and their practical benefits * Isometric
Week 13	<p>Linking the given projections with the process of imagining and drawing the analogous body</p> <p>Drawing axes of measurement and how to put dimensions on them</p>
Week 14	<p>Drawing the deleted third position of the body</p> <ul style="list-style-type: none"> * How to deduce the omitted location from two known locations of the body <p>Draw the omitted location of objects with inclined surfaces</p>
Week 15	<p>Geometric Sections</p> <ul style="list-style-type: none"> * Rules for cutting objects * Marking the cut areas and leaving blanks and uncut parts <p>Abnormal areas during cutting that were not marked: the oblique and vertical supports and appendages in the body</p>
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)
المنهاج الاسبوعي للمختبر

Week	Material Covered
Week 1	Using the engineering board and install the sheet on the board and use engineering drawings tools.
Week 2	Drawing: visible lines, hidden lines, center lines, dimension lines, cutting lines.
Week 3	Drawing a straight line parallel to a known straight line from a point outside it. Drawing a perpendicular bisector of a known straight line
Week 4	Drawing tangents
Week 5	Quiz
Week 6	Section drawing
Week 7	Arrange and draw the projections required for any object on the drawing board
Week 8	Mid Term Exam
Week 9	Drawing three-dimensional figures
Week 10	Drawing axes of measurement and put dimensions on them
Week 11	Linking the given projections with the process of imagining and drawing the analogous body
Week 12	Drawing the deleted third position of the body
Week 13	Draw the omitted location of objects with inclined surfaces
Week 14	Marking the cut areas and leaving blanks and uncut parts
Week 15	Abnormal areas during cutting that were not marked: the oblique and vertical supports and appendages in the body
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	-	No
Recommended Texts	Engineering Drawing and Graphic Technology, By French & Vierk, Twelve edition.	No
Websites		

Grading Scheme

مخطط الدرجات

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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	F – Fail	راسب	(0-44)	Considerable amount of work required

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ARC 113 Art & Architecture

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Art & Architecture		Module Delivery
Module Type	C	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input checked="" type="checkbox"/> Seminar	
Module Code	ARC 113		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGI	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Khawola faith mahmoud	e-mail	Khawola.mahmoud@uomosul.edu.iq
Module Leader's Acad. Title	Assist. prof	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0
Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	
Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. Introduction to Art and Architecture: The aim of this module is to provide students with a broad understanding of the relationship between art and architecture, and the relations between architecture and other sciences, introducing key concepts and terminology in the field.2. Elements of Design: The aim of this module is to introduce students to the fundamental elements of design and how they apply it to both art and architecture. Students will develop an understanding of how these elements contribute to the aesthetics and functionality of architectural design.3. Principles of design: : The aim of this module is to introduce students to the Principles of design and Identify and distinguish how the principles of design apply in architecture . Students will develop an understanding of how these Principles contribute to the aesthetics and functionality of architectural design.4. Drawing and Visualization: This module aims to develop students' drawing skills specifically for architectural representation. The goal is to enable students to effectively communicate their design ideas through drawings and visualizations.5. Space and Scale: This module aims to provide students with an understanding of space and scale in architectural design. Students will learn how to create a sense of space and manipulate the scale in their designs to achieve desired effects.6. Architectural composition, types of geometric forms' connections, articulation of forms and corners and their application in art and architecture7. Architectural trends and movements in art and architecture, (art nouveau, cubism).8. Historical Architectural Styles: This module aims to familiarize students with the major		

	<p>architectural styles throughout history, from ancient to contemporary, enabling them to recognize and analyze different architectural styles and their characteristics.</p> <p>9. Materials and Construction: The aim of this module is to introduce students to different construction materials and their applications in architecture. Students will gain knowledge about the properties and characteristics of materials, enabling them to make informed material choices in their designs.</p> <p>10. Technology and Architecture: This module explores how technology is shaping the future of architecture and Interior Design: This module aims to introduce students to the principles of interior design within architectural spaces. Students will learn how to create functional and aesthetically pleasing interiors, considering lighting, furniture, and material choices.</p> <p>11. Landscape Design and Site Planning: The aim of this module is to provide students with an understanding of landscape design principles and their role in architectural projects. Students will learn how to integrate buildings with the surrounding landscape to create harmonious and sustainable designs.</p> <p>12. Architectural Representation: This module aims to develop students' skills in architectural representation, including models, renderings, and digital visualization techniques. The goal is to equip students with effective communication tools to present their design ideas.</p> <p>13. Emerging Technologies and Future Trends: This module aims to explore the impact of emerging technologies on architecture and to discuss future trends in the field. Students will gain insights into challenges and opportunities it presents.</p>
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>14. Introduction to Art and Architecture:</p> <p>15. Understand the relationship between art and architecture.</p> <p>16. Use key concepts and terminology related to art and architecture.</p> <p>17. Historical Architectural Styles:</p> <p>18. Differentiate between major architectural styles throughout history.</p> <p>19. Analyze the characteristics and influences of various architectural styles.</p> <p>20. Elements of Design:</p> <p>21. Apply design principles to create aesthetically pleasing and functional architectural designs.</p> <p>22. Drawing and Visualization:</p> <p>23. Communicate design ideas effectively through drawings and visualizations.</p> <p>24. Space and Scale:</p> <p>25. Manipulate spatial qualities and scale in architectural design.</p> <p>26. Materials and Construction:</p> <p>27. Evaluate construction materials used in architecture.</p> <p>28. Make informed material choices for architectural applications.</p> <p>29. Sustainable Design and Green Architecture:</p> <p>30. Incorporate sustainable design principles and practices in architectural design.</p> <p>31. Apply environmentally friendly materials and energy-efficient strategies.</p> <p>32. Interior Design:</p> <p>33. Apply principles of interior design within architectural spaces.</p> <p>34. Landscape Design and Site Planning:</p> <p>35. Integrate buildings with the surrounding environment through landscape design.</p> <p>36. Architectural Representation:</p> <p>37. Present architectural designs effectively using appropriate representation methods.</p> <p>38. Emerging Technologies and Future Trends:</p> <p>39. Understand the impact of emerging technologies on architecture.</p> <p>40. Evaluate and discuss future trends in architecture.</p>

Indicative Contents المحتويات الإرشادية	the relationship between art and architecture, major historical architectural styles, elements of design in architecture, drawing and visualization skills, space and scale in architectural design, materials and construction, urban design and planning, sustainable design and green architecture, architectural history, building structures, interior design principles, landscape design and site planning, architectural representation techniques, and emerging technologies and future trends in architecture. These condensed indicative contents provide an overview of the essential topics and concepts that will be covered in the curriculum on art and architecture
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	67	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	<ul style="list-style-type: none"> ● Introduction to Art and Architecture ● Overview of the course and its objectives ● Understanding the basic principles of art and architecture ● Exploring the relationship between art and architecture ● Exploring the relationship between architecture and other sciences
Week 2	<ul style="list-style-type: none"> ● Elements of Design ● Introduction to the elements of design (line, shape, form, color, texture, etc.) ● Understanding how these elements apply to both art and architecture. ● Examples of how artists and architects utilize these elements in their work.
Week 3	<ul style="list-style-type: none"> ● Principles of design ● Introduction to the Principles of design (identical , similarity, contrast, Gradation, dominance, Balance, unity, etc.). ● Understanding how these Principles apply to architecture. ● Identify and distinguish how the principles of design apply in architecture

Week 4	<ul style="list-style-type: none"> • Drawing Fundamentals for Architects • Importance of drawing skills in architecture • Basic drawing techniques and exercises for architectural representation • Introduction to architectural drafting tools and conventions
Week 5	<ul style="list-style-type: none"> • Understanding Space and Scale, proportion • Exploring the concepts of space and scale in art and architecture • Techniques for creating a sense of space in architectural design. • Examining how artists play with scale in their works
Week 6	<ul style="list-style-type: none"> • Architectural composition • types of geometric forms' connections • articulation of forms and corners and their application in art and architecture
Week 7	<ul style="list-style-type: none"> • Architectural trends and movements in art and architecture, (art nouveau, cubism).
Week 8	<ul style="list-style-type: none"> • <u>Mid Term Exam</u>
Week 9	<ul style="list-style-type: none"> • Color Theory and Application • Basics of color theory and its significance in art and architecture • Exploring color palettes and their emotional impact on architectural spaces • Case studies of buildings that effectively use color in their design.
Week 10	<ul style="list-style-type: none"> • Architectural Styles: From Classical to Contemporary • Introduction to various architectural styles throughout history • Overview of classical architecture (Greek and Roman) • Exploration of modern and contemporary architectural styles
Week 11	<ul style="list-style-type: none"> • Introduction to Interior Design • Exploring the principles of interior design in architectural spaces • Understanding the role of lighting, furniture, and materials in interior design • Case studies of well-designed interiors
Week 12	<ul style="list-style-type: none"> • Landscape Design and Site Planning • Introduction to landscape design principles • Understanding the relationship between buildings and their surroundings • Case studies of landscape architecture projects
Week 13	<ul style="list-style-type: none"> • Architectural Representation: Models and Visualization • Introduction to architectural models and their role in design • Exploring different visualization techniques (renderings, digital modeling, etc.) • Understanding the importance of effective communication in architectural representation
Week 14	<ul style="list-style-type: none"> • Sustainable Design and Green Architecture • Introduction to sustainable design practices in architecture • Exploring environmentally friendly materials and energy-efficient strategies • Case studies of green buildings and their sustainable features
Week 15	<ul style="list-style-type: none"> • Future Trends in Architecture • Exploring emerging technologies and their impact on architecture • Trends in sustainable design, smart cities, and adaptive reuse • Discussion on the future challenges and opportunities in the field of architecture
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> • Architecture, Form, Space and Order / Francis Ching/1996 • The Art of Color and Design / Maitland Graves/1951 	Yes

	<ul style="list-style-type: none"> • Launching Imagination / Mary Stewart/2006 • مباديء في الفن والعمارة / شيرين احسان شيرزاد/1985 	
Recommended Texts	<ul style="list-style-type: none"> • "A Global History of Architecture" by Francis D. K. Ching, Mark M. Jarzombek, and Vikramaditya Prakash • "The Story of Art" by E.H. Gombrich • "Architecture: Form, Space, and Order" by Francis D. K. Ching • "Architecture: A World History" by Daniel Borden, Jerzy Elzanowski, and Joni Taylor • The Metropolitan Museum of Art's website (www.metmuseum.org) for online exhibits and resources on art and architectural history. • (www.getty.edu/education) for educational resources on art and architecture. • The National Gallery of Art's website (www.nga.gov) for virtual tours and educational materials on art history. • Architectural Review (www.architectural-review.com) • Architectural Digest (www.architecturaldigest.com) • Journal of Architectural Education (www.tandfonline.com/toc/uarc20/current) 	No
Wbsites	<ul style="list-style-type: none"> • The Artstor Digital Library (www.artstor.org) for high-quality images of artworks, architectural drawing • s, and historical photographs. • Google Arts & Culture (artsandculture.google.com) for virtual tours, high-resolution images, and educational resources on art and architecture. • Coursera (www.coursera.org) and edX (www.edx.org) offer online courses on art history, architectural design, and related topics. • The Architectural Association School of Architecture (www.aaschool.ac.uk) offers online courses and lectures on architecture and design. 	

Grading Scheme
مخطط الدرجات

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 (فيد 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.

UOM 1011 Arabic Language

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Arabic Language		Module Delivery
Module Type	B		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input checked="" type="checkbox"/> Seminar
Module Code	UOM 1011		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	1
Administering Department	ARC	College	COE
Module Leader	Khalid Altai	e-mail	
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		Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">• This course aims to introduce students to the importance of the Arabic language in university education by discussing a range of vocabulary and concepts used in undergraduate teaching. It also seeks to raise awareness of the importance of using correct grammatical rules in writing reports and lectures.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none">• Introducing students to the importance of language• A general theoretical and review-based introduction to the divisions of the Arabic language• Introducing the components of the sentence and the classification of speech• Presenting the types of sentences in Arabic and highlighting rhetorical (insha'i) styles• An introduction to the structure of Arabic grammar and how texts are formed, with discussion of the relationship between form and meaning• Exploring form and content based on binary oppositions derived from the philosophy of reality• <input type="checkbox"/> An introduction to the study of poetry and an overview of some of its techniques
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Student Workload (SWL)
الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	67	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	4.7
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation
تقييم المادة الدراسية

As	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome	
Formative assessment	Quizzes	2	10% (10)	4, 13	LO #3, 4, 5, and 6
	Assignments	4	10% (10)	4, 13	LO #3, 4, 5, and 6
	Projects / Lab.				
	Exam				
Summative assessment	Midterm Exam	1 hr	10% (10)	8	1,2,3,4,6,14
	Final Exam	3 hr	70% (70)	16	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Introducing literary terms such as rhythm, prosody, the unity of the poetic verse, the unity of the Arabic poem, and its vertical system
Week 2	Introducing literary terms such as rhythm, prosody, the unity of the poetic verse, the unity of the Arabic poem, and its vertical system
Week 3	Literary samples
Week 4	Literary samples
Week 5	Moving beyond the vertical poetic system to free verse, presenting the idea of transformation, and linking it with traditional and modern structural systems through the terms classical and modernist
Week 6	Moving beyond the vertical poetic system to free verse, presenting the idea of transformation, and linking it with traditional and modern structural systems through the terms classical and modernist
Week 7	The semiotics of the title as an important entry point in the critique of architectural designs
Week 8	Midterm Exam
Week 9	Presenting repetition as a mechanism in the construction of the literary text
Week 10	Presenting repetition as a mechanism in the construction of the literary text
Week 11	Distinguishing between repetition and parallelism and explaining the role of parallelism in text construction
Week 12	Distinguishing between repetition and parallelism and explaining the role of parallelism in text construction
Week 13	Irony and sarcasm as literary concepts and how they enter into architectural art in terms of

	critique and reception
Week 14	Irony and sarcasm as literary concepts and how they enter into architectural art in terms of critique and reception
Week 15	The concept of the receiver in Reception Theory by Jakobson
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC 114 Mathematics (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Mathematics (1)		Module Delivery
Module Type	B		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 114		
ECTS Credits	4.0		
SWL (hr/sem)	100		
Module Level	UGI	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Tuqa Waleed	e-mail	new.matrix242@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none"> 1. Provide the fundamental concepts for elementary mathematics. 2. Use the mathematical functions like trigonometric functions and application of derivatives to solve some Engineering problems.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>At the end of this course, students will have:</p> <ol style="list-style-type: none"> 1. Recognizing different types of matrices and their properties. 2. Applying matrix operations to solve system of linear equations. 3. Gaining knowledge of the Basic 2D Curves drawing using shifting properties. 4. Understanding the concepts of limits and continuity.

	<p>5. Learning how to use the power, product, quotient and chain rule to differentiate functions and algebraic trigonometric functions.</p> <p>6. Being able to apply the differentiation to solve engineering problems.</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following: Types of Matrices, operations, sum, multiplication by scalar, multiplication between two matrices. Determinants, the adjoint of matrix, inverse of matrix and solving systems of linear equation using matrices. [15 hrs]. Prerequisites for calculus, coordinates and graphs in the plane. Slope and equations for lines, functions and their graphs. Shifts, circles and parabolas and a review of trigonometric functions. [15 hrs]. Limits and continuity, introduction to limit, The sandwich theorem and $\frac{\sin \theta}{\theta}$, limits involving infinity and continuous functions. [15 hrs] Derivatives, slopes, tangent lines and derivatives. Differentiations rules, derivatives of trigonometric functions. The chain rule, implicit differentiation and fractional powers. [15 hrs] Applications of derivatives, related rates of change. Maxima, minima, curve sketching with y' and y''. Graphing of rational functions, asymptotes and optimization. [15 hrs].</p>
<p>Learning and Teaching Strategies استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<p>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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.</p>

<p>Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا</p>			
<p>Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل</p>	<p>78</p>	<p>Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا</p>	<p>5</p>
<p>Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل</p>	<p>22</p>	<p>Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا</p>	<p>1.46</p>
<p>Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل</p>	<p>100</p>		

Module Evaluation

تقييم المادة الدراسية

As		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	30% (30)	3,6 and 9	LO #(1, 2),(3) and (5,6).
	Assignments	5	5% (5)	3,6 ,9,11,13	LO # 1-6
	Projects / Lab.				
	Report	1	5% (5)		
Summative assessment	Midterm Exam	1 hr	10% (10)	8	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	<ul style="list-style-type: none"> Matrices types (square, diagonal, symmetric) and operations (addition, scalar multiplication, matrix multiplication).
Week 2	<ul style="list-style-type: none"> Determinants (2×2, 3×3), the adjoint and the inverse of matrix.
Week 3	<ul style="list-style-type: none"> Solving linear systems (Cramer's Rule, Gaussian elimination).
Week 4	<ul style="list-style-type: none"> Coordinates, graphs, line equations (slope-intercept, point-slope).
Week 5	<ul style="list-style-type: none"> Functions (polynomial, piecewise, trigonometric) and their graphs.
Week 6	<ul style="list-style-type: none"> (Shifts, scaling and symmetry), circles and parabolas.
Week 7	<ul style="list-style-type: none"> Introduction to limits (tables/graphs), GeoGebra: Interactive limit explorations.
Week 8	The sandwich theorem and $\frac{\sin \theta}{\theta}$.
Week 9	<ul style="list-style-type: none"> Limits at infinity, continuity (Intermediate Value Theorem).
Week 10	<ul style="list-style-type: none"> Definition of derivatives (slope, tangent lines).
Week 11	<ul style="list-style-type: none"> Differentiation rules and Trigonometric derivatives.
Week 12	The chain rule, implicit differentiation.
Week 13	Applications of derivatives and related rates of change.
Week 14	<ul style="list-style-type: none"> Extrema (first/second derivative tests), Rational functions graphing and Asymptotes.
Week 15	Optimization and Antiderivatives.
Week 16	Preparatory week before the final exam.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Thomas__Calculus_Addison-Wesley; 11th edition (January 1, 2004)	No
Recommended Texts	Calculus and Analytic Geometry 1 by Purcell,1972.	No
Websites		

Grading Scheme

مخطط الدرجات

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.



أ.م.د. عمر حازم خروقة



اسم وتوقيع صاحب المقرر

م. تقى وليد

UOM 1040 Democracy & Human Rights

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Democracy and Human Rights		Module Delivery
Module Type	B		<input checked="" type="checkbox"/> Theory
Module Code	UOM 1040		<input type="checkbox"/> Lecture
ECTS Credits	2		<input type="checkbox"/> Lab
SWL (hr/sem)	50		<input type="checkbox"/> Tutorial
			<input type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	UGI	Semester of Delivery	1
Administering Department	ARC	College	COE
Module Leader	Abdullah Fathi	e-mail	
Module Leader's Acad. Title	Assistant lecturer	Module Leader's Qualification	MSc
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0
Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	None
Co-requisites module	None	Semester	None
Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">• The aim of studying the democracy and human rights topics is to:• Understand the concept of human rights and explore their sources, including international, regional, national, and religious sources.• Define administrative corruption, explore its types, and understand its detrimental effects on society. Study methods to combat administrative corruption and promote transparency, accountability, and good governance.• Trace the historical development and evolution of human rights, examining key milestones and movements that have shaped the modern understanding of human rights.• Differentiate between different categories of human rights, including civil and political rights, economic and social rights, and environmental, cultural, and developmental rights.• Explore legal, institutional, and societal guarantees to prevent human rights violations, including guarantees of human rights in Islam, national-level protections, and international safeguards.• Comprehend the concept of democracy, including its principles, values, and various forms of democratic governance such as direct, semi-direct, indirect, and digital democracy.• Overall, studying these topics aims to develop a comprehensive understanding of human rights, democracy, and combating corruption, empowering individuals to actively promote and protect human rights and democratic values in society.		
Module Learning Outcomes مخرجات التعلم للمادة	<ul style="list-style-type: none">• After these module aims, students should be able to:• Demonstrate a comprehensive understanding of the concept of human rights and their sources, including international, regional, national, and religious sources.		

<p>الدراسية</p>	<ul style="list-style-type: none"> • Identify and explain the fundamental characteristics of human rights, such as universality, indivisibility, interdependence, and inalienability. • Analyze the historical emergence and evolution of human rights, including key milestones and movements that have shaped their development. • Differentiate between different categories of human rights, including civil and political rights, economic and social rights, and environmental, cultural, and developmental rights. • Evaluate and apply legal, institutional, and societal guarantees to prevent human rights violations, considering guarantees in Islam, at the national level, and within the international framework. • Understand and discuss the concept of democracy, including its principles, values, and different forms of democratic governance. • Evaluate the Islamic stance on democracy and engage in critical analysis of the strengths and weaknesses of the democratic system. • Recognize and assess the impact of administrative corruption on society and propose methods to combat and prevent corruption in administrative systems. • Demonstrate critical thinking skills by analyzing and evaluating different perspectives on human rights, democracy, and corruption. • Apply acquired knowledge and skills to promote and protect human rights, democracy, and good governance in personal, professional, and civic contexts. • Overall, students should have a solid understanding of democracy and human rights, democracy, and corruption issues, and be able to apply this knowledge to contribute to the advancement of human rights and democratic values in society.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>The indicative content includes:</p> <ol style="list-style-type: none"> 1. Definition and sources of democracy and human rights (international, regional, national, religious). [3h] 2. Characteristics of democracy and human rights: universality, indivisibility, interdependence, inalienability. [3h] 3. Emergence and evolution of human rights: historical development, key milestones, influential movements. [3h] 4. Types of human rights: civil and political, economic and social, environmental, cultural, and developmental. [3h] 5. Guarantees to prevent human rights violations: legal, institutional, societal safeguards, Islamic guarantees, national and international levels. [3h] 6. Concept of democracy: principles, values, forms of governance (direct, semi-direct, indirect). [3h] 7. Islamic stance on democracy: compatibility, strengths, weaknesses. [3h] 8. Critique of the democratic system: analysis of strengths and weaknesses. [3h] 9. Administrative corruption: definition, types, societal impact. [3h] 10. Methods to combat administrative corruption. [3h]
<p>Learning and Teaching Strategies استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<ul style="list-style-type: none"> • When it comes to learning and teaching strategies for a human rights module, there are several approaches can be taken to enhance understanding and engagement. Here are some effective strategies: • Interactive Discussions: Encourage students to actively participate in discussions, debates, and group activities. This promotes critical thinking, allows for different perspectives to be shared, and fosters a deeper understanding of human rights issues. • Case Studies: Present real-life case studies that highlight human rights violations or achievements. Analyzing these cases helps students apply theoretical concepts to practical situations and develops their problem-solving skills. • Research Projects: Assign research projects on specific human rights topics or issues.

	<p>This encourages independent learning, critical analysis, and the development of research skills.</p> <ul style="list-style-type: none"> • Collaborative Learning: Foster collaboration among students through group projects or assignments. This encourages teamwork, peer learning, and the exchange of diverse perspectives. • Assessment Variety: Use a variety of assessment methods, including essays, presentations, debates, and quizzes, to assess students' understanding of human rights concepts and their ability to apply them to real-world situations.
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	2.3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	1.2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

Week	Material Covered
Week 1	Definition of human rights and sources of rights (international sources / regional sources / national sources / religious sources).
Week 2	Characteristics of human rights.
Week 3	The emergence and evolution of human rights.
Week 4	Types of human rights / civil and political rights. Economic and social rights. Environmental, cultural, and developmental rights.
Week 5	Guarantees to prevent human rights violations / guarantees of human rights in Islam.
Week 6	Guarantees for the protection of human rights at the national level.
Week 7	Guarantees of human rights at the international level.
Week 8	The concept of democracy.
Week 9	Characteristics of a democratic system.
Week 10	Forms of democratic governance (direct democracy / semi-direct democracy / indirect democracy).
Week 11	Digital democracy / definition and advantages and disadvantages of digital democracy / manifestations of digital democracy.
Week 12	The Islamic stance on democracy.
Week 13	Critique of the democratic system.
Week 14	Administrative corruption / definition and types.

Week 15	Methods to combat administrative corruption.			
Week 16	Preparatory week before the final Exam			
Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر				
Learning and Teaching Resources مصادر التعلم والتدريس				
	Text	Available in the Library?		
Required Texts	ضمانات حقوق الانسان وحمايتها وفقا للقانون الدولي والتشريع الوطني / نبيل عبد الرحمن ناصر الدين	No		
Recommended Texts	الديمقراطية وحقوق الانسان / د. امير عبد العزيز	No		
Websites				
Grading Scheme مخطط الدرجات				
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.				

ARC 121 Architecture Design and Graphic (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Architecture Design and Graphic (2)	Module Delivery	
Module Type	C	<input checked="" type="checkbox"/> Theory	
Module Code	ARC 121	<input type="checkbox"/> Lecture	
ECTS Credits	12	<input type="checkbox"/> Lab	
SWL (hr/sem)	300	<input checked="" type="checkbox"/> Tutorial	
		<input type="checkbox"/> Practical	
		<input type="checkbox"/> Seminar	
Module Level	UGI	Semester of Delivery	spring
Administering Department	Department of architecture	College	College of Engineering
Module Leader	Ahmed A. Alfakhry	e-mail	ahmed.alfakhry@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Prof.	Module Leader's Qualification	Msc.
Module Tutor	Nasma M. Thabet / Maha A. Sadella / Luma M. Yahya / Russul S. Aloabidi / Marwa Isam / Farah Jalo / Surour N. Thamer / Ghofran Mohammad / Sara Mohammed	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ul style="list-style-type: none">• This course aims to teach students the basic principles of architectural design and presentation through introduces the student to methods of graphic representation essential to design professionals in the built environment. Design representation is taught both as a craft and as a method of thinking.• Types of representation include freehand drawing (drawing from observation and from the imagination); analytic diagramming (the two-dimensional representation of an idea or process);• illustration graphics (symbolic representation), and technical drafting (conventions of plan, section, elevation and axonometric). Students will be exposed to analog (pencil-and-paper) and digital tools.• The method of instruction will emphasize application of representation skills in response to project assignments
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ul style="list-style-type: none">• The purpose of this course also is to provide students with the necessary scientific and logical justification for the studied architectural as well as the exercises on which they depend.• General skills and other skills related to portability (Personal employment and development).• Teamwork within the group. Personal development through ethical values in dealing with, and respect for the other opinion.• Personal development through building the general and professional cultural background of the profession. Interaction with teaching staff as a guide educational and administrative educational process.
<p>Indicative Contents المحتويات الإرشادية</p>	<ul style="list-style-type: none">• Determine Creative thinking to apply design principles of composition and to deal with the level of mass and architectural space. Introduce opinions and deduce the nature of the application of design principles and the use of design elements in the studied architectural practice that achieve a collective agreement.• Self-learning skill through self-reliance in the conclusion of solutions to design problems and knowledge. Based on the students' criticism and follow-up by the teaching staff to ensure that the talents and abilities of the students are exploited and utilized to achieve the objectives of the educational program.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	123	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	8
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	177	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	11.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	300		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	8%	2,5	
	Assignments	1	4%	6	
	Projects / Lab.	6	24%	1,2,4, 7,8,9	
	Report	1	4%	3	
Summative assessment	Midterm Exam	1	10%	12	
	Final Exam	1	50%	15	
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Human scale
Week 2	Architectural scale
Week 3	Residential furniture standards
Week 4	Residential furniture standards
Week 5	Residential furniture standards
Week 6	Residential unit design
Week 7	Residential unit design
Week 8	Residential unit design
Week 9	Residential unit design
Week 10	Residential unit design
Week 11	Residential unit design
Week 12	Residential unit design
Week 13	Residential unit design
Week 14	Residential unit design
Week 15	Residential unit design

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none">Architecture, Form, Space and Order, Franic Ching, Van Nostrand Reinhold Company, New York, 1996Time saver standardNeufert	
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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.

اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروقة

أحمد عبد الوهاب الفخري

اسم وتوقيع صاحب المادة

أ.م. احمد عبد الوهاب الفخري

ARC 122 Free Hand Drawing (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Free Hand Drawing (1)		Module Delivery
Module Type	S		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 122		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	UGI	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Ahmed Yaroub Ghanem Tohala	e-mail	ahmadtohala@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD.
Module Tutor	Rawia Dabdoob	e-mail	rawia.dabdoob@uomosul.edu.iq
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0
Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	
Module Aims, Learning Outcomes and Indicative Contents			
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
Module Aims أهداف المادة الدراسية	<p>The free hand drawing curriculum for the architecture student aims at several important goals for the formation of the architect during his academic years, which go beyond learning the means and techniques of free hand drawing to develop visual perception and a mature architectural engineering vision of the world, which is very important for the architect, including</p> <ul style="list-style-type: none"> • The balance of vision and the development of artistic taste for objects and formations • Exercising the sense of sight on the vision and linking it to previous information • about the theory of perspective to form thought, perception and visualization of that form • Exercising the hand on expression by creating a harmonious relationship between the vision, the brain and the hand to express the visual perception of the world • Learn the method of measurement of proportions and proportions using hand, pen and sight • Recognize the differences between the values of light, shade and shadows in the theory of perspective and learn to express them • Learn the methods and techniques of drawing with different materials such as pencils and colors • Developing the ability to see the elements of artistic formation, such as lines, shapes, sizes, textures and directions, and analyze them in the model • Developing self-reliance in the process of vision and expression through a series of 		

	.drawing exercises that range in difficulty from simple shapes to more complex ones Obtaining a musical visual vision that will be important and useful for future • architecture students
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none"> • Aesthetic artistic taste through a musical vision of different shapes and configurations. • Learn the theory of perspective, which is the basis for visual perception of the world. • Create a harmonious relationship between vision, brain and hand for expression and the ability to express architectural ideas through free hand drawing. • Using the measurement method for proportions and proportions by hand, pen, and sight • Realizing the differences in light values in the theory of perspective and being able to express them. • Acquire the skills of using different drawing methods and techniques. • The artistic vision of the elements of the artistic composition, such as lines, shapes, sizes, textures, directions, and their analysis in the model.
Indicative Contents المحتويات الإرشادية	<ul style="list-style-type: none"> • Visual perception of different shapes from the perspective of the concept of perspective and its concepts. • Proportions in dimensions and shapes and measuring them by hand, pen, and vision. • Estimating light values, colors, tones, and the differences between them • Derivations of various shapes from the basic cube shape. • The relationship between vision, hand, visual perception, acquisition of vision skill and the ability to express. • Gaining the musical vision of an architecture student through practice and bringing concepts into practice.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	<ol style="list-style-type: none"> 1 . Giving the student the basic concepts and previous information about the reality that he draws through a model, and then criticizing the drawing so that the student acquires the skill of correct vision and the ability to express. 2 . Diversifying the shapes and configurations of the model and the gradation in the degree of complexity from simple to complex
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	62	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.13
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation

تقييم المادة الدراسية

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4, 13	LO #1, 2, and 3
	Assignments	1	30% (30)	6	LO #3
	Projects / Lab.	4 hr	30% (30)	12	LO #3 and 4
	Report				
Summative assessment	Midterm Exam	4 hr	15% (15)	15	LO #1-4
	Final Exam	3 hr	15% (15)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Introductory test for know the student aptitude
Week 2	Training for draw lines in different directions
Week 3	Simple model consist of cubes – stage 1
Week 4	Advance model consist of cubes – stage 1
Week 5	General discussion with the student about the drawing and paint
Week 6	Simple model consist of circle shapes & cylinders – Stage 1
Week 7	Simple model consist of circle shapes & cylinders – Stage 2
Week 8	Simple model consist of circle shapes & cylinders – Stage 3
Week 9	Simple model consist of oblique cubes – stage 1
Week 10	Simple model consist of oblique cubes – stage 2
Week 11	Simple models consist of potteries
Week 12	simple models consist of irregular forms 1
Week 13	Advance model consist of irregular forms 2
Week 14	General discussion with the student about the drawing and paint
Week 15	Final submission
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Drawing – a creative process, Francis d. k. Ching , john Wiley & sons , inc. , 1990 Drawing outdoor , henry c. pits , Watson- Guptill publications , 1965 , new York How to paint and draw , Bodo w. Jax Heimer , Thames and Hudson , 1962 , London Watercolor technique , rex Brandt , sixth edition , Reinhold publishing corporation , 1963	No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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	(فقد المعالجة) راسب	(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.

ARC 123 Construction and Building Materials

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Construction and Building Materials		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory
Module Code	ARC 123		<input checked="" type="checkbox"/> Lecture
ECTS Credits	4		<input type="checkbox"/> Lab
SWL (hr/sem)	100		<input type="checkbox"/> Tutorial
Module Level	UGI	Semester of Delivery	10
Administering Department	Architectural Engineering	College	College of Engineering
Module Leader	Roaa suhail		
Module Leader's Acad. Title	teacher	Module Leader's Qualification	MSc.
Module Tutor	Adil Khalil Qasim	e-mail	adil.khalil@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	Building Construction	Semester	Three

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">• Learning the fundamentals of construction materials, their architectural properties, and methods of their application• Understanding the basic principles of construction• Application of construction methods for load-bearing walls
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>By the end of the course, the student will be able to:</p> <ul style="list-style-type: none">• Explain the stages of building construction and its main components.• Identify the properties, types, and uses of construction materials.• Distinguish between different structural systems and architectural elements.• Analyze the relationship between building materials and appropriate construction applications.• Read and interpret basic construction symbols and details.• Apply construction principles in simplified architectural drawings and details.• Prepare brief technical reports on field visits.
Indicative Contents المحتويات الإرشادية	The course provides an introduction to building materials and the stages of building construction, along with an overview of the main building components, including foundations, walls, roofs, and floors. It covers traditional building

	<p>materials such as brick, stone, and gypsum, in addition to the study of cement and concrete in terms of their components, types, and properties. The course also addresses special types of concrete, such as lightweight concrete, hollow concrete, and Thorsten concrete.</p> <p>Furthermore, it introduces metallic and industrial materials such as steel, aluminum, and plastics, alongside a detailed study of structural and architectural elements. It also includes vertical circulation elements such as stairs, ramps, elevators, and escalators, as well as the study of building openings such as doors and windows.</p> <p>The course covers finishing materials and thermal and waterproofing insulation, while training students to read basic construction symbols and details. It also strengthens the practical aspect through field visits to laboratories and construction sites, with the preparation of technical reports based on these visits.</p>
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> • Analytical thinking • Brainstorming • Video-based observations (visual learning method) • Problem-solving • Critical thinking
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.46
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (10)	4,13	LO #1,2, and 3
	Assignments	1	15% (10)	6	LO #3
	Projects / Lab.				
	Report	1	10% (10)	5 and 15	
Summative assessment	Midterm Exam	2 hr	20% (20)	15	LO # 1-4
	Final Exam	3 hr	40% (40)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	An Introduction about building materials The Stages of the construction of the building, and the components of the building (foundations- Walls- roofs- floors)
Week 2	Construction materials (Brick), building by Brick, constructional Symbols, (Homework)
Week 3	Stone, Types of stones, building by stone, Gypsum. (H.W.)
Week 4	Types of cement and Its properties. Concrete, Types of Concrete and Its Properties, Concrete Components. (Quiz1)
Week 5	A visit to laboratories and sites under construction, (Report)
Week 6	Light and hollow Concrete and Thurstone, industry, components, properties, uses. (H.W.)
Week 7	Steel, Aluminum, Plastic materials
Week 8	Term Exam 1st
Week 9	Foundations, and walls (H.W.)
Week 10	Roofs and Floors (H.W.)
Week 11	Vertical circulation elements (Stairs, Ramps, Escalators, Lifts) (H.W.)
Week 12	Vertical circulation elements (Stairs, Ramps, Escalators, Lifts) (H.W.)
Week 13	Openings (Doors and windows) (Quiz 2)
Week 14	Finishing and Insulation Materials
Week 15	A visit to sites under construction, (Report)
Week 16	Term Exam 2 nd

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> Building Constructions- By Zuhair M. Saco Building Constructions, Walls and It's Details – By Anees Juaad Civil Engineering for Architects (Poland) 	Yes
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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.

UOM 1031 Computer (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Computer 1		Module Delivery	
Module Type	B		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	UOM 1031			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	1	Semester of Delivery	2	
Administering Department	Architectural Engineering	College	College of Engineering	
Module Leader	Ebtisam Sameer Al Sawaf		e-mail	ebtisamalsawaf@uomosul.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		Version Number		

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	The Module aim is to prepare student to deal with computers. In addition to, teach them on the principles of computers and the Internet's underlying technologies and skills. The course introduces students to the fundamentals of computing, including the use of a variety of different hardware and
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	software. Compo merits, and Creating documents using a word processor and creating presentations, Conducting research on the Internet.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	It is expected from the student who passes this module learn the following topics: <ol style="list-style-type: none"> 1. Introduction to Computer 2. Computer Components: 3. Operating System and Graphical User Interface GUI 4. Word Processing 5. Spread Sheet 6. Presentation Software 7. Introduction to Internet and Web Browsers 8. Communications and Emails 9. Introduction to Cloud Computing and Services
Indicative Contents المحتويات الإرشادية	Introduction to Computer[3 hr] Computer Components[6 hr] Operating System and Graphical User Interface GUI [6 hr] Word Processing [6 hr] Spread Sheet[6 hr] Presentation Software [6 hr] Introduction to Internet and Web Browsers [6 hr] Communications and Emails [3 hr] Introduction to Cloud Computing and Services [3 hr]

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the Lab activities, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, laboratory and by considering type of external search involving some of computer technology that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	20% (20)	5	
	Assignments	1	5% (5)	3, 10	
	Lab.	5	10% (10)	Continuous	
	Report	1	5% (5)	12	
Summative assessment	Midterm Exam	2 hr	10% (10)	10	
	Final Exam	3hr	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Computer
Week 2	Computer Components
Week 3	Computer Components (Cont.)
Week 4	Operating System and Graphical User Interface GUI
Week 5	Operating System and Graphical User Interface GUI (Cont.)
Week 6	Word Processing
Week 7	Word Processing (Cont.)
Week 8	Spread Sheet
Week 9	Spread Sheet (Cont.)
Week 10	Presentation Software
Week 11	Presentation Software (Cont.)
Week 12	Monthly Exam
Week 13	Introduction to Internet and Web Browsers

Week 14	Introduction to Internet and Web Browsers (Cont.)
Week 15	Communications and Emails , Introduction to Cloud Computing and Services

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction to Computer
Week 2,3	Computer Components
Week 4,5	Operating System and Graphical User Interface GUI
Week 6,7	Word Processing
Week 8, 9	Spread Sheet
Week 10,11	Presentation Software
Week 12,13	Introduction to Internet and Web Browsers
Week 14	Introduction to Cloud Computing and Services
Week 15	Monthly Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1.Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020) 2. Microsoft Office 2019 Step by Step 1st Edition by Curtis Frye & Joan Lambert 3. الخضر على الخضر بحث " أساسيات الحاسوب" 2016	Available as PDF
Recommended Texts		
Websites		

Grading Scheme
مخطط الدرجات

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.


اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروقة

اسم وتوقيع صاحب المادة
م.د. ابتسام سمير ادريس

ARC 124 Mathematics (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Mathematics (2)	Module Delivery	
Module Type	B	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 124		
ECTS Credits	4.0		
SWL (hr/sem)	100		
Module Level	UGI	Semester of Delivery	2
Administering Department	ARC	College	COE
Module Leader	Tuqa Waleed	e-mail	new.matrix242@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	1
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">3. Provide the fundamental concepts of elementary mathematics for integration.2. Use the mathematical integration to find the areas, volumes and the length of the curves.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>At the end of this course, students will have:</p> <ol style="list-style-type: none">7. Understanding and applying the fundamental concepts of integration.8. Finding the indefinite integral of a function using substitution techniques.9. Being able to solve problems involving applications of integration, such as area between curves, volume of revolutions and length of curves.10. Understanding the concept of inverse functions and how they relate the original functions.11. Recognizing the relationship between inverse trigonometric functions and their application in solving the problems.

	12. Applying the techniques of integration to solve integral problems.
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>Integrating and finding the area with respect to x and y axes, definite integrals and indefinite integrals [10 hrs].</p> <p>Applications of definite integrals, areas between curves, volumes of solids of revolution, disks and washers, cylindrical shells, length of curves in the plane and areas of surfaces of revolution.</p> <p>[20 hrs]</p> <p>The calculus of transcendental functions, inverse functions, $\ln x$, e^x and logarithmic differentiation, general exponential and logarithmic function and the inverse of trigonometric functions.</p> <p>[20 hrs]</p> <p>Techniques of integration, basic integration formulas, integration by parts, trigonometric integrals, trigonometric substitution, rational functions and partial fractions.</p> <p>[25 hrs]</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Type something like: 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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	22	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.46
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

As		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	30% (31)	3,6, 10	LO #(1, 2),(3) and (6).
	Assignments	4	4% (4)	3,7,9 and 11	LO # 1-6
	Projects / Lab.				

	Report	1	5% (5)		
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Definite integrals and indefinite integrals.
Week 2	Integrating and finding the area with respect to x and y axes.
Week 3	Application of definite integrals and areas between curves.
Week 4	Volumes of solids of revolution: disks and washers methods.
Week 5	Cylindrical shells method.
Week 6	Length of curves in the plane.
Week 7	Areas of surfaces of Revolution.
Week 8	The calculus of transcendental functions and inverse functions.
Week 9	In x , e^x and logarithmic differentiation and mid term exam.
Week 10	General exponential and logarithmic functions.
Week 11	The inverse trigonometric functions and L'Hopital rules.
Week 12	Techniques of integration and basic integration formulas.
Week 13	Integration by parts.
Week 14	Trigonometric integrals, Rational functions and partial fractions.
Week 15	Trigonometric substitution.
Week 16	Preparatory week before the final exam.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Thomas _ Calculus _ Addison-Wesley; 11th edition (January 1, 2004)	NO

Recommended Texts	Calculus and Analytic Geometry 1 by Purcell,1972.	NO
Websites		

Grading Scheme مخطط الدرجات				
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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اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروفة



اسم وتوقيع صاحب المقرر

م. تقي وليد

UOM 1021 English language (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية		
Module Title	English language (1)	Module Delivery
Module Type	B	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	UOM 1021	
ECTS Credits	2	
SWL (hr/sem)	50	

Module Level		Semester of Delivery		1.0
Administering Department		Architectural Engineering	College	College of Engineering
Module Leader	Tuqa Waleed		e-mail	new.matrix242@uomosul.edu.iq
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification	
			M.SC.	
Module Tutor			e-mail	
Peer Reviewer Name				e-mail
Scientific Committee Approval Date		Version Number		1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونواتج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<p>The main Learning Outcomes of English language Beginner module for the first stage is:</p> <p>1. Developing student's skills in English language includes the four skills:</p> <ul style="list-style-type: none"> - Listening objectives: Understand the main points of clear speech. - Reading Objectives: Understand basic language to read any topic on architecture. - Writing Objectives: write simply about familiar and architectural topics. - Speaking Objectives: extended communication skills in education contexts. Reflection on own learning and development and ability to work with, and relate to others. <p>2. upgrading the quality of architectural educational aiming to obtain academic accreditation.</p>
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<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>The Module Learning Outcomes aligned with this aim include:</p> <ol style="list-style-type: none"> 1. Studying the English language enables students to communicate more effectively with peers from around the world. 2. Learning English facilitates access to a wide range of architectural information and resources available in English. 3. Acquiring English language skills enhances employment prospects and boosts students' confidence. <p>These outcomes can be achieved through the cognitive domain of Bloom's Taxonomy as follows:</p> <ol style="list-style-type: none"> 1. Remembering Vocabulary: <ul style="list-style-type: none"> • Identifying words and understanding their meanings • Describing objects or situations 2. Understanding "Everyday English": <ul style="list-style-type: none"> • Interpreting sentences • Explaining the meanings of words 3. Applying "Spoken Grammar": <ul style="list-style-type: none"> • Comparing grammatical structures • Using vocabulary and grammar accurately in sentence formation • Applying grammatical rules effectively in writing.
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Throughout the course, students are expected to develop their speaking skills in both interaction and production, enabling them to handle most everyday situations using basic English. The course is based on the Headway Student's Book, a communicative English program developed by Oxford University. It is further enriched with a range of communicative and business-oriented projects to support the achievement of learning outcomes. The course is designed to enhance students' abilities in reading, writing, listening, and speaking, allowing them to work with longer and more complex texts and tasks. This progression helps build confidence and prepares students to advance to the intermediate level. The syllabus consists of twelve units, each carefully structured to develop the four core language skills, while also giving strong emphasis to grammar, vocabulary, and pronunciation.</p>

<p style="text-align: center;">Learning and Teaching Strategies</p> <p style="text-align: center;">استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<p>Learning and teaching strategies are the techniques and approaches instructors use to support student learning and help them achieve the module's intended outcomes. These strategies are designed to engage learners, deepen understanding, and develop their knowledge and skills in an advanced English course. The adopted strategies include:</p> <ul style="list-style-type: none"> - Lectures and presentations: Core content and instructor explanations are delivered through presentations that introduce essential concepts of English grammar and language skills. - Interactive discussions: Encourage active learning by involving students in class discussions. Instructors lead conversations on specific topics, motivating students to share ideas, ask questions, and consider different viewpoints. - Formative assessment and feedback: Ongoing assessments, such as quizzes and assignments, are used to monitor students' understanding and progress. Timely feedback helps learners recognize areas for improvement and strengthens their learning.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	25% (25)	3,5,10	1,2
	Assignments	2	10% (10)	(3-11)	1,2
	Projects / Lab. Report	1	5% (5)		1,2,3
	Midterm Exam	1 hr	10% (10)	(9)	1,2,3
Summative assessment	Final Exam	3 hr	50% (50)		
	Total assessment		100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Unit 1: Getting to know you Present, past, future tenses Right word, wrong word Social expression
Week 2	Unit 2: Whatever makes Present tenses Things I like doing Making conversation
Week 3	Unit 3: What's in the news? Past tenses Regular and irregular verbs
Week 4	Unit 4: Eat, drink, and be merry! Quantity Food, Can you come for dinner?
Week 5	Unit 5: Looking forward Verb patterns, Phrasal verbs, Expressing doubt and certainty
Week 6	Unit 6: The way I see it What Like?, Synonyms, What's on?
Week 7	Unit 7: Living history Present perfect

	Word ending, Word stress, Agree with me
Week 8	Unit 8: Girls and boys have to – should – must Things to wear At the doctor's
Week 9	Midterm Exam
Week 10	Unit 9: Time of a story Past perfect, Narrative tenses Joining sentences- conjunctions Feelings Exclamations with so and such
Week 11	Unit 10: Our interactive world Passives Words that go together
Week 12	Unit 11: Life's what you make it! Present perfect continuous, verbs patterns, used to Good news, bad news
Week 13	Unit 12: First conditional if + will, Might, Second conditional if + will Prepositions Thank you and goodbye!
Week 14	Unit 12: Questions & short answers Just wondering Form: might & might not Do you think
Week 15	Writing report
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	John and Liz Soars (2016) New Headway Pre-Intermediate Student's Book Fourth Edition. OXFORD University Press. ISBN : 978-0-19-476966-2	No
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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 (فيد 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.


اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروفة


اسم وتوقيع صاحب المقرر

م. تقي وليد

MODULE DESCRIPTION FORM

Bologna track

Second Level

ARC 211 Architecture Design (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Architecture Design (1)	Module Delivery	
Module Type	Core	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical Seminar	
Module Code	ARC 211		
ECTS Credits	12		
SWL (hr/sem)	300		
Module Level	UGII	Semester of Delivery	1
Administering Department	ARC	College	COE
Module Leader	Lect. Dr. Muzahim Muhammed Mustafa	e-mail	Mozahim.hadidi@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Lect. Dr. Omar Adil Lect. Dr. Iqbal Salim Younis Lect. Dr. Ibtisam Sameer Idris Asst. Lect. Mohammed Mahfouz Asst. Lect. Marwah Isam Asst. Lect. obay	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. Initiating the students into the basic principles of the design process (collecting information, analysis, synthesis), enabling them to start a design project, to resolve architectural functions and to manipulate architectural form and space within a given context using architectural vocabulary and respecting local architectural identity
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none">1. At the end of the course, the student will be able to acquire the necessary knowledge to design buildings with limited spaces (Villa).2. The student can make reports related to the analysis of similar examples, standards, and site analysis, in addition to other information about the project.3. The ability to solve design problems and choose the best alternative in design

Indicative Contents المحتويات الإرشادية	Introduction, Primary Elements, Visual proportion of form, Primary shapes, Platonic solid, Regular and irregular forms, Transformation of form, Additive forms, Formal collisions of geometry, Articulation of form, Defining space with horizontal & vertical elements, Closure, Qualities of Architectural Space, Openings in space / Lighting, Spatial Relationships, Spatial Organizations, Circulation, Proportion and Scale, Practice/ Preliminary Presentation Ordering Principles, Practice/ Development.
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	143	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	9
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	107	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	9hr(3day)	30%	1-13	LO #
	Assignments	13	10% (10)	1-13	LO #
	Projects / Lab.	3	30%	5-9-13	LO #
	Report	3	10% (10)	2, 3,4	LO #1,2,3, 4, 5, and 6
Summative assessment	Midterm Exam	6 hr(2 Day Sketch every one 3hr)	10% (10)	6,10	LO # 1-7
	Final Exam	4 hr	20% (20)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	General Introduction
Week 2	Definition and characteristics of the design process
Week 3	The design problematic and how to define it using architectural graphics and drawings
Week 4	Analysis as an interpreting tool clarifying the problem in relation to the composition
Week 5	Analysis using matrices
Week 6	architectural spaces adjacency criteria
Week 7	Day sketch
Week 8	Synthesis – representing matrices using geometrical shapes (the bubble diagram)
Week 9	Synthesis – representing matrices using geometrical shapes (the bubble diagram)
Week 10	Synthesis - Zoning
Week 11	Architectural form and its types
Week 12	Interlocking architectural forms
Week 13	Treatment of architectural form
Week 14	Solid and void
Week 15	Horizontal elements defining space
Week 16	Vertical elements defining spaces

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Architecture, form space & order by Francis D. K. Ching Methods of systematic analysis of design in architecture, By D. Mohamed A. Shihab	yes
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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	فقد المعالجة (راسب)	(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.

اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروقة

اسم وتوقيع صاحب المادة

د.م.زاحم محمد مصطفى

ARC 212 History of Ancient Architecture

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	History of Ancient Architecture		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC212			
ECTS Credits	3.00			
SWL (hr/sem)	75			
Module Level	UGII	Semester of Delivery	Three	
Administering Department	Architectural	College	Engineering	
Module Leader	Ashraf Ibrahim Mahmood	e-mail	ashraf.ibrahim@uomosul.edu.iq	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.Sc.	
Module Tutor	Marwah Isam Mohammed	e-mail	marwah.isam@uomosul.edu.iq	
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">Increasing the visual knowledge store about the history of architecture, its stages of development, its characteristics, and advantages.Preparing architectural graduates according to scientific rules that enable them to practice the profession of architecture in architectural and urban design, city planning, internal and external spaces, and the preservation of heritage and antiquities according to scientific rules and methods.
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<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>Students who complete this course will be able to:</p> <ol style="list-style-type: none"> 1. Gain knowledge about architectural history, including different styles and characteristics of buildings throughout history, through lectures, reading materials, and visual aids such as pictures and videos. 2. Understand and appreciate the importance of architectural style and its impact on society. 3. Apply knowledge and skills to real-world situations and problems in the fields of architecture, town planning, urban planning, interior and exterior spaces, and the preservation of cultural heritage and antiquities. 4. Practice the profession of architects according to scientific rules and methods. 5. Draw inspiration from design features of older buildings for future designs. 6. Use knowledge, skills, and creativity to develop new ideas, products, or solutions by incorporating design features from old buildings into future designs.
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<ul style="list-style-type: none"> • Introduction to the origins of architecture in early human settlements and primitive societies. • Architectural development in Mesopotamian civilizations (Sumerian, Babylonian, and Assyrian) • Ancient Egyptian architecture, with emphasis on religious buildings, temples and pyramids. • Classical Greek architecture, focusing on orders (Doric, Ionic, Corinthian), proportions, and temple design • Influence of environmental, religious, and socio-cultural factors on architectural form and development in ancient civilizations. • Building materials and construction techniques used in ancient architecture.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

<p>Strategies</p>	<ul style="list-style-type: none"> • Knowledge and Understanding: Identify key concepts and influences in the history of architecture. Comprehensive research into its development and its cultural, environmental, and historical contexts. Understand the interactions between local and global integration. • Experimental Technical Analysis: Analysis of new and innovative elements. Apply research methods to the study and documentation of architecture. Evaluate the value of heritage and propose recommendations for its preservation. • Research and Technical Skills: Use digital tools for architectural analysis and documentation. Prepare research reports and critical presentations on the history of architecture. Link historical architecture to contemporary practices. Acquire skills in hand-drawing historical buildings through homework assignments.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.9
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	%15(15)	3, 5,6,8 and 11	LO # 1-3
	Assignments	1	20%(20)	2 and 12	LO # 5-6
	Projects / Lab.				
	Report	1	5%(5)	7	LO # 4
Summative assessment	Midterm Exam	1 h	10% (10)	9	LO # 1-4
	Final Exam	3 h	50% (50)	16	All
Total assessment			100% (100)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to ancient Iraqi
Week 2	Sumerian Architecture
Week 3	Sumerian Architecture
Week 4	Old Babylonian Architecture
Week 5	Assyrian Architecture
Week 6	Assyrian Architecture
Week 7	Assyrian Architecture
Week 8	Modern Babylonian Architecture
Week 9	Ancient Egyptian Architecture
Week 10	Ancient Egyptian Architecture
Week 11	Ancient Egyptian Architecture
Week 12	Students Reports Discussion

Week 13	Greek Architecture
Week 14	Greek Architecture
Week 15	Greek Architecture
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> • Living in Ancient Mesopotamia, Bancroft-Hunt, Norman (2009) <i>Available in the Library?: No</i> • Graphic History of Architecture, John Mansbridge (1967) • The Art and Architecture of Ancient Egypt, Smith, William Stevenson (1981) • Mesopotamia: Ancient Art and Architecture, Zainab Bahrani (2017) <i>Available in the Library?: No</i> <ul style="list-style-type: none"> • Winter, N. A. (2006). Greek Architectural Terracottas: From the Prehistoric to the End of the Archaic Period. Oxford University Press. • J. J. Coulton. (1977). Ancient Greek Architects at Work. Cornell University Press 	No
Recommended Texts	Journal of Ancient Architecture. (n.d.). Ancient Architecture Studies. Retrieved from https://ancientarchitecturejournal.org	No
Websites	Ach net	

Grading Scheme

مخطط الدرجات

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	(قيد المعالجة) راسب	(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.

اسم وتوقيع رئيس القسم أو الفرع
أ.م.د. عمر حازم خروقة

اسم وتوقيع صاحب المادة
م.بتنزيه ابراهيم

ARC 213 Building Construction

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Building Construction		Module Delivery
Module Type	B		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 213		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGI	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Roaa Suhail	e-mail	adil.khalil@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	MSc.
Module Tutor	Asst. Lect. Adil Khalil Asst. Lect. Eman Khalid	e-mail	adil.khalil@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">To familiarize the student with its structural typesTo suit the appropriate structural type according to the type and size of the projectTo identify the types of simple foundations according to the structural structure and size of the projectTo identify the structural structure as load-bearing walls with all its partsTo identify the structural structure (columns and walls) with all its parts
Module Learning Outcomes	<ul style="list-style-type: none">To identify the structural type appropriate for the size of the projectTypes of simple foundations according to the structural system of the structural

مخرجات التعلم للمادة الدراسية	system • Detailed dimensions according to the structural structure • The type of roofing appropriate for the dimensions of the space • Method of designing health services sections and their relationship to the structural structure		
Indicative Contents المحتويات الإرشادية			
Learning and Teaching Strategies استراتيجيات التعلم والتعليم			
Strategies			
Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	67	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Determine the project dimensions, type, and function, and design its structural network (a house project with a load-bearing wall system)
Week 2	Draw the foundations in detail with reinforcement
Week 3	Draw the load-bearing walls in the plan
Week 4	Draw the service spaces, including the stairs and bathrooms
Week 5	Draw the ceilings with reinforcement
Week 6	Draw the façade
Week 7	Submit the project

Week 8	Day sketch exam
Week 9	Determine the project dimensions, type, and function, and design its structural network (a shopping mall project with a column and bridge system)
Week 10	Draw the foundations in detail with reinforcement
Week 11	Draw the columns and partitions
Week 12	Draw the service spaces, including the stairs and bathrooms
Week 13	Draw the ceilings and partitions with reinforcement
Week 14	Draw the facade
Week 15	Submit the project
Week 16	Day sketch exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Determine the project dimensions, type, and function, and design its structural network (a house project with a load-bearing wall system)
Week 2	Draw the foundations in detail with reinforcement
Week 3	Draw the load-bearing walls in the plan
Week 4	Draw the service spaces, including the stairs and bathrooms
Week 5	Draw the ceilings with reinforcement
Week 6	Draw the façade
Week 7	Submit the project
Week 8	Day sketch exam
Week 9	Determine the project dimensions, type, and function, and design its structural network (a shopping mall project with a column and bridge system)
Week 10	Draw the foundations in detail with reinforcement
Week 11	Draw the columns and partitions
Week 12	Draw the service spaces, including the stairs and bathrooms
Week 13	Draw the ceilings and partitions with reinforcement
Week 14	Draw the facade
Week 15	Submit the project
Week 16	Day sketch exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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 (فيد 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.

UOM 2050 Crimes of Ba'ath Regime in Iraq

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Crimes of Ba'ath Regime in Iraq	Module Delivery	
Module Type	E	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	UOM 2050		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGII	Semester of Delivery	1
Administering Department	ARC	College	COE
Module Leader	Asst. Lect. Ahmed Khalid	e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	

Week 15	
Week 16	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC 215 Computer Architectural Drawing 2D

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Computer Architectural Drawing 2D		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 215		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGII	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Luma Abdulwahab	e-mail	
Module Leader's Acad. Title	Asst. Lect.	Module Leader's Qualification	
Module Tutor	Ebtisam Sameer Al Sawaf	e-mail	ebtisamalsawaf@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. Develop an understanding of the principles and fundamentals of two-dimensional architectural drawing.2. Develop practical skills in drawing for exterior and interior architectural design.3. Teach computer projection using drawing programs.4. Instilling an understanding of logical thinking using a sequential drawing process.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none">• Basic Concepts: Understanding the basic settings and principles of architectural drawing .• Practical drawing skills as a starting point .• Evaluating drawings .• Communication and discussion among students .• Accuracy and skill in drawing .

	<ul style="list-style-type: none"> • Collaboration and teamwork . • Evaluating drawings. • Communication and discussion among students • Accuracy and skill in drawing
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Indicative Contents

المحتويات الإرشادية

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> • Learning based on architectural projects and pre-drawn illustrative examples: This strategy encourages students to engage in demonstrating how to draw projects sequentially or by simulating the drawing process. • Follow-up with peers: In this strategy, students form collaborative groups to produce electronic drawings through theoretical conversations among themselves, without direct drawing, to benefit from the close connection between students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction, Drawing Settings, Elements, Coordinates, Grid, etc.
Week 2	General Commands for Engineering Drawing (with application)
Week 3	Commands Related to Lines and 2D Shapes (with application)
Week 4	Commands Related to Lines and 2D Shapes (with application)
Week 5	Commands Related to Lines and 2D Shapes 1 (with application)

Week 6	Commands Related to Lines and 2D Shapes 2 First Practical Exam
Week 7	Drawing Commands for Group 2 (with application)
Week 8	Manipulating Ready-Made Shapes and Images (with application)
Week 9	Manipulating Ready-Made Shapes and Images (with application)
Week 10	Layers and 2D Shape Settings 1 (with application)
Week 11	Layers and 2D Shape Settings 2 Semester Theory Exam
Week 12	Dimensions and Measurements (with application)
Week 13	Dimensions and Measurements (with application)
Week 14	Main Tools 2
Week 15	Main Project Printing Final Output (with application) Second Practical Exam
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction, Drawing Settings, Elements, Coordinates, Grid, etc.
Week 2	General Commands for Engineering Drawing (with application)
Week 3	Commands Related to Lines and 2D Shapes (with application)
Week 4	Commands Related to Lines and 2D Shapes (with application)
Week 5	Commands Related to Lines and 2D Shapes 1 (with application)
Week 6	Commands Related to Lines and 2D Shapes 2 First Practical Exam
Week 7	Drawing Commands for Group 2 (with application)
Week 8	Manipulating Ready-Made Shapes and Images (with application)
Week 9	Manipulating Ready-Made Shapes and Images (with application)
Week 10	Layers and 2D Shape Settings 1 (with application)
Week 11	Layers and 2D Shape Settings 2 Semester Theory Exam
Week 12	Dimensions and Measurements (with application)
Week 13	Dimensions and Measurements (with application)
Week 14	Main Tools 2
Week 15	Main Project Printing Final Output (with application) Second Practical Exam
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks	Definition
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			(%)	
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.

UOM2022 English language (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	English language (2)	Module Delivery	
Module Type	B	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	UOM2022		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGII		
Administering Department	Architectural Engineering	College	College of Engineering
Module Leader	Dr. Sabreen Ali	e-mail	sabreen.abed@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PHD
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>The main Learning Outcomes of English language Beginner module for the first stage is:</p> <p>Developing student's skills in English language includes the four skills:</p> <ul style="list-style-type: none"> - Listening objectives: Understand the main points of clear speech. - Reading Objectives: Understand basic language to read any topic on architecture. - Writing Objectives: write simply about familiar and architectural topics. - Speaking Objectives: extended communication skills in education contexts. Reflection on own learning and

	<p>development and ability to work with, and relate to others.</p> <ol style="list-style-type: none"> 1. upgrading the quality of architectural educational aiming to obtain academic accreditation.
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<p>The Module Learning Outcomes that serve the aim include:</p> <ol style="list-style-type: none"> 1. learning English language may allow students to communicate easily with fellow global students and other counterparts. 2. learning English language may ease the access to different architectural information and resources in English. 3. learning English language may improve and widen employment opportunities, and make them more confident. <p>Those outcomes can be fulfilled through cognition domain from Blooms Taxonomy as following:</p> <ol style="list-style-type: none"> 1. Remembering Vocabulary. <ul style="list-style-type: none"> • Recognizing words and their meanings • Describing things or situation 2. Understanding 'Everyday English' <ul style="list-style-type: none"> • Interpreting sentences • Explaining a word meaning. 3. Applying 'Spoken grammar' <ul style="list-style-type: none"> • Comparing tools grammar • Applying tools and words meanings in forming sentences. • Carry out tools and grammars in writing.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>During the course, students will be able to speak interaction and production objectives, deal with most situations with basic English language. This course adopts Headway Student's Book, hence, is a communicative English language course designed by Oxford University. The course has been supplemented by a variety of communicative and business-related projects to ensure the outcomes of the program. The course aims to further develop students' language skills and strategies in reading, writing, listening, and speaking to a level where they can apply their language skills to longer, more complex material and tasks that help build confidence and prepare students to proceed to intermediate level. The course has twelve units where each is carefully designed to develop students' four main skills. The course also pays good attention to grammar, vocabulary, and pronunciation.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<p>Learning and teaching strategies refer to instructors' methods and approaches to facilitate student learning and achievement of module learning outcomes. These strategies aim to engage students, promote understanding, and enhance their knowledge and skills in advanced English course. Here are the adopted learning and teaching strategies:</p> <ol style="list-style-type: none"> 1. Lectures and presentations: the notes and the instructors are delivered through presentations introducing fundamental knowledge of English grammar and skills. 2. Interactive discussions: promotes active learning and thinking by engaging students in discussions. Instructors can facilitate class discussions on specific topics, encouraging students to share their insights, ask questions, and explore different perspectives. 3. Formative Assessments and Feedback: Regular formative assessments, such as quizzes and homework that help instructors gauge students' understanding and progress. Providing timely feedback allows students to identify areas for improvement and reinforces their learning.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3,8	1,2
	Homework assignments	9	27% (27)	2,3,4,5,6,7,8,9,11,12,13	1,2

	Discussions & Attendance	1	3% (3)	1,2,3,4,5,6,7,8,9,11,12,13,14,15	1,2
Summative assessment	Midterm Exam	1 hr	10% (10)	10	
	Final Exam	3 hr	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Unit 1: Getting to know you Present, past, future tenses Right word, wrong word Social expression
Week 2	Unit 2: Whatever makes Present tenses Things I like doing Making conversation
Week 3	Unit 3: What's in the news? Past tenses Regular and irregular verbs Saying when
Week 4	Unit 4: Eat, drink, and be merry! Quantity Food, Can you come for dinner?
Week 5	Unit 5: Looking forward Verb patterns, Phrasal verbs, Expressing doubt and certainty
Week 6	Unit 6: The way I see it What ... Like?, Synonyms, What's on?
Week 7	Unit 7: Living history Present perfect Word ending, Word stress, Agree with me
Week 8	Unit 8: Girls and boys have to – should – must Things to wear

	What things are made of At the doctor's
Week 9	Unit 9: Time of a story Past perfect Narrative tenses Joining sentences- conjunctions Feelings Exclamations with so and such
Week 10	Midterm Exam
Week 11	Unit 10: Our interactive world Passives Words that go together On the phone
Week 12	Unit 11: Life's what you make it! Present perfect continuous Birth, Marriage, Death Good news, bad news
Week 13	Unit 12: Just wondering First conditional if + will, Might, Second conditional if + will Prepositions Thank you and goodbye!
Week 14	Reading and listening
Week 15	Writing report
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	John and Liz Soars (2016) New Headway Pre-Intermediate Student's Book Fourth Edition. OXFORD University Press. ISBN : 978-0-19-476966-2	No
Recommended Texts		No
Websites		

Grading Scheme
مخطط الدرجات

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 (فقد 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.

ARC 214 Graphic and Architectural Presentation

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Graphic and Architectural Presentation		Module Delivery
Module Type	S		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 214		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UGII	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Anwar Meshal shareef	e-mail	anwar.meshal@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor	Mafaz Tareq, Aseel Ibrahim ,Rusul saad	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. The subject aims at developing the skills needed for presenting and documenting designs using hand drawings. This course will focus on drawing as a tool of communication through exercises that explore

	design representation using techniques of perspective and shadow.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. . This enables students to develop their drawing, visualization, and representation skills effectively in the architectural design process. 2. . Using drawings and documenting designs manually without the use of a computer, using engineering techniques and rules for drawing perspective and shadow.
Indicative Contents المحتويات الإرشادية	1. Architectural drawing and rendering are methods for depicting and showcasing projects in advanced architectural design. 2. Utilizing shading techniques to depict the facades and surfaces of architectural projects. 3. • Perspective drawing and shading are among the most important elements in drawing and rendering design projects.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> The main strategy that will be introduced to students is the fundamental principles of architectural drawings of both perspective and shadow This enables students to develop their drawing, visualization, and representation skills effectively in the architectural design process. Using drawings and documenting designs manually without the use of a computer, using engineering techniques and rules for drawing perspective and shadow.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	7	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	8%	2-5	
	Assignments	1	8%	6	
	Projects / Lab.	6	24%	1,2,4, 7,8,9	
	Report				

Summative assessment	Midterm Exam	1	10%	12	
	Final Exam	1	50%	15	
Total assessment			100%		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	First Week: The definition of perspective drawing of cubical forms using rays method.
Week 2	Second Week: Drawing perspective of stairs and sloping surfaces an using rays method.
Week 3	Third Week: The definition of perspective drawing using measuring points method.
Week 4	fourth week: The definition of perspective drawing using a circle of vision.
Week 5	Fifth week: Drawing perspective for circle and cylinder.
Week 6	Sixth week: The definition of one-point perspective drawing.
Week 7	Seven week: The definition of the principles of drawing shade and shadow for cubical forms- isometric and projections.
Week 8	Eighth week: Drawing shade and shadow for stairs and inclined surfaces - isometric and projections
Week 9	Nine week: Drawing shade and shadow for balconies and openings
Week 10	Tenth Week: Drawing shade and shadow for circles and cylinders
Week 11	Elevan week: Drawing shade and shadow for cubical perspectives
Week 12	Twelfth week: Drawing window and column shadows
Week 13	Thirteenth week : Drawing shade and shadow for balconies and openings
Week 14	Fourteenth week : inclined surfaces - isometric and projections
Week 15	Fifteenth week : Drawing shade and shadow for house perspectives
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
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	Material Covered
Week 1	The definition of perspective drawing of cubical forms using rays method.
Week 2	Drawing perspective of stairs and sloping surfaces an using rays method.
Week 3	Drawing perspective for circle and cylinder.
Week 4	Drawing shade and shadow for stairs and inclined surfaces - isometric and projections.
Week 5	Drawing shade and shadow for balconies and openings
Week 6	Drawing window and column shadows
Week 7	Drawing shade and shadow for balconies and openings

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	A methodological book: Shadow and Perspective - Author: Imad Al-Bakri	
Recommended Texts	Architectural Graphics by Ching,1996	
Websites		

Grading Scheme

مخطط الدرجات

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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اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حلزم خروقة

اسم وتوقيع صاحب المادة

انوار مشعل شريف

ARC 221 Architecture Design (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Architecture Design (2)		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 221		
ECTS Credits	12		
SWL (hr/sem)	300		
Module Level	UGII	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Lect. Dr. Muzahim Mohammed Mustafa	e-mail	Mozahim.hadidi@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Lect. Dr. Osama Hammadi Lect. Dr. Omar Adil Lect. Dr. Iqbal Salim Younis Asst. Lect. Mohammed Mahfouz Lect. Dr. Ibtisam Sameer Idris Asst. Lect. Marwah Isam Asst. Lect. obay	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none"> Enhancing critical thinking and problem-solving skills Identify characteristics, constraints, and opportunities. Develop effective communication and presentation skills. This course is intended to provide skills for designing different projects, with emphasis on detailing, custom designs, materials, etc. The typical route to qualifying is a combination of standards, academic studies and practical work and experience. Initially, a system is required to fulfil certain requirements.

	<ul style="list-style-type: none"> • This course covers building techniques related to the construction drawing production in order to understand design concepts and procedures. • The purpose of this course is to stimulate students' insights and understandings about different functions buildings and the link between design concept, function, form, and presentation drawings. • Providing the students with an introduction to the basic requirements of the projects for the profession while explaining the basic elements as well as the requirements. • In combination with the teaching package, students learn about the design process; the importance of color and light; other design elements influence such as furniture and materials that are used in the projects. • Covering and satisfying requirements and desires, as well as creating environments with the use of specific equipment and, most importantly, imagination and creativity. • Combining the aesthetic, functional, and philosophical approach to architectural design. • Implementing the elements and principles of design into the project. • The course covers commonly used materials, components, and systems.
<p style="text-align: center;">Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<ul style="list-style-type: none"> • Ability to gather, analyze, assess, record, apply, and comparatively evaluate relevant information within architectural design processes. • Demonstrate an understanding of principles and practices and integrate and apply that knowledge within architectural design processes. • Ability to develop imaginative and creative thinking. • Students will learn the basics of design including gathering data about the site plot, location, climate, space program, the relation between spaces, materials and finishes, openings such as doors and windows, and analyzing similar examples. • Students will learn how to formulate the concept of the project regarding the elements and principles of design, human needs, and form and function. • Students will learn about the philosophies and techniques for tackling three-dimensional design. • Students combine interdisciplinary talents they currently possess with new design skills. The projects look at concept creation and execution in 2D and 3D drawings including the detailing and furniture. • The student will gain the technical skills needed to express architectural concepts in a clear, efficient, and correct manner. • Students will draw increasingly complicated models and master new shading and color methods. Drawings of buildings and landscapes are also used to create and communicate ideas during the design process. • Students will use drawing board techniques, engineering drawing and handwriting to sketch, produce technical drawings with technical and design presentation and projections to express ideas and conceptions in the design process in the form of plans, elevations, sections, and other 3D illustrations. • It evolved into orthogonal, isometric, and axonometric projections, planes, sections, and elevations because of the employment of instruments and equipment required for precise drawing of simple geometric constructs.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Architectural Design – School Design – Educational buildings - Graphics – Plans – Site Plan – Elevations – Sections – Perspectives – Isometrics</p>
<p>Learning and Teaching Strategies</p>	

استراتيجيات التعلم والتعليم

Strategies	<ol style="list-style-type: none"> 1. Project-based learning: This strategy encourages students to engage in real-world or simulated design projects that require applying theoretical knowledge to practical scenarios. Through this approach, students can develop critical thinking and effective problem-solving skills while gaining valuable practical experience. 2. Analysis and Critique: In this strategy, students present their designs to the class and receive feedback from their peers and the instructor. This helps foster constructive criticism and opens the door to in-depth discussions about design principles and creative choices, improving students' overall communication and presentation skills. 3. Contact hours: 8 hours weekly. 4. The explanation using photos, videos, examples, drawings on the whiteboard and implementation through class work. 5. The attendance of students in lectures will have part of the credit. He / she is required to follow the lectures continuously, submits homework and assignments. Expect quizzes any time. 6. Students' assessment: The students will be assessed continuously through their activities in the class. Any student with ideas about learning and suggestions of alternative ways of dealing with problems will be very welcomed. 7. During the semester, extra information may provide for the students with more pictures and videos on the slide show, which can help them to maximize their imagination in design and modelling.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time / Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	21% (21)	4, 10 and 15	
	Assignments	1	3% (3)	1...15	LO # 1-6
	Projects / Lab.	2	6% (6)		
	Report	2	10% (10)	1,3	LO # 1-6
Summative assessment	Midterm Exam	3 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction
Week 2	Day sketch
Week 3	Openings
Week 4	Spatial relationships
Week 5	Types of spatial organization
Week 6	Movement – accessibility
Week 7	Day sketch
Week 8	Movement patterns - Entrances
Week 9	Scale
Week 10	Proportion
Week 11	Ordering principles / Axes
Week 12	Hierarchy, datum
Week 13	Symmetry and dominance
Week 14	Rhythm, repetition
Week 15	Rendering
Week 16	Final submission

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	<ul style="list-style-type: none"> • Opening • Spatial relationships • Types of spatial organization • Movement – accessibility
Week 2	<ul style="list-style-type: none"> • Day sketch (planes of building (house, small building))
Week 3	<ul style="list-style-type: none"> • Movement patterns, Entrances • Scale • Proportion • Ordering
Week 4	<ul style="list-style-type: none"> • Day sketch
Week 5	<ul style="list-style-type: none"> • Principles / Axes • Hierarchy – datum • Symmetry and dominance
Week 6	<ul style="list-style-type: none"> • Rhythm, repetition • Rendering
Week 7	<ul style="list-style-type: none"> • Final submission

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ol style="list-style-type: none"> 1. Methods of systematic analysis of design in architecture, By D. Mohamed A. Shihab 2. "ARCHITECTURE, Form, Space, & Order Third 	No

	<p>Edition”, Francis D.K. Ching</p> <p>3. “Time Saver Standards for Architectural Design Data” by John Hanock</p> <p>4. Neufert Architects Data Fourth Edition - By Wiley Blackwell</p> <p>5. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.</p>	
Recommended Texts	<p>1. “ARCHITECTURE, Form, Space, & Order Third Edition”, Francis D.K. Ching</p> <p>2. Neufert Architects Data Fourth Edition - By Wiley Blackwell</p>	
Websites	<p><input type="checkbox"/> Visualizing Architecture: A website that provides explanations and images of various architectural projects, helping to better understand new designs and ideas.</p> <p><input type="checkbox"/> Architizer: This site covers architecture news and new technologies and showcases architectural projects, providing a rich source of practical and theoretical information.</p> <p><input type="checkbox"/> Architecture Week: A specialized magazine that offers a wide range of articles and designs of interest to architecture students and architects.</p>	

Grading Scheme

مخطط الدرجات

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 (فيد 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.

ARC 222 Free Hand Drawing (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Free Hand Drawing (2)		Module Delivery	
Module Type	S		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 222			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGII	Semester of Delivery		
Administering Department	ARC	College	COE	
Module Leader	Dr. Ahmad Yarooob Tohalla		e-mail	ahmadtohala@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification		PhD
Module Tutor	Lect. Dr. Omar Adil Mafaz Tareq		e-mail	
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number		

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<p>The freehand drawing curriculum for architecture students aims to achieve several important goals for the development of an architect during their academic years. These goals go beyond simply learning freehand drawing methods and techniques, to developing visual perception and a mature architectural vision of the world, which is of utmost importance for architects. These goals include:</p> <ul style="list-style-type: none">• A balanced vision and developing artistic taste for objects and formations.• Using the sense of sight to see and linking it to previous knowledge about perspective theory to shape thought, perception, and conceptualization of
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	<p>that form.</p> <ul style="list-style-type: none"> • Practicing manual expression by creating a harmonious relationship between vision, brain, and hand to express visual perception of the world. • Learning how to measure proportions and dimensions using the hand, pen, and sight. • Understanding the differences between the values of light, shade, and shadows in perspective theory and learning to express them. • Learning drawing methods and techniques using various materials such as pens and colors. • Developing the ability to see and analyze the elements of artistic composition, such as lines, shapes, sizes, texture, and directions, in a model. • Developing self-reliance in the process of vision and expression through a series of drawing exercises that range in difficulty from simple to more complex forms. • Gaining a musical visual vision will be important and useful for future architecture students.
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>Acquire the skill of analyzing proportions and vanishing angles</p> <p>Strengthen the skill of planning a geometric shape</p> <p>Strengthen the skill of planning design ideas</p> <p>Strengthen the skill of drawing with pencils</p>
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Gradient pencils, drawing paper, wooden board</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>The silent geometric shape consisting of a group of cubes of different sizes and cylinders is explained and analyzed. Then the students begin to draw the shape freely using the skills acquired during the theoretical explanation.</p>
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

<p>Structured SWL (h/sem)</p> <p>الحمل الدراسي المنتظم للطلاب خلال الفصل</p>	63	<p>Structured SWL (h/w)</p> <p>الحمل الدراسي المنتظم للطلاب أسبوعيا</p>	4
<p>Unstructured SWL (h/sem)</p> <p>الحمل الدراسي غير المنتظم للطلاب خلال الفصل</p>	37	<p>Unstructured SWL (h/w)</p> <p>الحمل الدراسي غير المنتظم للطلاب أسبوعيا</p>	
<p>Total SWL (h/sem)</p> <p>الحمل الدراسي الكلي للطلاب خلال الفصل</p>	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative	Midterm Exam	1 hr	10% (10)	9	LO # 1-4

assessment	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to perspective, drawing angles, and vanishing points
Week 2	Preliminary test to assess student ability
Week 3	Practice drawing lines in different directions
Week 4	Simple model made of cubes - Stage 1
Week 5	Advanced model made of cubes - Stage 1
Week 6	General discussion with the student about drawing and coloring
Week 7	Simple model made of circles and cylinders - Stage 1
Week 8	Monthly drawing exam
Week 9	Simple model made of circles and cylinders - Stage 2
Week 10	Simple model made of circles and cylinders - Stage 3
Week 11	Simple model made of slanted cubes - Stage 1
Week 12	Simple model made of slanted cubes - Stage 2
Week 13	Simple models made of pottery
Week 14	Monthly drawing exam
Week 15	Simple models made of irregular shapes 1
Week 16	Advanced model made of irregular shapes 2

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 2	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 3	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 4	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 5	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 6	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 7	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 8	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 9	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 10	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 11	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 12	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 13	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 14	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 15	Drawing a still life shape, analyzing the shape into dimensions and proportions
Week 16	Drawing a still life shape, analyzing the shape into dimensions and proportions

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts	Drawing – a creative process, Francis d. k. Ching , john Wiley & sons , inc. , 1990 Drawing outdoor , henry c. pits , Watson- Guptill publications , 1965 , new York How to paint and draw , Bodo w. Jax Heimer , Thames and Hudson , 1962 , London Watercolor technique , rex Brandt , sixth edition , Reinhold publishing corporation , 1963	No
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC 223 Physics (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Physics (1)		Module Delivery	
Module Type	S		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 223			
ECTS Credits	4			
SWL (hr/sem)	100			
Module Level	UGII	Semester of Delivery		
Administering Department	ARC	College	COE	
Module Leader	Reem Ali Talib Alothman		e-mail	reemalothman@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification		PhD
Module Tutor		e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number		

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none"> 1. Introduce students to the fundamentals of physics, primarily for students intending to major in a field of engineering. 2. Understanding the Introduction to Physics; Kinematics; Forces and motion; Newton's Laws of Motion; Work; Energy; power; Linear Momentum; Impulse; Simple Harmonic Motion; Universal Gravitation; Fluid Mechanics and Basic of Architectural Physics; Solar Radiation; Heat Transfer (Conduction, Convection, and Radiation); and Thermal Behaviour of Materials. 3. In this course, the students learn how to analyze various physical concepts, such as
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	<p>motion, forces, heat, and others, and apply them through mathematical problems.</p>
<p style="text-align: center;">Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. At the end of this course, students will have gained knowledge of the basic concepts in Physics. Students who study principles of physics will be able to state SI units, write the units and their abbreviations correctly; Determine whether a physical quantity is a vector or a scalar; and distinguish between kinematic and kinetic energy. 2. They are able to define, calculate, and distinguish between distance and displacement, average and instantaneous speed and velocity, and average and instantaneous acceleration; State, explain, and apply Newton's three laws of motion; Differentiate between static and kinetic friction, and solve friction problems; State and apply Hooke's law for ideal springs; 3. They define work, and calculate the work done by a constant force in one and two dimensions; State the work–energy theorem, and use it to solve problems. 4. Apply the principle of conservation of mechanical energy to solve simple problems in mechanics; calculate both kinetic and potential energy; Calculate the power. 5. They will be able to define linear momentum, calculate and compare momenta of various objects; Express Newton's laws in terms of rates of change of linear momentum, and define and calculate impulse. 6. State, explain, and apply the simple harmonic motion; and Solve problems using Newton's law of universal gravitation and calculate the gravitation for different locations (i.e., Earth, Moon, Sun, etc.); and Calculate the pressure and density of fluid at different depths. 7. Explain the Hydrostatic Pressure; Explain Pascal's principle and the operation of a hydraulic lift; Define and describe the buoyant forces and Archimedes's principle, furthermore, weighing an object immersed in a fluid; Derive the equation of continuity for fluids; Use Bernoulli's equation to calculate flow speed and pressure of a moving fluid for simple situations and Determine the most important source of permanent and inexhaustible energy supply (Solar Radiation). 8. Ability to define and describe the flow of heat through a material by direct molecular contact (conduction), derive the equation of heat transfer by conduction, define and describe the transfer of heat by the movement or flow of molecules -liquid or gas (convection), Derive the equation of heat transfer by convection. Define and describe the transfer of heat by electromagnetic waves through a gas or vacuum (Radiation) and the equation of heat transfer by radiation.
<p style="text-align: center;">Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p>Introduction to physics; Standards of length, mass, and time; Scalar and Vector quantities; Kinematics; Position, Displacement and Distance; Speed, Velocity and Acceleration; [2 hrs].</p> <p>Forces and motion; Mass and gravity force; Newton's three laws of motion</p>

	<p>Spring forces and Hooke's law; Friction forces; Uniform circular motion; Work; Kinetic and Potential Energy; The work-kinetic energy theorem; Conservation of total mechanical energy; and Power [4 hrs].</p> <p>Linear momentum; Momentum and kinetic energy; Rate of change of linear momentum and Newton's laws; Law of conservation of linear momentum; Impulse; and Simple Harmonic Motion. Universal gravitation; Newton's law of universal gravitation; Free-fall acceleration and the gravitational force; and solve problems using Newton's law of universal gravitation and calculate the gravitational force for different locations. Fluid mechanics; Pressure and density of fluid at different depths; Hydrostatic pressure; Pascal's principle and the operation of a hydraulic lift. Buoyant forces and Archimedes's principle; the equation of continuity for fluids; and Bernoulli's equation [10 hrs].</p> <p>Introduction to Thermodynamics, Heat, heat transfer in materials, heat transfer by (Conduction, Convection, Radiation) Thermal comfort .(14 hrs)</p>
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

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, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time / Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4, 13	LO #2, 3, 4, 5, and 6
	Assignments	3	15% (15)	3, 7, 14	LO #3, 4, 5, and 8
	Projects / Lab.				
	Report	1	5% (5)	15	
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	3 hr	50% (50)	16	All

Total assessment	100% (100 marks)		
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Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to physics; Standards of length, mass, and time; Scalar and Vector quantities; Kinematics; Position, Displacement and Distance; Speed, Velocity and Acceleration;
Week 2	Forces and motion; Mass and gravity force; Newton's three laws of motion
Week 3	Spring forces and Hooke's law; Friction forces; Uniform circular motion; Work; Kinetic and Potential Energy; The work-kinetic energy theorem; Conservation of total mechanical energy; and Power
Week 4	Linear momentum; Momentum and kinetic energy; Rate of change of linear momentum and Newton's laws; Law of conservation of linear momentum; Impulse; and Simple Harmonic Motion.
Week 5	Universal gravitation; Newton's law of universal gravitation; Free-fall acceleration and the gravitational force; and solve problems using Newton's law of universal gravitation and calculate the gravitational force for different locations.
Week 6	Fluid mechanics; Pressure and density of fluid at different depths; Hydrostatic pressure
Week 7	Pascal's principle and the operation of a hydraulic lift.
Week 8	Buoyant forces and Archimedes's principle; the equation of continuity for fluids; and Bernoulli's equation
Week 9	Introduction to Thermodynamics.
Week 10	Heat, heat transfer in materials
Week 11	Thermal conductivity
Week 12	Thermal conductivity by Conduction
Week 13	Thermal conductivity by Convection
Week 14	Thermal Conductivity by Radiation
Week 15	Thermal comfort.
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1-Physics for scientists and engineers: An interactive approach. Robert Hawkes, Javed Iqbal, Firas Mansour, Marina Milner-Bolotin, and Peter Williams. 2nd edition, 2019. 2- Physics for Scientists and Engineers with Modern Physics. Raymond A. Serway and John W. Jewett. 9th edition, 2014. 3- Fundamentals of Physics. David Halliday, Robert Resnick, and Jearl Walker. 10th Edition, 2014. 4- Engineering Mechanics: Dynamics - Volume 2. J.L. Meriam, L.G. Kraige, and J. N. Bolton. 8th edition, 2015. 5- Physics of Radiation and Climate; Michael A. Box, Gail P. Box; CRC Press, 2015	No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC 224 Computer Architectural Drawing 3D

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Computer Architectural Drawing 3D		Module Delivery
Module Type	B		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 224		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UGII	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Luma Abdulwahab aldabbagh	e-mail	Luma.a.aldabbagh@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor	Waleed sami	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none"> Enhancing sequential practical thinking, skills for resolving drawing constraints, and defining work features. Developing effective communication and presentation skills. Following current work contexts and understanding them in a way that is relevant to the current situation.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none"> Basic concepts: Understanding the basic settings and principles of three-dimensional architectural drawing. Practical drawing skills as a starting point. Drawing evaluation. Communication and discussion among students. Accuracy and skill in drawing. Collaboration and teamwork.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<p>Learning based on architectural projects and pre-drawn illustrative examples: This strategy encourages students to engage in demonstrating how to draw projects sequentially or by simulating the drawing process.</p> <p>Follow-up with peers: In this strategy, students form collaborative groups to produce electronic drawings through theoretical conversations among themselves, without direct drawing, to benefit from the close connection between students.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Review of commands related to 2D drawing
Week 2	General commands for 3D engineering drawing (with application)
Week 3	Commands related to primary 3D shapes (with application)
Week 4	Modification commands for the first group (with application)
Week 5	Modification commands for the first group (with application)
Week 6	Modification commands for the second group (with application)
Week 7	First practical test (with application)
Week 8	Modification of 3D models (with application)

Week 9	Shaping 3D surfaces (with application)
Week 10	Semester theoretical test
Week 11	Operations on 3D models (with application)
Week 12	Architectural rendering
Week 13	Materials and modifications (with application)
Week 14	Lighting and scenery (with application)
Week 15	Final rendering (with application)
Week 16	Second practical test

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

Material Covered	
Week 1	Review of commands related to 2D drawing
Week 2	General commands for 3D engineering drawing (with application)
Week 3	Commands related to primary 3D shapes (with application)
Week 4	Modification commands for the first group (with application)
Week 5	Modification commands for the first group (with application)
Week 6	Modification commands for the second group (with application)
Week 7	First practical test (with application)
Week 8	Modification of 3D models (with application)
Week 9	Shaping 3D surfaces (with application)
Week 10	Semester theoretical test
Week 11	Operations on 3D models (with application)
Week 12	Architectural rendering
Week 13	Materials and modifications (with application)
Week 14	Lighting and scenery (with application)
Week 15	Final rendering (with application)
Week 16	Second practical test

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> ▪ <input type="checkbox"/> Computer programs that assist in drawing ▪ <input type="checkbox"/> AutoCAD for two-dimensional drawing ▪ <input type="checkbox"/> Using Microsoft programs to support drawing operations. ▪ 1- Al-Allaf, Emad Hani, Architectural and Computer Aided Engineering Drawing, 2D Drawing Principles in AutoCAD®, 2018. 	No
Recommended Texts	Al-Alaf, Imad Hani, Computer-Aided Architectural and Engineering Drawing, Principles of 2D® Drawing in AutoCAD 2018	No

Websites	https://static.sdcpublishings.com/pdfsamples/978-1-63057-339-3-1-cw77gw9lwo.pdf Randy H. Shih, Videos by Luke Jumper AutoCAD 2021 Tutorial © First Level 2D Fundamentals , 2021
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Grading Scheme مخطط الدرجات

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.

ARC 225 Science of Mechanics

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	Science of Mechanics	Module Delivery	
Module Type	C	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 225		
ECTS Credits	3.0		
SWL (hr/sem)	75		
Module Level	UGII		
Administering Department	ARC	College	College of Engineering
Module Leader	Tuqa Waleed	e-mail	new.matrix242@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>During this course, students should develop the ability to:</p> <ul style="list-style-type: none"> • Work comfortably with basic engineering mechanics concepts required for analyzing static structures • Identify an appropriate structural system to study a given problem and isolate it from its environment. • Model the problem using good free-body diagrams and accurate equilibrium equations • Identify and model various types of loading and support conditions that act on structural systems. • Apply relevant mathematical, physical and engineering mechanical principles to the system to solve and analyze the problem. • Understand the meaning of centers of gravity (mass)/centroids and

	<p>moments of Inertia using integration methods.</p> <ul style="list-style-type: none"> • Communicate the solution to all problems in an organized and coherent manner and elucidate the meaning of the solution in the context of the problem. • Stress and Strain: Mechanics of materials provides a deep understanding of stress and strain in materials. Stress refers to the internal force per unit area within a material, while strain measures the deformation or elongation of a material in response to stress. These concepts help engineers and researchers analyze and predict the structural response of materials under different loading conditions. • Material Properties: Mechanics of materials helps characterize and understand materials' mechanical properties. These properties include elasticity, plasticity, strength, stiffness, toughness, and fatigue resistance. Knowledge of these properties allows engineers to select appropriate materials for specific applications and design structures that can withstand anticipated loads. • Mechanics of materials plays a crucial role in the design, analysis, and understanding of the mechanical behavior of materials and structures. It enables engineers to make informed decisions to ensure various engineering applications' reliability, efficiency, and safety.
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>Students who complete this course will be able to:</p> <ul style="list-style-type: none"> • Solving mechanic problems using principles of engineering • Discern and determine the magnitude of loads acting on simple structural members • Analyze rigid body equilibrium • Construct free-body diagrams showing the function of simple structural elements; • Analyze the force(s) or moment(s) required to maintain a structure in equilibrium; • Analyze external reactions on structural members under applied loading. • Knowledge of different types of applied loading on a given structure. • Understanding the distribution and the path of forces within a structure. • Find center of gravity for a given body. • Find center of moment of inertia for a given body. • Understanding Material Behavior: By studying materials' mechanics, one deeply understands how materials respond to external forces and loads. This knowledge allows engineers to predict and analyze the behavior of materials in different situations, helping them make informed decisions regarding material selection, design, and structural integrity. • The outcomes of studying mechanics of materials and engineering mechanics empower engineers and researchers with the knowledge and skills necessary to design, analyze, and optimize the

	performance of materials and structures in a wide range of engineering applications.
Indicative Contents المحتويات الإرشادية	Demonstrate competence in identifying, defining, and solving problems. 1. Communicate effectively using written, oral and graphical skills 2. Use mathematical skills appropriate to an engineer. 3. Work independently and in a team environment. 4. Manage workloads and time effectively.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The primary strategy adopted in delivering this module is encouraging student participation in the exercises while refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering simple experiments involving enjoyable sampling activities for the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.9
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

As		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	31% (31)	4, 7 and 10	LO # 3 – 10
	Assignments	2	4% (4)	6, 11	LO # 3 – 10
	Projects / Lab.				
	Report	1	5 (5%)	14	LO # 1-7
Summative assessment	Midterm Exam	1 hr	10% (10)	9	All
	Final Exam	3 hr	50% (50)		All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week	Material Covered
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Week 1	Resultant of Force Systems.
Week 2	Resultant of Concurrent Force Systems.
Week 3	Moment of Force, Couple.
Week 4	Resultant of Non-Concurrent Force Systems.
Week 5	Equilibrium of Force Systems, Equilibrium equations
Week 6	Free Body Diagram, Types of Supports, Types of Loadings.
Week 7	Centroids and Centers of Areas.
Week 8	Centroids of Composite Figures.
Week 9	Moments of inertia.
Week 10	Moments of Inertia of Composite Figures.
Week 11	Simple Stresses, Axial Stress, Shearing Stress, Bearing Stress.
Week 12	Simple Strain, Stress-Strain Diagram, Hook's Law.
Week 13	Shear and Moment in Beams.
Week 14	Shear Force Diagram, Bending Moment Diagram, Stresses in Beams.
Week 15	Deflection in beams.
Week 16	Preparatory week before the final exam.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?

Required Texts	1- Pytel and J. Kiusalaas, Engineering Mechanics, 4th edition, 2017, Library of Congress. 2- Pytel and J. Kiusalaas, Mechanics of Materials, 2nd edition, 2012, Library of Congress.	No
Recommended Texts	Engineering Mechanics 14th by Hibbeler, 2016.	No
Websites		

Grading Scheme				
مخطط الدرجات				
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.

اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروقة

اسم وتوقيع صاحب المقرر

م. تقى وليد

MODULE DESCRIPTION FORM

Semester System

Third Level

ARC311 Architectural Design (3)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Architectural design 3		Module Delivery
Module Type	C		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARCH 311		
ECTS Credits	12		
SWL (hr/sem)	300		
Module Level		UGIII	Semester of Delivery
Administering Department			College Engineering
Module Leader	Raed salim alnumman		e-mail raeedalnumman@uomosul.edu.iq
Module Leader's Acad. Title		Assistant prof.	Module Leader's Qualification Msc
Module Tutor	Hussen salman/ Ashraf Ibrahim/Meyssa Muafaq/isra malallah /Sheymma Kheeraldeen/Aseel Ibrahim/mousabe jaarub/noor yasar / alhan /abudulla abed alrahmman		e-mail
Peer Reviewer Name			e-mail
Scientific Committee Approval Date			Version Number 1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 2. To make students of architecture familiar with principles and concepts of planning taking into consideration the importance of the planning process and the role of the architect within this process. 3. Students should be able to deal with the urban planning process and its elements including street and parking design and master plans besides introducing many worldwide experiments within this subject. 4. • Systematic introduction to issues related to the design of human habitat, its components and space standards. 5. The objective of the studio will be on understanding residential spaces in both urban and traditional contexts. 6. • To train students for undertaking the design of multi-story buildings, frame structures, considering site planning, structures, services, etc. 7. • Study architecture prevalent in Iraq (MOSUL) and its local character and characteristic elements of design. 8. • Green: Demonstration of world-leading sustainability principles 9. • Global: Understanding of and interpreting the past, present, and future of the city, iconic, defining the identity and character of different Neighborhoods in MOSUL City, demonstration of excellence in all aspects of planning, design, contemporary, inspired, and inventive, and expressive of its time and place, poetic and thought-provoking. 10. • Responsiveness: Welcoming, open and inclusive, integrated and harmonious, visually connected with, and open to, its immediate surroundings, responsive to the site, the wider context, and the social needs of the families and the whole community.
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. Ability to gather, analyze, assess, record, apply, and comparatively evaluate relevant information within architectural design processes. 2. Ability to develop imaginative and creative thinking. A capacity for practicing architectural design methodology, by analyzing a problem and identifying and defining the architectural requirements appropriate to its solution. An understanding of the urban dimension of architecture and the consequences of building activities on the environment. 3. An ability to function effectively on teams to accomplish a common goal. 4. An ability to recognize and apply building structure design.

<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative contents for multi-storey residential buildings represent the architectural program of residential and support spaces required to ensure functional, social, and environmental performance of housing complexes. It does represent serves as a design guideline for space planning and zoning OF DIFFERENT BUILDINGS TYPES.</p> <ol style="list-style-type: none"> 1. POINT SYSTEM 2. SEGEMENT SYSTEM 3. GALLERY SYSTEM 4. VILLA <p>Architectural Importance</p> <p>Indicative contents for multi-storey housing are essential because they:</p> <ul style="list-style-type: none"> Define unit mix and housing typologies Support social diversity and density planning Organize vertical circulation efficiency Ensure privacy vs. community balance Guide early-stage zoning and massing design <p>This approach is widely used in Housing Design and Urban Planning..</p>
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>Architectural design focuses on integrating practical design experience and collaboration. It emphasizes hands-on studio work, interdisciplinary approaches, and the application of architectural analysis, enabling students to create innovative, sustainable designs that respond to complex social and environmental contexts.</p> <ol style="list-style-type: none"> 1. Learning through projects: 2. Field visits 3. Design evaluation and feedback 4. Use of technology and employing graphics, CAD, and VR tools to support the educational process 5. Sustainable design 6. Case studies and applied research <p>Learning method</p> <p>IN THE BEGINNING</p> <p>Project-Based Learning (PBL)</p> <p>Students learn by analyzing a real project, to achieve the skills to solve architectural problems, such as designing a building or urban space.</p> <p>Peer Learning and Collaboration</p> <p>Students learn from each other through group discussions, teamwork, and critiques, fostering a collaborative learning environment that mirrors professional practice.</p> <p>AFTER</p> <p>Studio-Based Learning</p> <p>A collaborative studio environment encourages students to work on their</p>
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projects under the supervision of instructors, who guide the process and provide feedback at different stages.

Experiential Learning

This involves learning through doing, where students actively participate in the design process—sketching, modeling, and testing ideas—while reflecting on their experiences to improve their work.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	153	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	8
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	147	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	300		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	12	20%	3,7	SITE ANALYSIS CONCEPT
	Assignments		10%	1,2 ,4	CONCEPT
	Projects / Lab.		10%	4,5	PLANS
	Report		10%	6,8	ELEVATIONS
Summative assessment	Midterm Exam	4	10%	9	NEW TASK
	Final Exam		50%	10,11,12,13,14,15	DTIALES
Total assessment			100%		

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction to multifamily housing
Week 2	Analysis of similar examples
Week 3	Site analysis
Week 4	Design concept and primary idea formulation
Week 5	Discussion
Week 6	Discussion

Week 7	First submission
Week 8	Details of plans
Week 9	Elevations and visual aspect
Week 10	Details
Week 11	Pre- Final submission
Week 12	Discussion
Week 13	Discussion
Week 14	Final presentation settings
Week 15	Final presentation settings

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Housing Project Multi Stories
Week 2	Introduction TYPOLOGIES Design of Residential Areas
Week 3	Types of urban spaces ACCESSIBILITY Key Elements for Apartment Type
Week 4	Examples Apartments collection Segment system
Week 5	Point system Gallery system Service plac
Week 6	Green Architecture principles of sustainability in housing
Week 7	PARKING STANDARDS Iraq Urban Housing Standards
Week 8	Fundamentals of residential neighborhood design
Week 9	Architectural Elevation Architectural form (principles)

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Francis D.K. Ching (2014). Building Construction Illustrated. Wiley. Ernst Neufert (2012). Architects' Data. Wiley-Blackwell. Jan Gehl (2011). Life Between Buildings. Island Press. UN-Habitat (2015). Housing at the Centre of the New Urban Agenda. United Nations. Time-Saver Standards for Architectural Design Data. 7th ed., McGraw-Hill, 2004. PolSERVICE, 1982 Housing Technical Standards & Codes of Practice URBAN-HOUSING-STANDARDS, Iraq (2010)	
Recommended Texts	Christopher Alexander (1977). A Pattern Language. Oxford University Press. Hershberger, R. G. (2015). Architectural Programming and Pre-Design Manager. McGraw-Hill. Architectural record AD.	
Websites	Ach net , PINTREST , AGA AHAN	

Grading Scheme

مخطط الدرجات

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	(فقد المعالجة) راسب	(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.

ARC312 Working Drawings (1)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Working drawing 1		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory	
Module Code	ARC 312		<input type="checkbox"/> Lecture	
ECTS Credits	3		<input type="checkbox"/> Lab	
SWL (hr/sem)	75		<input checked="" type="checkbox"/> Tutorial	
			<input type="checkbox"/> Practical	
			<input type="checkbox"/> Seminar	
Module Level	UGIII	Semester of Delivery		
Administering Department	ARCHITECTUR E	College	ENGINEERING	
Module Leader	Maysaa Moffeq Alobaidi	e-mail	Maysaa.moffeq@uomosul	
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Master's	
Module Tutor		e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. Enhance critical thinking and problem-solving skills through the ability to identify design characteristics, understand constraints, and explore available opportunities within an architectural project.2. Develop skills in creating integrated architectural solutions that are well-coordinated with the building's structural systems.3. Acquire the ability to understand the contextual aspects of design ideas and relate them to realistic, applicable solutions in engineering projects.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none">1. Understanding Fundamental Concepts: Develop a solid understanding of the core principles and concepts in structural design and analysis, including structural systems and their detailed components.2. Practical Design Skills: Build the ability to design structurally sound projects that are realistic and feasible for implementation.3. Critical Evaluation and Analytical Thinking: Enhance the ability to critically analyze and evaluate existing projects and design proposals in an effective and informed manner.4. Communication Skills: Improve the ability to communicate effectively with other disciplines, including building services and construction detailing within projects.5. Teamwork and Collaboration: Develop the ability to work within multidisciplinary teams and collaborate effectively with engineers, architects, and other structural specialists.
Indicative Contents المحتويات الإرشادية	<ul style="list-style-type: none">• Introduction to working drawings and their importance.• Preparation and reading of plans, elevations, and sections.• Basic architectural detailing (walls, openings, stairs, ceilings).• Coordination with structural and MEP drawings.• Standard symbols and conventions.• Digital drafting and final drawing presentation.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	12	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10	3-6	
	Assignments	2	12	4	
	Projects / Lab.	2	13	8	
	Report	1	5	10	
Summative assessment	Midterm Exam	1	10	14	
	Final Exam		50	15	
Total assessment					

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Definition of building construction material and the relationship between initial ideas and planned Executive and to all the terms of reference .
Week 2	Definition of building construction material and the relationship between initial ideas and planned Executive and to all the terms of reference .
Week 3	Structural types of systems for concrete structure
Week 4	Structural types of systems for concrete structure
Week 5	System of structural concrete (type of concrete Structure) with the structural details.
Week 6	System of structural concrete (type of concrete Structure) with the structural details.
Week 7	How to set up the chart of the Executive and the standards of the scheme, as well as special symbols chart Executive.

Week 8	How to set up the chart of the Executive and the standards of the scheme, as well as special symbols chart Executive.
Week 9	Detailed explanation of the planned construction and structural details .
Week 10	Discussion of reports
Week 11	Architectural details and construction of the building ready at the level of ceilings and walls, the work of the link between the prefabricated pieces (ready).
Week 12	Modern methods of construction (Construction cortical systems and the structural system hung and blown the structural system).
Week 13	Mid exam
Week 14	Detailed explanation of the method of construction-ready systems and various Construction.
Week 15	Detailed explanation of the method of construction-ready systems and various Construction.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<p>1- Working Drawings Handbook , Keith Styles , Kindle Edition , 2014 by Architectural Press , USA , 2014.</p> <p>2- Working Drawings Handbook , Keith Styles, Andrew Bichard , SBN 9780750663724 Published September 4, 2004 by Routledge , UK , 2004.</p> <p>3-Architectural Working Drawings, Fourth Edition , Ralph W. Liebing (Author(Ralph W. Liebing , Wiley , USA , 1999.</p>	

	4-Architectural Working Drawings: Residential and Commercial Buildings , William. Spence , John Wiley & Sons , USA , 2000.	
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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	فقد المعالجة (راسب)	(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.

م.ميساء موفق يونس العبيدي

اسم وتوقيع رئيس القسم أو الفرع

أ.م.د. عمر حازم خروقة

ARC313 Computer Rendering Techniques

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Computer Rendering Techniques			Module Delivery
Module Type	C			<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC313			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGIII	Semester of Delivery	1	
Administering Department	ARC	College	COE	
Module Leader	Dr. Reem Ali Talib Alothman	e-mail	reemalothman@uomosul.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		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	ARC 224 Computer Architectural Drawing 3D	Semester	Four
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<p>The course is concerned with applying the latest techniques used in computer-aided architectural presentation by learning about drawing and rendering techniques by using 3d Max and Corona render software, and also Lumion software to reach a computer-aided architectural presentation that is as close to realism as possible. In addition to getting acquainted with the most important techniques to assist in architectural presentation through the use of Adobe Photoshop software.</p> <p style="text-align: center;">The course develops students' design skills and creative thinking through design and formal alternatives that students learn about during work, as well as the architectural presentation of various projects and in various environmental conditions.</p>
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. Remember and understand the most commonly used commands in 3ds Max, Corona render, and the Lumion program. 2. Comparing the different of using these programs. 3. Describe different ways that are used for drawing the same object or model. 4. Naming and describing the different kinds for the final render. 5. The ability to choose the appropriate mode for the final render, and judge its suitability for the building, reaching a realistic scene. 6. Carrying out the final renders of the project by applying different effects to reach the most suitable scene and design for the project . 7. Create an iconic design of any project in any location. 8. Integrating the design of any project with as much realism as possible. 9. Analysis of many effects, and different environments, and identifying the most suitable environment used to achieve the final project render. 10. Design a project, making an explanatory poster, using the most important programs for drawing, rendering, and postproduction, suitable for the location and function. 11. Expresses the aesthetic, architectural, and engineering uses of 3d Max, Corona render, Lumion, and Photoshop. 12. The use of architectural drawing and rendering programs to reach innovative engineering designs, and to reach a virtual reality using modern technologies in construction. <p style="text-align: center;">Benefit from these programs in engineering and architectural work after graduation .</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <ol style="list-style-type: none"> 1. Introducing the 3ds Max program, importing AutoCAD 2D file, creating advanced and 3D architectural models, and readymade models [15 hrs]. 2. The modifiers list and the most important modifiers used. Presenting an exterior design project. [9 hrs]. 3. Corona render software, the types and forms of Corona light, and Corona material. [12 hrs]. 4. Blocks in the 3ds Max program. [3 hrs]. 5. Lumion program, modify the materials. elements, environment, landscape, and weather elements. 6. The final render for architectural projects. [6 hrs]. <p>Adobe Photoshop software program and post-production for an exterior and interior design project. [6 hrs].</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

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 training sessions by considering different projects.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	3.4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 11	
	Poster	1	15% (15)	15	
	Projects / Lab.	1	5% (5)	7	
	Report				
Summative assessment	Midterm Exam	2 hr	20% (20)	8	
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introducing the 3ds Max program and the program's drawing board, adjusting the basic settings, and getting to know the main menus in the program.
Week 2	Learn the basic commands and commands used in 3ds Max.
Week 3	Learn how to draw two-dimensional geometric shapes and edit spline applications. Import an AutoCAD 2D file.
Week 4	Learn how to create advanced and 3D architectural models (Extended primitives) and readymade models used in architectural and construction works, AEC Extended.
Week 5	Edit poly applications.
Week 6	Get to know the modifiers list and the most important modifiers used. Start to convert the AutoCAD 2D file to 3D.
Week 7	Presenting an exterior design project (Villa exterior design) using instructions, orders, and rates.
Week 8	Midterm Exam
Week 9	Interior design of an architectural space using directives, orders, and modifiers + practical semester exam
Week 10	Learn about Corona render software and how to install it in 3ds Max. Learn how to set Corona cameras and how to adjust their main settings, and how to choose the appropriate shot.
Week 11	Adjust Corona render settings. Recognize the types and forms of Corona light and how to choose, adjust, and define the appropriate lighting to control it.
Week 12	Learn how to add Corona material and its types using the Material editor and how to adjust them, in addition to getting to know the Corona material library, and the method of manufacturing different materials.
Week 13	The way to insert the different blocks within the 3ds Max program and the way to insert them with their own material, in addition to identifying the most important sites from which the different blocks can be obtained.
Week 14	The final render and the most important render settings are to reach a more realistic scene and prepare the horizontal and vertical projections.
Week 15	Post production using the Adobe Photoshop software program and adding different backgrounds and environmental effects. Presenting a presentation for an exterior and interior design project.
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Use the 3ds Max program's drawing board, adjusting the basic settings, and the main menus in the program.
Week 2	Use basic commands and commands used in 3ds Max.

Week 3	Draw two-dimensional geometric shapes and edit spline applications. Import an AutoCAD 2D file.
Week 4	Create advanced and 3D architectural models (Extended primitives) and readymade models used in architectural and construction works, AEC Extended.
Week 5	Use Edit poly applications.
Week 6	Use the modifiers list and the most important modifiers used. Start to convert the AutoCAD 2D file to 3D.
Week 7	Presenting an exterior design project (Villa exterior design) using instructions, orders, and rates.
Week 8	Midterm Exam
Week 9	Draw an Interior design of an architectural space.
Week 10	Install Corona render software in 3ds Max. Set Corona cameras and adjust their main settings, and choose the appropriate shot.
Week 11	Adjust Corona render settings, and Corona light, adjust and define the appropriate lighting to control it.
Week 12	Add Corona material and its types using the Material editor and adjust them, in addition to getting the Corona material library, and the method of manufacturing different materials.
Week 13	Insert the different blocks within the 3ds Max program and insert them with their own material, in addition to identifying the most important sites from which the different blocks can be obtained.
Week 14	Render a more realistic scene and prepare the horizontal and vertical projections.
Week 15	Add different backgrounds and environmental effects by using the Adobe Photoshop software program Presenting a presentation for an exterior and interior design project.
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	-	No
Recommended Texts	1- A Fascinating journey into the world of 3D Graphics with 3ds Max. By Iftikhar Abbasov 2- Autodesk 3D Max Design- The Designer's Handbook. By Marcello Femi, AIA 3- Corona Render 1.3. By Giao Trinh Mastering Lumion 3D. By Ciro Cardoso	No
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC314 Principles of Housing

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Principles of Housing		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC314			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGIII	Semester of Delivery	five	
Administering Department	department of architecture	College	Engineering	
Module Leader	Mazin Jaber Omar	e-mail	mazinjaber@uomosul.edu.iq	
Module Leader's Acad. Title	Assist. Prof.	Module Leader's Qualification		
Module Tutor	Assist. Lect. Esraa Malallah	e-mail	esraa malallah@uomosul.edu.iq	
Peer Reviewer Name				
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	The housing course aims to introduce the student to the concept of housing from the psychological, social, urban, economic and urban aspects, and to look at the Dwelling Unit (house or dwelling) as an urban unit within the urban fabric of the city as a whole.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Learning based on theoretical studies: This strategy encourages students to engage in real or simulated housing projects that require the application of theoretical knowledge in practical scenarios. Through this approach, students can effectively develop critical thinking and problem-solving skills while gaining valuable practical experience. Analysis and critique: In this strategy, students receive feedback from their peers and instructors. This helps foster constructive criticism and opens the door to in-depth discussions about housing principles and creative options, thereby improving students' overall communication and presentation skills.
Indicative Contents المحتويات الإرشادية	The Concept of Human Needs *Classification of Human Needs *Human Needs in the Housing Environment *Collective and Individual Housing Needs *Importance of Housing Needs in the Housing Sector The Historical Development of the Concept of Urban Housing in the World *Early Beginnings Pre-Industrial Stage Post-Industrial Stage The 1920s Stage The Contemporary Stage The evolution of urban housing patterns in Iraq during the last twenty years * Factors driving the evolution of housing patterns * Morphological changes in Iraqi housing during the last twenty years

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The strategy aims to equip students with skills in housing studies and helps them develop their intellectual, critical, and analytical abilities to achieve the best results in the field of housing, thus increasing their scientific knowledge
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	18%	2	Daily preparation
	Assignments	4	12%	4	Class activity
	Projects / Lab.	/	/	/	/
	Report	1	10%	10	Research activity
Summative assessment	Midterm Exam	1	10%	12	Student level assessment
	Final Exam	1	50%	15	Student level assessment
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to science of Housing
Week 2	Basics of housing:
Week 3	definitions of important terms
Week 4	Housing need
Week 5	Housing demand
Week 6	Housing balance and housing Shortage
Week 7	Housing densities: definitions
Week 8	Housing densities and their relationship to degrees of urbanization Methods of controlling housing densities
Week 9	Housing policies and programs
Week 10	The housing market and the factors of market forces

Week 11	The importance of financing policy
Week 12	Components of the residential urban fabric
Week 13	weekend
Week 14	Movement Networks and Urban Space Network
Week 15	Discussion
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> • Housing Technical Standard and Codes of Practice", Report Two- Polservice - 1982 - Ministry of Housing and Construction - Iraq. • "Housing in Iraq - Problems - Policies - Programs", 1958 - Doxiadis Associates - Consulting Engineers - Republic of Iraq. • Thurthar New Town, 1985, "The Determinate of The Planning Process, The Formulation of The Master Plan and Conceptual Urban Design Elements", Doxiadis Associates – Consultants on Development and Ekistics. • J. J. Coulton. (1977). Ancient Greek Architects at Work. Cornell University Press 	Available
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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 (فيد 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.

ARC315 Reinforced Concrete Design

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Reinforced Concrete Design	Module Delivery	
Module Type	S	<input checked="" type="checkbox"/> Theory	
Module Code	ARC315	<input type="checkbox"/> Lecture	
ECTS Credits	3	<input type="checkbox"/> Lab	
SWL (hr/sem)	75	<input checked="" type="checkbox"/> Tutorial	
Module Level	UGIII	Semester of Delivery	five
Administering Department	department of architecture	College	Engineering
Module Leader	fahad akram saeed	e-mail	fahad.akram@uomosul.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification	PHD
Module Tutor		e-mail	
Peer Reviewer Name			
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. Develop a solid understanding of the behavior of reinforced concrete elements under flexural bending, shear, and axial loads.2. Enable students to analyze and design rectangular reinforced concrete beams subjected to bending moments and shear forces.
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	<ol style="list-style-type: none"> 3. Introduce the principles of designing short columns under combined axial load and bending. 4. Provide knowledge and skills for designing one-way slabs under uniformly distributed loads. 5. Enhance students' ability to apply design codes and safety considerations in practical structural design.
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>By the end of this course, students will be able to:</p> <ol style="list-style-type: none"> 1. Analyze internal forces (bending moment and shear) in reinforced concrete beams. 2. Design rectangular beams for flexure and shear according to standard design codes. 3. Evaluate and design short columns subjected to axial loads and bending moments. 4. Design one-way slabs under uniform loading conditions. 5. Apply appropriate safety factors and code provisions in reinforced concrete design. 6. Prepare clear and accurate structural calculations and basic detailing for reinforced concrete elements.
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Design of rectangular beams subjected to flexural bending and Shear design for beams moreover, Design of Short Columns Subject to Axial Load and Bending. Design of one-way slab subject to uniform load.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>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, interactive tutorials and by considering some challenging problems to motivate students.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

<p>Structured SWL (h/sem)</p> <p>الحمل الدراسي المنتظم للطالب خلال الفصل</p>	33	<p>Structured SWL (h/w)</p> <p>الحمل الدراسي المنتظم للطالب أسبوعيا</p>	2
<p>Unstructured SWL (h/sem)</p> <p>الحمل الدراسي غير المنتظم للطالب خلال الفصل</p>	42	<p>Unstructured SWL (h/w)</p> <p>الحمل الدراسي غير المنتظم للطالب أسبوعيا</p>	
<p>Total SWL (h/sem)</p> <p>الحمل الدراسي الكلي للطالب خلال الفصل</p>	75		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	15%	2	
	Assignments	10	20%		
	Projects / Lab.	/	/	/	
	Report	1	5%	10	
Summative assessment	Midterm Exam	1	10%	12	
	Final Exam	1	50%	15	
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Reinforced Concrete
Week 2	Design of singly Reinforced Beams
Week 3	Design of singly Reinforced Beams
Week 4	Design of Doubly Reinforced Beams
Week 5	Design of Doubly Reinforced Beams
Week 6	exam
Week 7	Design of Doubly Reinforced Beams
Week 8	Design of one way slabs Reinforced Beams
Week 9	Design of one way slabs Reinforced Beams
Week 10	exam
Week 11	Design of Short Columns Subject to Axial Load and Bending
Week 12	Design of Short Columns Subject to Axial Load and Bending
Week 13	Design and Analysis of Eccentrically Loaded Columns Using Interaction Diagrams
Week 14	Introduction to Reinforced Concrete
Week 15	Design of singly Reinforced Beams
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Calculus I By: Darwin, David, Charles William Dolan, and Arthur H. Nilson. Design of concrete structures. New York, NY, USA: McGraw-Hill Education, 2020.	
Recommended Texts	Aghayere, A. O., Limbrunner, George F. (2014) "DESIGN OF REINFORCED CONCRETE" 8th ed. Library of Congress, USA.	
Websites	-----	

Grading Scheme

مخطط الدرجات

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
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ARC316 Physics (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Physics (2)		Module Delivery	
Module Type	B		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input checked="" type="checkbox"/> Seminar	
Module Code	ARC 316			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGIII	Semester of Delivery		4
Administering Department	ARC	College	COE	
Module Leader	Dr. Reem Ali Talib Alothman		e-mail	reemalothman@uomosul.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		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims

أهداف المادة الدراسية

The module aims for the curriculum on Architectural Physics (1) are as follows:

1. To provide students with a comprehensive understanding of the relationship between architecture and climate.
2. To introduce students to the principles and strategies of climate-responsive design in architecture.
3. To explore the fundamental concepts of climate analysis and its influence on architectural design decisions.
4. To develop students' knowledge and skills in utilizing passive design strategies for energy efficiency and thermal comfort.
5. To familiarize students with sustainable technologies and practices related to renewable energy, water efficiency, and green infrastructure.
6. To examine the impact of climate change on the built environment and equip students with resilient design strategies.
7. To foster critical thinking and problem-solving abilities in addressing climate challenges through architectural design.
8. To encourage students to analyze and evaluate case studies of climate-conscious architectural projects.
9. To inspire students to explore future trends and innovations in sustainable architecture and climate-responsive design.
10. To promote interdisciplinary collaboration and an understanding of the role of architecture in creating climate-friendly cities.

These modules aim to provide students with a strong foundation in the principles, techniques, and considerations related to architecture and climate, enabling them to design buildings that are responsive to their climatic conditions and contribute to environmental sustainability.

Module Learning Outcomes

مخرجات التعلم للمادة الدراسية

The module learning outcomes for the curriculum on Architectural Physics (1) are designed to provide students with a comprehensive understanding of the relationship between architecture and climate and equip them with the necessary knowledge and skills to design sustainable and climate-responsive buildings. The learning outcomes include:

1. Understanding the fundamental relationship between architecture and climate and recognizing the significance of climate-responsive design in creating sustainable built environments.

2. Analyzing and interpreting climate data to inform design decisions, including assessing different climate zones, understanding microclimates, and analyzing climate data for appropriate design responses.
3. Applying passive design strategies to enhance energy efficiency and occupant comfort, such as considering orientation, solar access, shading techniques, and daylighting strategies in architectural design.
4. Evaluating and selecting sustainable materials and technologies for building envelope design and insulation, including understanding the importance of a well-insulated building envelope and considering design considerations for minimizing heat transfer.
5. Integrating renewable energy systems, such as solar panels and photovoltaics, into architectural designs and understanding the concept of net-zero energy buildings.
6. Designing water-efficient systems and incorporating rainwater harvesting techniques, including understanding the importance of water efficiency in sustainable architecture and developing strategies for rainwater collection and reuse.
7. Understanding the benefits and design considerations of green roofs, vertical gardens, and other green infrastructure elements, including their ecological and thermal advantages and exploring design considerations and implementation techniques.
8. Conducting life cycle assessments (LCAs) and applying cradle-to-cradle design principles, including evaluating sustainable materials, assessing life cycle assessments, and exploring the concept of cradle-to-cradle design.
9. Developing resilient design strategies to address the impacts of climate change and extreme weather events, including understanding the challenges posed by climate change, exploring resilient design strategies, and considering adaptation and mitigation measures.
10. Applying bioclimatic design principles inspired by vernacular and traditional architecture, including learning from lessons in traditional and vernacular architecture, exploring climate-responsive design in different regions and cultures, and incorporating passive cooling and heating techniques.
11. Utilizing daylighting techniques and designing energy-efficient lighting systems, including understanding the importance of natural light, exploring techniques for optimizing daylight, and developing artificial

	<p>lighting design strategies.</p> <ol style="list-style-type: none"> 12. Understanding the urban heat island effect and implementing mitigation strategies in urban design, including exploring sustainable urban planning principles and designing resilient and climate-friendly cities. 13. Analyzing and evaluating case studies of exemplary climate-conscious architectural projects, including critically reflecting on design strategies and outcomes and drawing lessons for their own architectural practice. 14. Identifying emerging trends, technologies, and innovations in sustainable architecture and climate-responsive design, including staying updated on advancements in the field, exploring emerging technologies, and identifying opportunities for further research. 15. Demonstrating effective communication and teamwork skills through project presentations and discussions, including presenting design projects, engaging in discussions on architecture and climate-related topics, and collaborating with peers. <p>These module learning outcomes provide a clear roadmap for students to acquire the necessary knowledge and skills in designing sustainable and climate-responsive buildings</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>The curriculum on Architectural Physics covers a range of indicative contents to provide students with a comprehensive understanding of the subject. It begins with an introduction to the relationship between architecture and climate, emphasizing the importance of climate-responsive design and exploring key milestones in climate-conscious architecture. The fundamentals of climate are then explored, including different climate zones, climate data analysis, and the impact of microclimates on architectural design.</p> <p>Passive design strategies are introduced, focusing on principles for energy efficiency, orientation, solar access, shading, and daylighting techniques. Thermal comfort and building performance are addressed, covering human thermal comfort requirements, energy-efficient HVAC systems and controls, and building envelope design for thermal insulation.</p> <p>The curriculum also includes topics such as natural ventilation and cooling, building envelope and insulation, solar energy and photovoltaics, water efficiency and rainwater harvesting, and green roof and vertical gardens. These topics delve into the benefits and techniques of optimizing airflow, minimizing heat transfer, harnessing solar energy, and implementing sustainable water practices and green infrastructure.</p> <p>Sustainable materials and life cycle assessment are explored to familiarize students with the selection of eco-friendly materials and the evaluation of their environmental impact. Resilient design and climate change adaptation are</p>

discussed, focusing on strategies to address the impacts of climate change and promote resilience in architectural design.

Additional topics include bioclimatic design and vernacular architecture, daylighting and lighting design, urban design and climate, and case studies showcasing exemplary climate-conscious architectural projects. The curriculum concludes with an exploration of future trends and opportunities for research and development in architecture and climate.

Overall, these indicative contents provide a comprehensive framework for students to develop knowledge and skills in designing sustainable and climate-responsive buildings, taking into account various climate factors and incorporating innovative approaches to address the challenges of a changing climate.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

The curriculum on Architectural Physics incorporates various learning and teaching strategies to enhance the students' understanding and engagement. These strategies include:

1. Lectures: Traditional lectures are used to deliver foundational knowledge and theoretical concepts related to architecture and climate. Expert instructors provide in-depth explanations and present case studies to illustrate real-world examples.
2. Interactive Discussions: Facilitated discussions encourage students to actively participate and share their thoughts, perspectives, and questions related to the topics being covered. This fosters critical thinking and deepens the understanding of the subject matter.
3. Group Activities: Collaborative group activities promote teamwork and allow students to work together on projects, problem-solving tasks, and design exercises. This encourages peer learning and the exchange of ideas.
4. Case Studies: In-depth analysis of case studies provides students with practical examples of climate-responsive architecture. They can study successful projects, evaluate design strategies, and understand the real-world challenges and solutions.
5. Site Visits: Organizing site visits to sustainable buildings and architectural landmarks offers students the opportunity to experience climate-responsive design principles in practice. They can observe the integration of passive design strategies, renewable energy systems, and sustainable materials in actual buildings.
6. Guest Lectures: Inviting guest speakers who are experts in the field of architecture and climate provides valuable insights and diverse perspectives. Guest lectures can offer practical experiences, industry trends, and emerging technologies, enriching the learning experience.

7. Hands-on Workshops: Practical workshops allow students to apply theoretical knowledge to hands-on activities. They can engage in activities such as building energy modeling, daylighting simulations, and sustainable material experiments to enhance their understanding of key concepts.

8. Research Projects: Assigning research projects to students enables them to delve deeper into specific topics of interest within architecture and climate. They can explore cutting-edge research, analyze data, and present their findings to the class.

These strategies aim to create an interactive and immersive learning environment, fostering a deeper understanding of the relationship between architecture and climate and preparing students to design sustainable and climate-responsive buildings.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/ N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	3,10	1,2
	Homework/ classworks	2	10%(10)	3,5,7	6,8,9,10,11,12,13,14,15
	Report	1	10% (10)	2,10	5,7,8,9,10,11,12,13,14,15
	Discussions& Analysis team's work	1	5% (5)	14,15	8,9,10,11,14,15
Summative assessment	Midterm Exam	1 hr	% (10)10	8	1,2,3,4,6,14,15
	Final Exam	3 hr	50% (50)	16	1,2, 3, 4,6,14,15

Total assessment	100% (100 Marks)		
Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري			
	Material Covered		
Week 1	Lecture 1: Introduction to Architecture and Climate <ul style="list-style-type: none"> • Overview of the relationship between architecture and climate • Importance of climate-responsive design • Historical context and key milestones in climate-conscious architecture 		
Week 2	Lecture 2: Climate Fundamentals <ul style="list-style-type: none"> • Understanding different climate zones and their characteristics • Climate data analysis and interpretation • Microclimates and their impact on architectural design 		
Week 3	Lecture 3: Passive Design Strategies <ul style="list-style-type: none"> • Principles of passive design for energy efficiency • Orientation and solar access • Shading and daylighting techniques 		
Week 4	Lecture 4: Thermal Comfort and Building Performance <ul style="list-style-type: none"> • Human thermal comfort requirements • Energy-efficient HVAC systems and controls • Building envelope design for thermal insulation 		
Week 5	Lecture 5: Natural Ventilation and Cooling <ul style="list-style-type: none"> • Benefits of natural ventilation in buildings • Strategies for optimizing airflow and cross-ventilation • Passive cooling techniques, such as stack effect and evaporative cooling 		
Week 6	Lecture 6: Building Envelope and Insulation <ul style="list-style-type: none"> • Importance of a well-insulated building envelope • Insulation materials and their properties • Design considerations for minimizing heat transfer 		
Week 7	Lecture 7: Solar Energy and Photovoltaics <ul style="list-style-type: none"> • Harnessing solar energy in architectural design 		

	<ul style="list-style-type: none"> Integration of solar panels and photovoltaic systems Net-zero energy buildings and energy-positive design
Week 8	<p>Lecture 8: Water Efficiency and Rainwater Harvesting</p> <ul style="list-style-type: none"> Importance of water efficiency in sustainable architecture Design strategies for rainwater collection and reuse Water-saving fixtures and systems
Week 9	<p>Lecture 9: Green Roof and Vertical Gardens</p> <ul style="list-style-type: none"> Benefits of green roofs and vertical gardens Design considerations and implementation techniques Ecological and thermal advantages of green infrastructure
Week 10	<p>Lecture 10: Sustainable Materials and Life Cycle Assessment</p> <ul style="list-style-type: none"> Selection of sustainable materials and their properties Life cycle assessment (LCA) and embodied energy Cradle-to-cradle design principles
Week 11	<p>Lecture 11: Resilient Design and Climate Change Adaptation</p> <ul style="list-style-type: none"> Understanding the impacts of climate change on the built environment Resilient design strategies for extreme weather events Adaptation and mitigation measures for future climate scenarios
Week 12	<p>Lecture 12: Bioclimatic Design and Vernacular Architecture</p> <ul style="list-style-type: none"> Lessons from traditional and vernacular architecture Climate-responsive design in different regions and cultures Passive cooling and heating techniques from around the world
Week 13	<p>Lecture 13: Daylighting and Lighting Design</p> <ul style="list-style-type: none"> Importance of daylight in architectural spaces Techniques for optimizing natural light and reducing energy consumption Artificial lighting design for energy efficiency and visual comfort
Week 14	<p>Lecture 14: Urban Design and Climate</p> <ul style="list-style-type: none"> Urban heat island effect and mitigation strategies Sustainable urban planning principles Designing resilient and climate-friendly cities

Week 15	Lecture 15: Case Studies and Future Trends <ul style="list-style-type: none"> Case studies of exemplary climate-conscious architectural projects Emerging technologies and innovations in sustainable architecture Opportunities for further research and development in architecture and climate
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Textbooks and Reference Materials: -"Sustainable Architecture: Principles, Paradigms, and Case Studies" by Svetlana Shitova -"Climate-Responsive Design: A Study of Buildings in Moderate and Hot Humid Climates" by Richard Hyde "Passive Solar Architecture: Heating, Cooling, Ventilation, Daylighting, and More Using Natural Flows" by David Bainbridge	No
Recommended Texts	-"Climate-Responsive Design: A Study of Buildings in Moderate and Hot Humid Climates" by Richard Hyde	No

	"Passive Solar Architecture: Heating, Cooling, Ventilation, Daylighting, and More Using Natural Flows" by David Bainbridge
Websites	Websites dedicated to sustainable architecture and climate-responsive design, such as the U.S. Green Building Council (USGBC) and the World Green Building Council (WGBC) Online platforms offering educational content on architecture and climate, such as Coursera, edX, and MIT OpenCourseWare

Grading Scheme مخطط الدرجات				
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.

ARC 317 History of European Architecture

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information			
معلومات المادة الدراسية			
Module Title	History of European Architecture		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 317		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UGIII	Semester of Delivery	
Administering Department	ARC	College	COE
Module Leader	Hassan Mahmood Kasim	e-mail	hassan.kasim@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none">• Inform students about the development of European Architecture from Greek Age till Renaissance & Baroque–17th century• Enhance the concept of architectural interactions between European civilizations and others, especially Arab-Islamic civilization• Enhance students' understanding of architectural design by analyzing historical examples of buildings according to architectural methodologies

	<ul style="list-style-type: none"> Free-hand sketch analysis of historical buildings to enhance students' skills of free-hand sketches of design concepts.
Module Learning Outcomes	
مخرجات التعلم للمادة الدراسية	
Indicative Contents	
المحتويات الإرشادية	
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Understanding and analyzing

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	30% (30)	4,7, 10 and 15	LO #(1, 2),(3),(4) and (5,6).
	Assignments	5	6% (6)	3, ,9,11,13 and 14	LO # 1-6
	Projects / Lab.				
	Report	1	4% (4)	14	LO # 1-6
Summative assessment	Midterm Exam	1 hr	10% (10)	9	LO # 1-4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to the history of European Architecture
Week 2	Greek Architecture: Architectural characters & Orders
Week 3	Greek Architecture: Temples
Week 4	Roman Architecture: Architectural characters
Week 5	Roman Architecture: Temples & Pantheon
Week 6	Roman Architecture: Basilicas, Thermae, Theatre & sports
Week 7	Roman Architecture: Palaces, Tombs & Triumphal Arches

Week 8	Interaction between Roman and Eastern Architecture
Week 9	Mid Term Exam
Week 10	Early Christian Architecture
Week 11	Byzantine Architecture
Week 12	Gothic Architecture
Week 13	Renaissance Architecture
Week 14	Renaissance Periods and Architects
Week 15	General Discussion
Week 16	Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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.

ARC 321 Architecture Design (4)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Architecture Design (4)		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 321			
ECTS Credits	12			
SWL (hr/sem)	300			
Module Level	UGIII	Semester of Delivery		Six
Administering Department		College	Engineering	
Module Leader	Raed salim alnumman	e-mail	raeedalnumman@uomosul.edu.iq	
Module Leader's Acad. Title	Assistant prof.	Module Leader's Qualification		Msc
Module Tutor	Hussen salman/ Ashraf Ibrahim/Meysa Muafaq/isra malallah /Sheymma Kheeraldeen/Aseel Ibrahim/mousabe yaarub/noor yasar/ syra / alhan /abudulla abed alrahmman	e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 1. Ability to gather, analyze, assess, record, apply, and comparatively evaluate relevant information within architectural design processes. 2. Demonstrate an understanding of principles and practices and integrate and apply that knowledge within architectural design processes. 3. Design Development Skills for Different Building Types Ability to create designs for a variety of building types such as schools, shopping malls, and cultural centers, while addressing specific functional, aesthetic, and social needs. Representation and Communication Advanced representation skills: Produce accurate and detailed digital drawings, models, and sketches for schools, shopping malls, and cultural centers, ensuring clarity and accuracy in the presentation of design ideas.
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. Understanding Basic Concepts: Develop a deep understanding of the fundamental concepts and principles in the design (school, culture, shopping center) buildings, including history, theory, and current practices. 2. Practical Design Skills: Develop the ability to design realistic housing projects that take into account functionality, flexibility, aesthetics, functionality, and sustainability. 3. Critical Evaluation and Analytical Thinking: Enhance the ability to critically and effectively analyze and evaluate existing projects and design proposals.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative Contents refer to the architectural program (functional brief) of a building. It is a structured list of all required spaces, functions, and spatial requirements that a building must include to operate effectively.</p> <p>It does represent serves as a design guideline for space planning and zoning OF DIFFRENT BUILDINGS TYPES.</p> <ol style="list-style-type: none"> 1. SCONDARY SCHOOLES 2. CLTURE CENTER 3. SHOPPING CENTER 4. ISLAMIC CENTER <p>Architectural Role of Indicative Contents</p> <p>Indicative contents are a fundamental step in the architectural design process, as they:</p> <ul style="list-style-type: none"> Define functional requirements before design development Help organize spatial relationships Support zoning and bubble diagram development Provide the basis for architectural programming <p>This approach is widely used in Architectural Programming and Urban Design, ensuring that design decisions are based on functional and spatial logic rather than form alone.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

Strategy

Architectural design focuses on integrating practical design experience and collaboration. It emphasizes hands-on studio work, interdisciplinary approaches, and the application of architectural analysis, enabling students to create innovative, sustainable designs that respond to complex social and environmental contexts.

1. Learning through projects:
2. Field visits
3. Design evaluation and feedback
4. Use of technology and employing graphics, CAD, and VR tools to support the educational process
5. Sustainable design
6. Case studies and applied research

Learning method

Interactive Learning: This approach involves using classroom discussions, workshops, and group activities to promote interaction between students and teachers.

Practical Projects: Designing realistic projects allows students to apply their acquired knowledge in a practical setting, which helps enhance problem-solving skills and creative thinking.

Field Trips and Study Visits: Visiting real sites enables students to see real-world applications of landscape design, which enhances their understanding of the challenges and opportunities in the field.

Use of Technology: Digital learning through computer-aided design (CAD) software and virtual reality (VR) tools enhances students' ability to visualize projects and develop complex designs.

Evaluation and Feedback: Providing Evaluations

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	153	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	8
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	147	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	300		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	12	20%	3,7	SITE SNALYSIS CONCEPT
	Assignments		10%	1,2 ,4	CONCEPT
	Projects / Lab.		10%	4,5	PLANS
	Report		10%	6,8	ELEVATIONS
Summative assessment	Midterm Exam	4	10%	9	NEW TASK
	Final Exam		50%	10,11,12,13,14,15	DTIALES
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	TYPES OF BUILDING
Week 2	TYPES OF CERCULATION IN SCHOOL BUILDINGS
Week 3	TYPES OF CERCULATION IN SHOPPING CENTER BUILDINGS
Week 4	TYPES OF CERCULATION IN CULTURE CENTER BUILDINGS
Week 5	TYPES OF CERCULATION IN ISLAMIC CENTER BUILDINGS
Week 6	CONCEPT SOURCES
Week 7	ELEVATION DETALIES.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Site analysis
Week 2	Design concept and primary idea formulation for different building types. (school, culture center, shopping center, and Islamic complex).
Week 3	feedback
Week 4	feedback
Week 5	First submission
Week 6	Details of plans
Week 7	feedback
Week 8	feedback

Week 9	Day sketch
Week 10	Elevations and visual aspect
Week 11	feedback
Week 12	feedback
Week 13	Pre- Final submission
Week 14	feedback
Week 15	Final submission

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. Joseph De Chiara, Julius Panero, Time-Saver Standards for Housing Residential Development 2. Dutt, I. (2012) 'School Design and Students' Relationships with the Natural World', Children, Youth and Environments	
Recommended Texts	Francis D.K. Ching (2014). Architecture: Form, Space, and Order. Wiley. Christopher Alexander (1977). A Pattern Language. Oxford University Press. Hershberger, R. G. (2015). Architectural Programming Pre-Design Manager. McGraw-Hill. Neufert, E. (2012). Architects' Data. Wiley-Blackwell. Architectural record AD.	
Websites	Ach net , PINTREST , AGA AHAN	

Grading Scheme

مخطط الدرجات

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 (فيد 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.

ARC 322 Survey and Architectural Documentation

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Survey and Architectural Documentation		Module Delivery
Module Type	S		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC322		
ECTS Credits	4		
(SWL (hr/sem	100		
Module Level	UGIII	Semester of Delivery	Six
Administering Department	Architectural Engineering	College	College of Engineering
Module Leader	Dr. Emad Hani Ismaeel	e-mail	emad.hani.ismaeel@uomosul.edu.iq
s Acad. Title' Module Leader	Assistant Professor	s 'Module Leader Qualification	.Ph.D
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	The semester seeks to present and discuss the modern and contemporary tools and techniques used to collect and document spatial information and data related to historical constructions and sites, and later used in the activities of preserving the urban heritage, and the ways and mechanisms for digitally representing and extracting them in a variety of formats, while reviewing the characteristics, capabilities, efficiency and shortcomings of these technologies.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The student who exceeds the semester will be able to complete the architectural documentation and submit the engineering documents required for the survey and registration processes. He will also be able to learn about a number of advanced devices and technologies recently used in the field of architectural documentation with knowledge of its strengths and weaknesses. On completion of this course, students will be able to demonstrate through practical exercises on cultural heritage properties a basic understanding of the techniques involved in the conservation of cultural heritage; and realize the basic deterioration processes of historic objects.
Indicative Contents المحتويات الإرشادية	Architectural documentation is a scientific course with theoretical and practical parts, concerned with providing and analyzing information specialized in the field of urban conservation, especially the techniques and technologies of architectural documentation of historical buildings and the built environment. The semester establishes for fundamental base for the conservation and documentation processes, and provides the ability to use different techniques and tools for this purpose.

Learning and Teaching Strategies

Strategies	The strategy is achieved through lectures, e-learning platforms, and giving home and class assignments.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

(Structured SWL (h/sem الحمل الدراسي المنتظم للطلاب خلال الفصل	63	(Structured SWL (h/w الحمل الدراسي المنتظم للطلاب أسبوعيا	2
(Unstructured SWL (h/sem الحمل الدراسي غير المنتظم للطلاب خلال الفصل	37	(Unstructured SWL (h/w الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
(Total SWL (h/sem الحمل الدراسي الكلي للطلاب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

As		Time/Number	Weight ((Marks	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes				
	Assignments	5	(30) %30	12 - 4	LO #1,2,3, 4, and 5
	.Lab / Projects				
	Report	1	(10) %10	13	LO # 1-5
Summative assessment	Midterm Exam	hr 1	(10) %10	7	LO # 1-5
	Final Exam	hr 3	(50) %50	16	All
Total assessment			100) %100 (Marks		

(Delivery Plan (Weekly Syllabus

المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	.process and objectives ,Conservation history .International charters and organizations .The Heritage of Iraq and its old cities .Iraqi experiments in conservation and documentation
Week 2	Modern technologies and activities of documentation and urban conservation Urban preservation and the problem of multiplicity of modern technologies for documentation and information management Representation and three-dimensional models in documenting urban heritage Digital engineering models, their types and advantages in documentation and urban conservation activities
Week 3	Contact Techniques for 3D Information Acquisition
Week 4	Photogrammetry
Week 5	Laser Scanning
Week 6	Non-Destructive Techniques Infrared Thermography-IR
Week 7	Global Positioning System – GPS
Week 8	Semester exam
Week 9	.degrees panorama software, benefits, how to create, case study 360
Week 10	.Virtual reality- aims, requirements, interaction types
Week 11	.VR benefits and limitation, VR systems D virtual city, Virtual Museums3
Week 12	(Geographic information system (GIS
Week 13	Unmanned Aerial Vehicles Robots Heritage Documentation of Underwater
Week 14	D Printers3
Week 15	Applications
Week 16	Final Exam

/Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the ?Library
Required Texts	<ul style="list-style-type: none"> Fielden, B. (2003). Conservation of Historic Buildings. London: Architectural Press. 	No
Recommended Texts	<ul style="list-style-type: none"> Al-Allaf, Emad Hani, (2018). Information modeling and management technology for historical sites and urban heritage buildings. Al-Allaf, Emad Hani, Representation Technologies of the Built Heritage, 2018. 	Yes
Websites		

Grading Scheme

مخطط الدرجات

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

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

ARC 323 Physics Laboratory

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Physics Laboratory		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input checked="" type="checkbox"/> Seminar	
Module Code	ARC323			
ECTS Credits	4			
SWL (hr/sem)	100			
Module Level	UGIII	Semester of Delivery	6	
Administering Department	ARC	College	COE	
Module Leader	Dr. Reem Ali Alothman		e-mail	reemalothman@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification		
Module Tutor		e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	Module Aims for the curriculum on using computers to study the behavior of air and fluid dynamics in the field of architecture: <ol style="list-style-type: none">11. Provide students with a comprehensive understanding of the application of Computational Fluid Dynamics (CFD) in architectural design and analysis.12. Familiarize students with the principles and fundamentals of fluid mechanics and their relevance to architectural systems.13. Develop students' proficiency in using CFD software to model and simulate airflow, thermal conditions, and other fluid dynamics phenomena in
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	<p>architectural environments.</p> <ol style="list-style-type: none"> 14. Enable students to evaluate and optimize architectural designs based on their understanding of air and fluid dynamics. 15. Enhance students' ability to analyze and interpret simulation results to inform design decisions and improve building performance. 16. Cultivate students' critical thinking and problem-solving skills by engaging them in practical exercises and projects that apply CFD techniques to real-world architectural scenarios. 17. Foster collaboration and communication skills through group discussions, project presentations, and case study analysis. 18. Encourage students to critically assess the limitations and uncertainties associated with CFD simulations and recognize the importance of validation and verification. 19. Stimulate students' awareness of emerging trends and advancements in the field of CFD and its potential impact on architectural design and sustainability. 20. Promote an interdisciplinary approach by connecting fluid dynamics principles with other relevant aspects of architecture, such as thermal comfort, energy efficiency, and environmental performance. <p>Overall, the module aims to equip students with the knowledge, skills, and mindset to effectively use CFD software to study and optimize the behavior of air and fluids in architectural contexts.</p>
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>By the end of this module, students should be able to:</p> <ol style="list-style-type: none"> 1. Understand the principles and theories of fluid dynamics and their application in architectural design and analysis. 2. Utilize Computational Fluid Dynamics (CFD) software to model and simulate air and fluid flow in architectural environments. 3. Apply boundary conditions and define appropriate parameters for accurate simulation of airflow, thermal conditions, and other fluid dynamics phenomena. 4. Analyze and interpret simulation results to evaluate the performance of architectural designs in terms of airflow, thermal comfort, and energy efficiency. 5. Assess and optimize architectural designs based on insights gained from CFD simulations and analysis. 6. Demonstrate proficiency in using CFD software to explore and evaluate different design options and scenarios. 7. Communicate effectively about CFD simulations, presenting findings and recommendations to stakeholders in a clear and concise manner. 8. Recognize the limitations and sources of uncertainty in CFD simulations and apply appropriate methods for validation and verification. 9. Collaborate effectively in interdisciplinary teams, integrating fluid dynamics principles into architectural design processes. 10. Stay informed about emerging trends and advancements in the field of CFD and their implications for architectural design and sustainability. 11. Apply ethical considerations in the use of CFD software, considering the responsible and sustainable use of resources. 12. Demonstrate critical thinking and problem-solving skills in applying CFD techniques to real-world architectural challenges. <p>These learning outcomes aim to equip students with the knowledge, skills, and competencies required to effectively utilize CFD software for studying and</p>

	optimizing the behavior of air and fluid dynamics in architectural contexts.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>The curriculum on using computers to study the behavior of air and fluid dynamics in the field of architecture covers a range of topics to equip students with the necessary knowledge and skills. The indicative contents include an introduction to Computational Fluid Dynamics (CFD) in architecture, fundamentals of fluid mechanics, and an overview of commonly used CFD software. Students will learn techniques for building geometry modeling, defining boundary conditions, and generating accurate meshes for simulations.</p> <p>The curriculum also emphasizes practical applications, such as simulating airflow in building interiors and analyzing ventilation effectiveness, evaluating thermal comfort parameters, and exploring design modifications for improved thermal conditions. Students will gain insights into wind flow analysis around buildings, assessing wind effects on facades and outdoor spaces. Additionally, they will explore fire and smoke simulations, rainwater penetration analysis, and large-scale simulation techniques for efficient modeling.</p> <p>The curriculum includes validation and verification of CFD simulations, enabling students to compare results with experimental data and understand the limitations and sources of uncertainty. Optimization of building performance is covered, allowing students to set up optimization studies and use algorithms to find optimal design solutions. Real-world case studies showcase the application of CFD in architecture, and ethical considerations and sustainability aspects in CFD simulations are discussed.</p> <p>Overall, this curriculum provides a comprehensive and practical approach to using computers for studying air and fluid dynamics in architecture, enabling students to analyze and optimize architectural designs for improved performance and sustainability.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>The curriculum of Physics Laboratory employs a combination of learning and teaching strategies. These include interactive lectures to introduce theoretical concepts and principles, hands-on practical sessions where students can apply CFD software to solve real-world problems, and group discussions to analyze case studies and share insights.</p> <p>Students will also engage in individual and group projects, allowing them to explore specific topics in-depth and apply their knowledge to practical scenarios. Guest lectures by industry professionals will provide valuable insights into the application of CFD in architecture. Additionally, site visits and fieldwork may be organized to observe and analyze real-world architectural environments.</p> <p>The teaching strategies emphasize active learning, encouraging students to participate, ask questions, and collaborate with their peers. The use of visual aids, demonstrations, and multimedia resources enhances understanding and engagement. Regular assessments, including assignments and exams, will be used to evaluate students' understanding and progress throughout the curriculum. Overall, these strategies promote a comprehensive and immersive learning experience for students in the field of architectural air and fluid dynamics.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	3,10	1,3,10
	Computer- simulated experiments	4	40%(40)	3,6,9,12	2,3,4,5,6,7,8,11,12
	Discussions & Analysis team's work	4	20% (20)	3,6,9,12	2,3,4,5,6,7,8,11,12
Summative assessment	Midterm Exam	1 hr	10% (10)	8	1,3,4,5,9
	Final Exam	3 hr	20% (20)	16	1,2,3,4,5,6,8,9,10 ,11
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Practical Lesson 1: Introduction to Computational Fluid Dynamics (CFD) Software <ul style="list-style-type: none"> Familiarize students with CFD software interface and basic functionalities Learn how to create a simple geometry and define boundary conditions Run a basic simulation and analyze the results
Week 2	Practical Lesson 2: Modeling Airflow in Building Interiors <ul style="list-style-type: none"> Create a 3D model of an indoor space using CFD software Set up ventilation system and define inlet/outlet conditions Simulate airflow patterns and analyze ventilation effectiveness
Week 3	Practical Lesson 3: Thermal Comfort Analysis

	<ul style="list-style-type: none"> • Simulate the temperature distribution in an indoor space • Evaluate thermal comfort parameters, such as PMV and PPD • Explore design modifications to improve thermal comfort
Week 4	<p>Practical Lesson 4: Wind Flow Analysis around Buildings</p> <ul style="list-style-type: none"> • Model a building and its surroundings in CFD software • Simulate wind flow patterns and analyze pressure distribution • Assess wind effects on building facades and outdoor comfort
Week 5	<p>Practical Lesson 5: Natural Ventilation Design Optimization</p> <ul style="list-style-type: none"> • Optimize the design of a natural ventilation system using CFD • Explore different inlet and outlet configurations • Analyze the impact on airflow rates and indoor air quality
Week 6	<p>Practical Lesson 6: Indoor Air Quality Assessment</p> <ul style="list-style-type: none"> • Model a space with pollutant sources using CFD software • Simulate the dispersion of pollutants and assess air quality • Evaluate the effectiveness of ventilation strategies in pollutant removal
Week 7	<p>Practical Lesson 7: Fire and Smoke Simulation</p> <ul style="list-style-type: none"> • Simulate a fire scenario and smoke movement in a building • Assess the effectiveness of fire safety measures • Analyze evacuation routes and smoke control strategies
Week 8	<p>Practical Lesson 8: Urban Microclimate Analysis</p> <ul style="list-style-type: none"> • Model an urban area and simulate its microclimate • Study the impact of buildings and vegetation on temperature and wind patterns • Evaluate the potential for urban heat island mitigation strategies
Week 9	<p>Practical Lesson 9: Rain Penetration Analysis</p> <ul style="list-style-type: none"> • Simulate rainwater penetration in a building facade • Analyze potential areas of water ingress and moisture damage • Explore design modifications for improved waterproofing
Week 10	<p>Practical Lesson 10: Optimization of Building Performance</p> <ul style="list-style-type: none"> • Set up an optimization study using CFD software • Define design parameters and performance metrics • Use optimization algorithms to find the optimal design solution
Week 11	<p>Practical Lesson 11: Sensitivity Analysis</p> <ul style="list-style-type: none"> • Perform a sensitivity analysis on a building design • Vary input parameters and assess their impact on performance

	<ul style="list-style-type: none"> Identify the most influential design factors for further optimization
Week 12	Practical Lesson 12: Parametric Design Exploration <ul style="list-style-type: none"> Explore parametric design techniques using CFD software Generate a range of design variations and evaluate their performance Analyze the trade-offs between different design options
Week 13	Practical Lesson 13: Large-Scale Simulation Techniques <ul style="list-style-type: none"> Learn techniques for efficient simulation of large-scale models Utilize parallel computing and distributed processing methods Run simulations on high-performance computing platforms
Week 14	Practical Lesson 14: Validation and Verification of CFD Simulations <ul style="list-style-type: none"> Compare CFD simulation results with experimental data Analyze the accuracy and reliability of the simulations Understand the limitations and sources of uncertainty in CFD modeling
Week 15	Practical Lesson 15: Case Studies and Project Presentations <ul style="list-style-type: none"> Present and discuss case studies showcasing CFD applications in architecture Encourage students to present their own CFD projects and findings Foster a discussion on future trends and advancements in the field
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	-"Computational Fluid Dynamics for Engineers" by Tuncer Cebeci and Jian P. Shao -"Introduction to Computational Fluid Dynamics" by Anil W. Date -"Building Performance Simulation for Design and Operation" by Jan L. M. Hensen and Roberto Lamberts -"CFD for Architects: A Practical Guide" by Asim Hussain	No
Recommended Texts	-"Computational Fluid Dynamics for Engineers" by Tuncer Cebeci and Jian P. Shao -"Building Performance Simulation for Design and Operation" by Jan L. M. Hensen and Roberto Lamberts	No
Websites	"Introduction to Computational Fluid Dynamics" - Online course offered by Cornell University on edX "CFD for Building Design" - Online course offered by SimScale "Introduction to CFD Analysis" - Tutorial series by Autodesk CFD Learning Channel on YouTube "CFD for Architects: A Step-by-Step Guide" - Tutorial series by EngiSoft on YouTube	

Grading Scheme

مخطط الدرجات

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.

Module Information

معلومات المادة الدراسية

Module Title	Physics (3)		Module Delivery	
Module Type	S		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 324			
ECTS Credits	3.00			
SWL (hr/sem)	75			
Module Level	UGIII	Semester of Delivery	Six	
Administering Department	Architectural	College	Engineering	
Module Leader	Rawia Marwan Dabdoob		e-mail	rawia.dabdoob@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer		Module Leader's Qualification	Master
Module Tutor			e-mail	
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date			Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none"> Describe and specify equipment and fittings for water supply and sewage systems. Install appropriate pipes and fittings for water supply, sewage, stormwater, and wastewater systems, and waste disposal systems, according to the building design. Calculate the building's average water consumption and the required pipe width and length.
Module Learning	<ul style="list-style-type: none"> Develop an understanding of the principles of urban water distribution and drainage through the public distribution network, and the factors affecting urban water consumption.

Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none"> • Develop practical skills in designing sanitary pipes for supply and drainage within buildings, and rainwater drainage. • Develop practical skills in designing sanitary spaces and the standards used in distributing sanitary equipment within sanitary spaces. • Instill an understanding of environmental sustainability in the subject of rainwater collection and reuse. • Instill an understanding of environmental sustainability in the subject of waste collection in multi-story residential or office buildings via waste pipes and methods for waste separation and recycling.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> • Lecture strategy • Discussion strategy • Problem-solving strategy • Cooperative learning strategy <ol style="list-style-type: none"> 1. Promote an interactive studio environment for lecture presentations and discussions to reflect a realistic picture that simulates professional challenges. 2. Enhance understanding through classroom assignments, including calculations and diagrams of the supply and drainage network and waste disposal pipes. 3. Enhance understanding through implemented real-life projects that reflect the job market.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.9
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	%15(15)	3, 5,6,8 and 11	LO # 1-3
	Assignments	1	20%(20)	2 and 12	LO # 5-6
	Projects / Lab.				
	Report	1	5%(5)	7	LO # 4
Summative assessment	Midterm Exam	1 h	10% (10)	9	LO # 1-4
	Final Exam	3 h	50% (50)	16	All
Total assessment			100% (100)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction, Definitions of the Scope of Sanitary Supply and Drainage Works
Week 2	Sanitary Equipment, Sanitary Spaces
Week 3	Public Water Distribution System and Building Water Distribution Network
Week 4	Building Water Requirements Calculations
Week 5	Term exam 1
Week 6	Types of Supply and Drainage Network Pipes
Week 7	Public drainage system and building drainage network
Week 8	Calculating sewer pipe sizes and lengths
Week 9	Monthly exam
Week 10	Rainwater drainage system
Week 11	Waste pipe system
Week 12	Seminars
Week 13	Seminars
Week 14	Seminars
Week 15	Seminars
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> Plumbing Complete: Expert Advice from Start to Finish, Book by Rex Cauldwell. 	No
Recommended Texts	Ultimate Guide: Plumbing, Updated 5th Edition, Book	No
Websites	<p>https://iccts.moch.gov.iq/wp-content/uploads/2023/09/%D9%85%D8%AF%D9%88%D9%86%D8%A9-%D8%A7%D9%84%D8%B5%D8%B1%D9%81-%D8%A7%D9%84%D8%B5%D8%AD%D9%8A-%D9%81%D9%8A-%D8%A7%D9%84%D9%85%D8%A8%D8%A7%D9%86%D9%8A.pdf</p> <p>https://www.alnaqeb.me/%D8%AA%D9%86%D9%81%D9%8A%D8%B0-%D8%B4%D8%A8%D9%83%D8%A7%D8%AA-%D8%A7%D9%84%D8%B5%D8%B1%D9%81-%D8%A7%D9%84%D8%B5%D8%AD%D9%8A/#google_vignette</p>	

Grading Scheme

مخطط الدرجات

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 (فيد 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.

ARC 325 Working Drawings (2)

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information معلومات المادة الدراسية			
Module Title	Working Drawings 2		Module Delivery
Module Type	C		<input type="checkbox"/> Theory
Module Code	ARC 325		<input checked="" type="checkbox"/> Lecture
ECTS Credits	4		<input type="checkbox"/> Lab
SWL (hr/sem)	100		<input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Level	UGI	Semester of Delivery	10
Administering Department	Architectural Engineering	College	College of Engineering
Module Leader	Roua Suhail Mohammad	E-mail	rouasuhail@uomosul.edu.iq
Module Leader's Acad. Title	teacher	Module Leader's Qualification	Master Degree
Module Tutor	Maysaa moffeq Shaimaa aldabbagh Alhan faris Esraa malallah Fahad akram	e-mail	maysaa.moffeq@uomosul.edu.iq Shaimaa.aldabbagh@uomosul.edu.iq alhan.faris@uomosul.edu.iq Esraa.malallah@uomosul.edu.iq fahad.akram@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	2.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ul style="list-style-type: none"><input type="checkbox"/> Enhancing critical thinking and problem-solving skills, identifying characteristics, constraints, and opportunities. Enhancing critical thinking and problem-solving skills, and identifying characteristics, constraints, and opportunities<input type="checkbox"/> Developing skills related to architectural solutions linked to the structural solution of the building. Developing skills related to architectural solutions associated with the structural solutions of the building.<input type="checkbox"/> Estimating the contexts of ideas related to architectural design and the possibility of linking them to practical solutions for engineering projects. Appreciation of the contexts related to architectural design ideas and the possibility of linking them to practical solutions for engineering projects.

<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>By the end of the course, the student will be able to:</p> <ul style="list-style-type: none"> • The student's ability to design and analyze structural engineering structures and their detailed elements. • The student is capable of designing projects with structural frameworks that are realistic and feasible. • The student's ability to conduct critical evaluation and analytical thinking, and to enhance the capacity to analyze and assess existing projects and design proposals critically and effectively. • The student's ability to communicate effectively with other specializations regarding services and construction details of projects. • The ability of students to collaborate and work as a team, and their capacity to work within multidisciplinary teams, effectively cooperating with engineers, architects, and other specialists (structural engineers).
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>1-Teaching the student the principles of designing structures with steel frameworks, as well as familiarizing them with the types of steel structures and how to handle them as an essential part of architectural design.</p> <p>2-Implement clear practical programs that focus on the technological details of using steel structures, without neglecting architectural beauty standards, and keeping up with advancements in developed countries by offering an architectural educational program that establishes a foundation based on modern technologies related to recent developments in engineering and artistic fields, especially concerning architectural constructions and building installations.</p> <p>3-Enhancing the capabilities and skills of graduates by offering specialized continuing education courses and engaging with them to support the department's mission.</p>

<p>Learning and Teaching Strategies</p> <p>استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Learning thru projects: Learning thru projects <input type="checkbox"/> Field visits Field visits <input type="checkbox"/> Video-based observations (visual learning method) <input type="checkbox"/> Evaluation of design and feedback Design evaluation and feedback <input type="checkbox"/> Use of visual media and technology Using visual media and technology

<p>Student Workload (SWL)</p> <p>الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا</p>			
<p>Structured SWL (h/sem)</p> <p>الحمل الدراسي المنتظم للطلاب خلال الفصل</p>	<p>63</p>	<p>Structured SWL (h/w)</p> <p>الحمل الدراسي المنتظم للطلاب أسبوعيا</p>	<p>4</p>
<p>Unstructured SWL (h/sem)</p> <p>الحمل الدراسي غير المنتظم للطلاب خلال الفصل</p>	<p>37</p>	<p>Unstructured SWL (h/w)</p> <p>الحمل الدراسي غير المنتظم للطلاب أسبوعيا</p>	
<p>Total SWL (h/sem)</p> <p>الحمل الدراسي الكلي للطلاب خلال الفصل</p>	<p>100</p>		

<p>Module Evaluation</p> <p>تقييم المادة الدراسية</p>					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	10% (5)	4,13	LO #1,2, and 3
	Assignments	1	40% (20)	6	LO #3
	Projects / Lab.		20%(10)		
	Report	1	10% (5)	5 and 15	
Summative assessment	Midterm Exam	2 hr	20% (10)	15	LO # 1-4
	Final Exam	3 hr	100% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Introduction, definitions, references
Week 2	Review of international natural design projects
Week 3	he history of landscape design
Week 4	How to start designing a project thru its structural framework
Week 5	Basics of executive drawing for architectural projects.
Week 6	
Week 7	Design of structural networks for projects
Week 8	Structural spaces and their engineering specifications
Week 9	Designing buildings in harmony with the execution plans.
Week 10	Details of the external spaces
Week 11	
Week 12	Designing the executive details of the projects under study
Week 13	
Week 14	Discussion of the report
Week 15	The final exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> 1 -Working Drawings Handbook , Keith Styles , Kindle Edition , 2014 by Architectural Press , USA . 2 -Design of Steel Structures , Mc Graw Hill India , Brand New, International Softcover Edition , 3rd edition 2017 , USA . 3 -Architecture and Construction in Steel , Alan Blanc, Michael Mc Evoy, Roger Plank , ISBN 9780419176602 , Taylor & Francis , 2019 , USA . 	Yes
Recommended Texts		
Websites		

Grading Scheme
مخطط الدرجات

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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ARC 326 Principles of Planning

University of Mosul

College of Engineering

Architectural Engineering Department

Module Information

معلومات المادة الدراسية

Module Title	Principles of Planning	Module Delivery	
Module Type	S	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 326		
ECTS Credits	3.00		
SWL (hr/sem)	75		
Module Level	UGIII	Semester of Delivery	Six
Administering Department	Architectural	College	Engineering
Module Leader	Dr. Hussein Salman Abdullah	e-mail	husein.salman@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PHD
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	Enhance philosophical thinking and urban problem-solving skills, Identifying characteristics, constraints, and opportunities Develop modern urban planning skills Appreciate the cultural, social, and historical contexts of urban planning
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ul style="list-style-type: none">• Understanding Basic Concepts• Understanding the characteristics of human settlements and how they emerged in ancient civilizations• The concept of sustainability in cities

	<ul style="list-style-type: none"> • Characteristics of sustainable cities • Types of sustainability and their applications • The most important sustainable cities in the Arab world
Indicative Contents المحتويات الإرشادية	<p>Introduce architecture students to the principles and concepts of planning, taking into account the practical importance of planning and the role of the architect in this process. Students should be able to engage with the urban planning process and its elements, including streetscapes, parking design, and master plans, in addition to providing numerous parking spaces around the world as examples of this topic.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ul style="list-style-type: none"> • Lecture strategy • Discussion strategy • Problem-solving strategy
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.9
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/N umber	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	%15(15)	3, 5,6,8 and 11	LO # 1-3
	Assignments	1	20%(20)	2 and 12	LO # 5-6
	Projects / Lab.				
	Report	1	5%(5)	7	LO # 4
Summative assessment	Midterm Exam	1 h	10% (10)	9	LO # 1-4
	Final Exam	3 h	50% (50)	16	All
Total assessment			100% (100)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction, definitions of the development of urban planning concepts and principles, and the role of the architect
Week 2	The emergence of human settlements in ancient civilizations
Week 3	Medieval and Islamic cities
Week 4	Modern theories and ideas of urban planning
Week 5	Term exam 1
Week 6	Sustainable and Contemporary Cities
Week 7	Elements of Urban Spaces and Streets
Week 8	Technical Aspects of Street Planning
Week 9	Term exam 2
Week 10	Technical Aspects of Walkway Planning
Week 11	Planning Aspects of Parking Garages
Week 12	Seminars
Week 13	Seminars
Week 14	Seminars
Week 15	Seminars
Week 16	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> ▪ "Ecological Design and Planning" - يقدم جورج إف. طومسون وفريدريك آر. ستاينر، رؤى حول كيفية تضمين مبادئ الاستدامة في تصميم وتخطيط المواقع الخارجية. ▪ The Urban Pattern ، Van Nostrand Reinhold Co. ، جالين ، آرثر ب • Chapin ،F. Stewart ،Urban Land use Planning ، University of Illinois 	No
Recommended Texts	<ul style="list-style-type: none"> ▪ كتاب يغطي جوانب متعددة من تخطيط وتصميم البيئي من Simonds - الناحية النظرية والعملية. ▪ مجلة علمية تنشر بحوثاً ودراسات حول " Urban Planning " مجلة تخطيط وتصميم المدن والعمران. <p>"Ecological Design and Planning" بواسطة George F. Thompson و Frederick R. Steiner - يقدم الكتاب منظوراً على كيفية دمج مبادئ الاستدامة في تصميم وتخطيط المدن.</p>	No
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جداً	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
<p>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.</p>				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Architectural Design (5)		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory
Module Code	ARC 411		<input checked="" type="checkbox"/> Lecture
ECTS Credits	12		<input type="checkbox"/> Lab
SWL (hr/sem)	300		<input checked="" type="checkbox"/> Tutorial
			<input checked="" type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	UGIV	Semester of Delivery	7
Administering Department	ARC	College	COE
Module Leader	Dr. Dhuha Abdulgani Al-kazzaz	e-mail	dhuha.kazzaz@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Ghada Mohammed Younis Miqdam Ameen Majeed Baydaa Hanna Saffo Farhan Awad Jasim Amer Abdullah Alazzawi	e-mail	E-mail

Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		None	Semester
Co-requisites module		None	Semester

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>This course, in the design studio sequence, continues the development of a comprehensive building design process with problems of complex scope. .1</p> <p>The studio focuses on building types that exhibit complexity and challenge such as hospital. Hospital project explored in this studio includes the synthesis of spatial, functional, and contextual concerns, as directly linked to the understanding and employment of building systems. .2</p> <p>The course emphasis is placed on a building envelope in terms of form, massing, articulation and fenestration. The use of computer-aided drafting is a part of the formal design exploration. .3</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>Ability to gather, analyze, assess, record, apply, and comparatively evaluate relevant information within architectural coursework. .1</p> <p>Using creativity, conceptual skills, and judgment to identify human and environmental needs and to meet or express them in space and form. .2</p> <p>Demonstrate an understanding of principles and practices and integrate and apply that knowledge within architectural coursework and design processes. .3</p> <p>Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards. .4</p> <p>Critical understanding of the theory and practice of environment and energy issues in the cultural context of society as a whole .5</p> <p>Ability to develop imaginative and creative thinking within architectural coursework and design processes. .6</p>

Indicative Contents المحتويات الإرشادية	Indicative content includes the following.
	Introduction to hospital designs: types, functions, and characteristics includes precedents Analysis of previous hospital projects to highlight a handful of design issues: such as, functional zoning, plan circulation diagrams, systems integration ideas, structural concepts, elevation design, section-volume concepts, and so on. Then, data collection includes design standards and criteria of health facilities in hospital building designs. Next, site analysis includes traffic, environment, topography, etc. (30 hrs)
	Preparing preliminary design concept including land use, space layout of all floors and their massing in scale (1/500). (25 hrs)
	Developing design proposal including floor plans of all levels in scale (1/200). (40 hrs)
	Developing the formal design of building elevations and sections in scale (1/200). (20 hrs)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>Many strategies are adopted in delivering this Student-led design projects by encouraging students to participate in the following skills:</p> <ul style="list-style-type: none"> <li style="text-align: right;">Analyze a problem and systematically design and implement an effective solution. - <li style="text-align: right;">Using creativity and judgement; both as an individual or in group work to enhance the students' critical thinking skills. - <li style="text-align: right;">Having negotiation skills to resolve complex building issues. - <li style="text-align: right;">Having clarity of expression using spoken words, computer aided drafting, and visual media to deliver 2D and 3D drawings. - <li style="text-align: right;">Ability to work in collaboration with others and in multidisciplinary teams to successfully complete design projects. - <p style="text-align: right;">This will be achieved through lectures and design studio-based tutorials for individual and group work.</p>

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	154	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	10

Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	146	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	9.7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	300		

Module Evaluation تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes				
	Assignments				
	Projects / Lab.	5	60% (60)	4-15	All
	Report	3	10% (10)	1-3	LO #1 and 4
Summative assessment	Midterm Exam	4 hr	15% (15)	7	All
	Final Exam	4 hr	15% (15)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to hospital designs: types, functions, and characteristics.
Week 2	Data collection: Precedents Analysis of previous hospital projects to highlight a handful of design issues: such as, functional zoning, plan circulation diagrams, systems integration ideas, structural concepts, elevation design, section-volume concepts, and so on.
Week 3	Data collection of Design standards and criteria of health facilities in hospital building designs.

Week 4	Site analysis
Week 5	Discussion of proposals of design concept
Week 6	First submission of Design concept
Week 7	Design concept development
Week 8	Midterm Exam
Week 9	Development of plans (zoning & circulation)
Week 10	Development of plans (building structure)
Week 11	Second submission: plans and physical model
Week 12	Development of elevations & sections
Week 13	Pre-final submission
Week 14	Solving minor problems: functional, formal & structural
Week 15	Final submission
Week 16	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Joseph De Chiara, "Time-Saver Standards for Building Types". 1-	Some of them
	Ernst Neufert, "Neufert Architects' Data". 2-	
	Philipp Meuser & Christoph Schirmer, "New Hospital Buildings in Germany". 3-	
	Philipp Meuser "Construction and Design manual - Hospital and Health Centers". 5-	
	Louis G. Redistone, "Hospitals and Health Care Facilities". 6-	

	Christine Nickl-Weller & Hans Nickl, "Hospital Architecture + Design". 7- Richard Sprow, "Planning Hospitals of the Future". 8-	
Recommended Texts	محمد ماجد خلوصي، "المستشفيات والمراكز الصحية والإجتماعية" 9- هشام حسن علي، "محاضرات في تخطيط وتنسيق المستشفيات" 10-	No
Websites		

Grading Scheme				
مخطط الدرجات				
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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Interior Design		Module Delivery
Module Type	C		<input type="checkbox"/> Theory
Module Code	ARC412		<input checked="" type="checkbox"/> Lecture
ECTS Credits	6		<input type="checkbox"/> Lab
SWL (hr/sem)	150		<input type="checkbox"/> Tutorial
			<input checked="" type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	UGIV	Semester of Delivery	7
Administering Department	ARC	College	COE
Module Leader	Khawola Faith Mahmoud	e-mail	Khawola.Mahmoud@uomosul.edu.iq
Module Leader's Acad. Title	Assist. prof	Module Leader's Qualification	PhD.
Module Tutor		e-mail	
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	

Co-requisites module	None	Semester
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Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>Introduction to interior design principles and the definition of interior design, interior architecture, and decoration. .1</p> <p>Understand the relationship between Architecture form and interior space and the integrations between them. .2</p> <p>Understanding the types of interior design and industrial interior design and the theory in design .3</p> <p>Identifying the interior design elements and relations .4</p> <p>Understanding the physical, psychological and emotional needs of interior space users .5</p> <p>The importance of designing furniture and interior design elements .6</p> <p>The integration between interior design and sustainability developments goals .7</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>At the end the semester The student learn the language of interior design and its vocabulary by studying and applying the basics and the technical relationship of its different elements and its impact on the environment -1</p> <p>The student learn the design knowledge to construct any interior design in terms of functional and aesthetic, by studying the foundations on which any design is based, and the human, cultural, technological and environmental needs. -2</p> <p>The student touch the initial elements of the design -3</p> <p>The student learn the basics of flat organization -4</p> <p>The student learn the principles of design -5</p> <p>The student learn the basics of transforming shape into design -6</p> <p>The student learn how to deal with interior space and furniture -7</p> <p>The student learn how to design furniture of interior design elements. -8</p>

Indicative Contents المحتويات الإرشادية	Define basic concepts of interior design, The principles of interior design and its differences from decoration, The interior design elements and relations The integration of architecture design and interior space The psychological, physical, and emotional needs of users of the interior space, Interior furniture and furnishing and its related to the overall interior design images Methodologies of interior design process and the concepts resources

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			150

Module Evaluation تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome

As					
Formative assessment	Quizzes	2	10% (10)	4, 13	LO #1, 2, and 3
	Assignments	1	10% (10)	6	LO #3
	Projects / Lab.	4 hr	20% (20)	12	LO #3 and 4
	Report				
Summative assessment	Midterm Exam	4 hr	30% (30)	15	LO #1-4
	Final Exam	3 hr	30% (30)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to the course – : Define basic concepts of interior design
Week 2	The principles of interior design and its differences from decoration
Week 3	The interior design elements and relations
Week 4	The integration of architectural design and interior space
Week 5	The psychological, physical, and emotional needs of users of the interior space
Week 6	Interior furniture and furnishing and its related to the overall interior design images
Week 7	Methodologies of the interior design process and the concepts resources
Week 8	<u>Sustainable interior design and the role of designers</u>
Week 9	Theme and colour elements and its effects on interior space
Week 10	The interior design styles 1
Week 11	The interior design styles 2
Week 12	The history of interior design
Week 13	The relation between space layout and furnishing

Week 14	The type of using lighting elements in the interior space
Week 15	Type of interior spaces related to the function
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Interior Design Illustrated 3rd Edition, -1 Rethinking Design and Interiors: Human Beings in the Built Environment	No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Theories of Architecture		Module Delivery	
Module Type	C		Theory ✓	
Module Code	ARC 413		Lecture ✓	
ECTS Credits	3		Lab	
SWL (hr/sem)	75		Tutorial	
			Practical	
			Seminar	
Module Level	UGIV	Semester of Delivery	7	
Administering Department	ARC	College	COE	
Module Leader	Asma H. Al-Dabbagh	e-mail	asma.dabbagh@uomosul.edu.iq	
Module Leader's Acad. Title	Assist. prof	Module Leader's Qualification	Ph.D.	
Module Tutor	Sinan M. Al-Saffar	e-mail	sinan.mohammad@uomosul.edu.iq	
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<p>The course includes a presentation of the theoretical framework of the main architectural movements and their secondary sub-divisions over their change within the nineteenth and twentieth centuries, to contemporary architecture today. This framework includes the presentation of the thought of modernist architecture from its beginnings and development, with its changes according to the regions and architects who practiced it, as well as the architecture of late modernity, postmodern architecture and deconstructive architecture. Classification of the important aspects of each of the architectural movements which distinguishes them from others. Clarify the theoretical aspect of each architectural movement by enhancing it with examples.</p>
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<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<ul style="list-style-type: none"> Recognize the main movements in architecture through the last three decades. ● Describing and identifying the characteristic concerning the main movements and secondary approaches in Architecture. ● Comparing the different architectural approaches in conceptual and formal characteristics. ● Analyzing the well-known projects according to the obtained knowledge. ● Evaluating the contemporary and local projects considering the main topics in course. ● Outlining the expected future evolution in architectural trends and applications. ●
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<ol style="list-style-type: none"> Backgrounds of Modern Architecture, Revivalism, Eclecticism .1 The Beginning of Modern Architecture, Art Nouveau, De Stijl & Futurism .2 Constructivism, Expressionism, Organic Architecture/ Frank Lloyd Wright, The Chicago School of Architecture .3 Functionalism, Purism, New Objectivism & The Bauhaus School, .4 International Style, The Architecture of Le- Corbusier, The Architecture of Ludwig Mies .5 The deficiencies of Modern Architecture, Crises of Modern Architecture .6 The Architecture of Brutalism, Archigram & Metabolism .7 Late-Modern Movement .8 Post-Modern Movement .9 Deconstruction, Contemporary Architecture .10

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Encouraging students' to analyze implemented projects due to the characteristics of Styles .1
	Discussing the conceptual and formal characteristics in order to outlining the expected future evolution. .2

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل			75

Module Evaluation

تقييم المادة الدراسية

As		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	15 min./3	30% (30)	3,6,9	1,2,3,4
	Structural model				
	Report	1	10% (10)	13	1,2,3,4,5,6
	Discussions & Analysis team's work				

Summative assessment	Midterm Exam	30 min./2	10% (10)	8,11	1,2,3,4,5,6
	Final Exam	3 hr	50% (50)	16	1,2,3,4,5,6
Total assessment			Total assessment	100% (100 Marks)	

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Backgrounds of Modern Architecture, Revivalism, Eclecticism
Week 2	The Beginning of Modern Architecture, Art Nouveau, De Stijl & Futurism
Week 3	Constructivism, Expressionism, Organic Architecture/ Frank Lloyd Wright, The Chicago School of Architecture
Week 4	Functionalism, Purism, New Objectivism & The Bauhaus School,
Week 5	International Style, The Architecture of Le- Corbusier, The Architecture of Ludwig Mies
Week 6	The deficiencies of Modern Architecture, Crises of Modern Architecture
Week 7	The Architecture of Brutalism, Archigram & Metabolism
Week 8	Midterm Exam
Week 9	Late-Modern Movement
Week 10	Late-Modern Movement
Week 11	Midterm Exam
Week 12	Post-Modern Movement
Week 13	Post-Modern Movement
Week 14	Late-Modern & Post-Modern spaces
Week 15	Deconstruction, Contemporary Architecture
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

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

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	None	
Recommended Texts	<ul style="list-style-type: none"> Changing Ideals in Modern Architecture/ Peter Collins ● Modern Architecture since 1900/ William Curtis ● Architecture Today/ Charles Jencks ● International Style in Architecture/ Shereen Sherzad ● 	All of them
Websites		

Grading Scheme

مخطط الدرجات

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				معلومات المادة الدراسية	
Module Title	Steel design		Module Delivery		
Module Type	S		<input checked="" type="checkbox"/> Theory		
Module Code	ARC 414		<input checked="" type="checkbox"/> Lecture		
ECTS Credits	4		<input type="checkbox"/> Lab		
SWL (hr/sem)	100		<input checked="" type="checkbox"/> Tutorial		
			<input type="checkbox"/> Practical		
			<input type="checkbox"/> Seminar		
Module Level	UGIV	Semester of Delivery	7		
Administering Department	ARC	College	COE		
Module Leader	Fahad akram saeed	e-mail	Fahad.akram@uomosul.edu.iq		
Module Leader's Acad. Title	assistant lecturer	Module Leader's Qualification	Ms.c		
Module Tutor	Name (if available)	e-mail	E-mail		
Peer Reviewer Name	Name	e-mail	E-mail		
Scientific Committee Approval Date		Version Number	1.0		

Relation with other Modules				العلاقة مع المواد الدراسية الأخرى	
Prerequisite module		None	Semester		
Co-requisites module		None	Semester		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>introduce students to the fundamental design process of steel as a structural member which found in bridges and building structures. .1</p> <p>The AISC LRFD Code is the design specifications choice used in this course. .2</p> <p>Understanding the relationship between analysis and design of steel structures by applying gain knowledge from statics, mechanics of solid, and structural analysis further. .3</p> <p>In this course, the students learn how to analysis the steel members under different loading conditions. In addition to the connection between members. .4</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>At the end of this course, students will have gained knowledge of the fundamental concepts behind the design of structural steel as well as instruction in the most recent design and analysis methods for steel structural elements. .1</p> <p>Understand the design criteria, LRFD design philosophy and behavior of structural steel according to ANSI/AISC 360-16 - An American National Standard (Specification for Structural Steel Buildings). .2</p> <p>Learning how to use the AISCM (American Institute of Steel Construction Manual). .3</p> <p>Calculate the acceptable design loading for steel members. .4</p> <p>Able to analyze and design tension members, compression members, .5</p> <p>Able to analyze and design simple connections between structural elements including riveted and welded connections. .6</p>
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>Introduction to steel as a structural material, hot rolled, cold formed and built-up sections, Introduction to various methods of design, fundamentals of allowable stress design (ASD) Methods Objectives of designer and selection design criteria, LRFD Method of Design: Factor of safety, loads and load combination. Concept of load and resistance factors, plastic design and limits on design [5 hrs].</p> <p>Analysis and design of tension members, Nominal strengths of tension members, calculation of net areas. Effect of staggered holes in analysis of tension members. Shear lag and effective net areas. Block shear [10 hrs].</p> <p>Design of tension members. Selection of sections. Built-up tension members. Threaded rods. Design of tension members and sag rods in roof trusses [10 hrs].</p> <p>Compression members under concentric axial loads. Introduction. Sections used for columns. The Euler formula. Effective length and slenderness ratio [10 hrs].</p> <p>AISC requirements for compression members. Analysis of compression members. Design compressive strength of compression members. Effective length of columns in frames and alignment charts. Stiffness-reduction factors [10 hrs].</p> <p>Design of compression members. Built-up compression members. Connection requirements for built-up compression members composed of rolled shapes. Base plates for concentrically loaded columns [15 hrs].</p>

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>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</p>

	classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل			100

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	20% (20)	4, 12	LO #3, 4, 5, and 6
	Assignments	3	20% (20)	6, 14	LO #3, 4, 5, and 6
	Projects / Lab.				
	Report				
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

Week	Material Covered
Week 1	Introduction to structural steel design. Advantages of steel as a structural material. Disadvantages of steel as a structural material. Steel sections. Stress–strain relationships in structural steel.
Week 2	ANSI/AISC 360-16 definitions. How to use AISC.
Week 3	Specifications, loads, and methods of design. Specifications and building codes. Load and resistance factor design (LRFD) and allowable strength design (ASD). Computing combined loads with LRFD expressions. Computing combined loads with ASD expressions.
Week 4	Tension members. Analysis of tension members. Introduction. Nominal strengths of tension members.
Week 5	Net areas. Effect of staggered holes in analysis of tension members.
Week 6	Shear lag and effective net areas. Block shear.
Week 7	Design of tension members. Selection of sections
Week 8	Built-up tension members. Threaded rods. Design of tension members and sag rods in roof trusses.
Week 9	Compression members under concentric axial loads. Introduction. Sections used for columns.
Week 10	The Euler formula. Effective length and slenderness ratio.
Week 11	AISC requirements for compression members. Analysis of compression members. Design compressive strength of compression members.
Week 12	Effective length of columns in frames and alignment charts. Stiffness-reduction factors.
Week 13	Design of compression members.
Week 14	Built-up compression members. Connection requirements for built-up compression members composed of rolled shapes.
Week 15	Base plates for concentrically loaded columns.
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	

Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Structural Steel Design, Jack C. McCormac and Stephen F. Csernak, Pearson Education Limited, 5 th edition, 2012.	No
Recommended Texts	AISC Construction Manual, 14 th Edition.	No
Websites		

Grading Scheme				
مخطط الدرجات				
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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	building techniques		Module Delivery
Module Type	Support		Theory ✓
Module Code	ARC415		Lecture ✓
ECTS Credits	3		Lab
SWL (hr/sem)	75		Tutorial
			Practical ✓
			Seminar ✓
Module Level	UGIV	Semester of Delivery	7
Administering Department	ARC	College	COE
Module Leader	Omar hazim kharofa	e-mail	omar.kharufa@uomosul.edu.iq
Module Leader's Acad. Title	Assist. prof	Module Leader's Qualification	Ph.D.
Module Tutor	Maysaa Moffeq yones Alobaidi	e-mail	Maysaa.moffeq@uomosul.edu.iq
Peer Reviewer Name	Lecturer Dr.Rasha Abdulkareem Ali	e-mail	rasha.abdulkareem@nahrainuniv.edu.iq

Scientific Committee Approval Date		Version Number	1.0
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Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Introduce students to the concept of technology in its general and applied context, highlighting its role in the field of construction and architecture. Achieve a comprehensive understanding of technology as an idea and its application in the context of architecture. .8
	Understand the relationship between technology and the art of architecture, with a focus on ways to develop technology through advanced and modern techniques of industrial and scientific technology. This relationship is elucidated within a comprehensive framework that encompasses architectural work. .9
	Familiarize students with structural systems, including their fundamentals, the transfer of structural forces, and their impact on the form of the structural system. Additionally, students become acquainted with the details related to each system, especially modern systems used in contemporary architectural buildings. .10
	Explore a range of global architectural projects executed by renowned architects, providing examples of advanced technology utilization in those projects. .11
	Open new horizons for students to explore the architectural ideas they are working on in architectural design courses, with the aim of developing integrated projects from intellectual, design, and construction perspectives. .12
	Enhance the role of students and activate their participation by presenting reports on structural systems, architects, and buildings that employed those systems. These reports are discussed in discussion sessions to delve into advanced technology and exchange ideas between students and the professor. Moreover, students' confidence in themselves is boosted, and their skills and knowledge in the technological field are increased through the presentation of the latest advanced concepts and applications used in the current era. .13
	Bridging the Gap between academic theories and practical applications and explore the details of structural systems in architectural buildings and understand the methods used in their construction. Students are given the opportunity to train and work on practical exercises and present three-dimensional models of the main structural systems implemented in global engineering projects. This .14

	<p>opportunity is achieved under the supervision and training of the course professor, helping students enhance their practical and theoretical skills in this field.</p>
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<p>Identify the concept of technology in architecture and its role in construction. .1 Understanding the relationship between technology and art in architecture and ways to develop it. .2 Familiarizing students with structural systems and their impact on construction form. .3 Studying global architectural projects and their use of technology. .4 Encouraging exploration of architectural ideas and comprehensive project development. .5 Bridging the academic-practical gap, exploring structural systems, and construction methods through hands-on training and creating 3D models of global engineering projects. .6 Enhancing student roles through report presentations and discussions. .7 Linking academic theories with practical applications and providing hands-on exercises. .8 Encouraging active learning and collaborative work among students. .9 Effective communication with diverse audiences. .10 Functioning effectively as a team member, providing leadership, collaboration, and goal achievement. .11 Encouraging active learning and collaboration through group presentations showcasing students' skills and collective work. .12 Acquiring and applying new knowledge using appropriate learning strategies. .13 Program skill goals: .14</p> <ul style="list-style-type: none"> • Ability to design structurally and aesthetically advanced buildings. • Increasing the student's ability to solve technical problems in their work. • Linking the course material with architectural design by seeking technical solutions for the student's design project. • Understanding advanced building materials and how to use the appropriate material in the appropriate structure. • Emphasizing the consideration of building service systems and ensuring their compliance with standards.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Technology and the concept of advanced technology and its relationship to architecture. .11 The most important types of advanced construction systems and their applications in contemporary global projects. .12 The structural form and its significant classifications. .13 Advanced building materials and their applications in global projects. .14 Building systems, including seismic and fire systems, with detailed international examples. .15 Artificial intelligence and architectural engineering. .16</p>

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>3. Encouraging students' active participation through pre-lecture readings and class discussions.</p> <p>4. Promoting an interactive learning environment by implementing reverse learning, where students explore and research important technologies, contemporary building materials, and new architectural applications, leading to meaningful discussions and a deeper understanding of the subject matter.</p>

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
As		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (15)	3,10	1,2
	Structural model	1	15%(15)	3,5,7	6,8,9,10,11,12,13,14
	Report	1	5% (5)	2,10	5,7,8,9,10,11,12,13,,14

	Discussions & Analysis team's work	1	5% (5)	14,15	8,9,10,11,14
Summative assessment	Midterm Exam	1 hr	10% (10)	8	1,2,3,4,6,14
	Final Exam	3 hr	50% (50)	16	1,2, 3, 4,6,14
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to the course – : Define basic concepts of building techniques
Week 2	The concept of Tectonic and Atectonic & set the reports
Week 3	Structural Form &- <u>model exercise explained 1</u>
Week 4	Tent systems & Space frame Systems
Week 5	Construction systems In High Rise Buildings 1 & <u>model exercise explained 2</u>
Week 6	Construction systems In High Rise Buildings2
Week 7	Advanced Building materials & model
Week 8	<u>Mid Term Exam</u>
Week 9	Digital architecture
Week 10	Discuss the reports 2
Week 11	<u>Artificial intelligence</u> and it's applications in Architecture
Week 12	Building services systems 1 ; Earthquake Systems
Week 13	Building services systems 2; Dealing with fires in buildings techniques
Week 14	Reports analysis exercise – Seminar3
Week 15	Reports analysis exercise – Seminar4

Week 16	Preparatory week before the final Exam
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Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	-	No
Recommended Texts	<ul style="list-style-type: none"> ● "Sources of architectural form", Manchester University Press, MANCHESTER and NEW YORK-USA) ●) Robert.E Melchers, Richard Hough, "Modeling Complex Engineering Structures ",2007.(●)Design of reinforced concrete buildings(–) "High-Rise Building Structure", John Wiley & Sons, New York.(Yes most of them

	<ul style="list-style-type: none"> (Gelernter, M. "Sources of architectural form", Manchester University Press, MANCHESTER and NEW YORK-USA) (Technology Effect In Constructing High Rise Buildings, M.sc Thesis by Rasha Abdulkareem Ali) 	
Websites	<p>Given that the lesson focuses on advanced technologies, it necessitates ongoing and evolving research. To fulfill this requirement, we frequently refer to reputable international sources, including renowned architects such as Zaha Hadid, Jean Nouvel, Norman Foster, and others. Additionally, we explore diverse building materials, contemporary technologies, and the field of artificial intelligence as relevant internet resources.</p>	

Grading Scheme				
مخطط الدرجات				
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.

نموذج وصف المادة الدراسية

Module Information					
معلومات المادة الدراسية					
Module Title	Engineering Services (2)		Module Delivery		
Module Type	E		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar		
Module Code	ARC416				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level		UGIV	Semester of Delivery		7
Administering Department		ARC	College	COE	
Module Leader	Ahmed A. Alfakhry		e-mail	ahmed.alfakhry@uomosul.edu.iq	
Module Leader's Acad. Title		Assistant Professor	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			Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>This course aims to introduce architecture students to the most significant knowledge in all engineering services, in order to make them more aware and understand what happens during the design process .1</p> <p>Give architecture students sufficient experience to provide adequate spaces and access to the necessary building engineering systems and equipment during the early stages of the building design process. .2</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p style="text-align: center;">On successful completion of this course students will be able to:</p> <p>Through this course, the students would learn how to deal with other engineering disciplines, especially electricity, which is considered an essential need in building design. .1</p> <p>This course provides sufficient understanding of electrical and mechanical engineering, which is required during the conceptual stages for the design process of buildings, and to be partially enough qualified in building engineering services. .2</p> <p>This course provides the student with efficient knowledge supported by examples and homework to give a glance at the necessary electrical and mechanical systems and equipment's with practical skills. .3</p> <p>This course provides enough practical knowledge of building services terminologies and requirements (spatial and structural). .4</p> <p>This course provides sufficient knowledge of interior lighting systems and preliminary basic information on special engineering systems such as fire detection systems, conveying systems, and their types. .5</p> <p>This course promotes skills in solving problems in students. .6</p>
Indicative Contents المحتويات الإرشادية	<p>Introduction to engineering services and why architects should learn and understand engineering services.(2 hrs.)</p> <p>Basic information about electricity and how it's generated supplied and distributed. Describes the electricity energy consumption calculations, electrical installation systems and types. Presents types of various electrical systems in buildings.(4 hrs.)</p> <p>Interior lighting design calculations concentrated on (the lumen method) , lighting fixtures , types and their effects on interior design , other lighting characteristics like types of Glare and methods to avoid it , color temperature of lamps and its biological effects on humans and space , color rendering of lamps . (8 hrs.)</p> <p>Describes some light fixture types according to light direction and distribution. (6 hrs.)</p> <p>Covers some of the other building services which are in significant touch with architectural design (fire detection and alarm system, conveying systems including elevators, escalators and their types and design requirements).(10 hrs.)</p>

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
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, interactive tutorials.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			50

Module Evaluation تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4, 13	1, 2, 3
	Assignments	1	10	10	4,5.6,
	Projects / Lab.				
	Report	1	10	14	4,5.6,
Summative assessment	Midterm Exam	2 hr	10% (10)	7	2, 4, 5, 6
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to Building services
Week 2	Electricity energy consumption calculation
Week 3	Electricity load distribution in buildings + Electricity installation systems
Week 4	Lighting design (lumen method)
Week 5	Interior lighting design (1)
Week 6	Interior lighting design (2)
Week 7	Interior lighting design (3)
Week 8	Exterior lighting design and Media architecture
Week 9	Fire detection and Alarm system
Week 10	Firefighting and suppression
Week 11	Conveying systems (Elevators)
Week 12	Conveying systems (Escalators)
Week 13	Project of small house design (working drawings of electricity installations)

Week 14	Building systems integration
Week 15	General preview and discussion
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> • التأسيسات الكهربائية ، د. مظفر النعمة ، د. سنان عطار باشي 1982 • هندسة الخدمات الكهربائية المعمارية ، د. مظفر النعمة 2012 • تصميم الانارة العربي ، عزت بارودي 2008 	No
Recommended Texts	<ul style="list-style-type: none"> • Environment and Services By Peter Burberry Dip Arch,Msc,RIBA,FCIOB, London,Basford Limited,1986. • Architectural Lighting Design, a practical guide , Admire Jukanovic 2018 • Building Control Systems , Vaughn Bradshaw 1985 	No
Websites		

Grading Scheme				
مخطط الدرجات				
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
<p>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.</p>				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Architectural Design (6)	Module Delivery	
Module Type	Core	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 421		
ECTS Credits	12		
SWL (hr/sem)	300		
Module Level	UGIV	Semester of Delivery	8
Administering Department	ARC	College	COE
Module Leader	Dr. Dhuha Abdulgani Al-kazzaz	e-mail	dhuha.kazzaz@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Ghada Mohammed Younis Miqdam Ameen Majeed Baydaa Hanna Saffo Farhan Awad Jasim Amer Abdullah Alazzawi	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>This course, in the design studio sequence, continues the development of a comprehensive building design process with problems of complex scope. .4</p> <p>The studio focuses on building types that exhibit complexity and challenge such as educational buildings. .5 College project explored in this studio includes the synthesis of spatial, functional, and contextual concerns, as directly linked to the understanding and employment of building systems.</p> <p>The course emphasis is placed on a building envelope in terms of form, massing, articulation and fenestration. The use of computer-aided drafting is a part of the formal design exploration. .6</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>Ability to gather, analyze, assess, record, apply, and comparatively evaluate relevant information within architectural coursework. .7</p> <p>Using creativity, conceptual skills, and judgment to identify human and environmental needs and to meet or express them in space and form. .8</p> <p>Demonstrate an understanding of principles and practices and integrate and apply that knowledge within architectural coursework and design processes. .9</p> <p>Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards. .10</p> <p>Critical understanding of the theory and practice of environment and energy issues in the cultural context of society as a whole .11</p> <p>Ability to develop imaginative and creative thinking within architectural coursework and design processes. .12</p>
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>Introduction to the design of university colleges: types, functions, and characteristics includes precedents Analysis of previous projects to highlight a handful of design issues: such as, functional zoning, plan circulation diagrams, systems integration ideas, structural concepts, elevation design, section-volume concepts, and so on. Then, data</p>

	<p>collection includes design standards and criteria of educational facilities in college building. Next, site analysis includes traffic and pedestrian movement, environment, topography, etc. (30 hrs)</p> <p>Preparing preliminary design concept including space layout of all floors and their massing in scale (1/500). (25 hrs)</p> <p>Developing design proposal including floor plans of all levels in scale (1/200). (40 hrs)</p> <p>Developing the formal design of building elevations and sections in scale (1/200). (20 hrs)</p>
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Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	<p>Many strategies are adopted in delivering this Student-led design projects by encouraging students to participate in the following skills:</p> <ul style="list-style-type: none"> - Analyze a problem and systematically design and implement an effective solution. - Using creativity and judgement; both as an individual or in group work to enhance the students' critical thinking skills. - Having negotiation skills to resolve complex building issues. - Having clarity of expression using spoken words, computer aided drafting, and visual media to deliver 2D and 3D drawings. - Ability to work in collaboration with others and in multidisciplinary teams to successfully complete design projects. <p>This will be achieved through lectures and design studio-based tutorials for individual and group work.</p>

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem)	154	Structured SWL (h/w)	10
الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem)	146	Unstructured SWL (h/w)	9.7
الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem)	300		

Module Evaluation					
تقييم المادة الدراسية					
As	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome	
Formative assessment	Quizzes				
	Assignments				
	Projects / Lab.	5	60% (60)	4-15	All
	Report	3	10% (10)	1-3	LO #1 and 4
Summative assessment	Midterm Exam	4 hr	15% (15)	7	All
	Final Exam	4 hr	15% (15)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to College designs: types, functions, and characteristics.
Week 2	Data collection: Precedents Analysis of previous Colleges and Universities projects to highlight a handful of design issues: such as, functional zoning, plan circulation diagrams, systems integration ideas, structural concepts, elevation design, section-volume concepts, and so on.
Week 3	Data collection of Design standards and criteria of educational building designs.
Week 4	Site analysis
Week 5	Discussion of proposals of design concept
Week 6	First submission of Design concept
Week 7	Design concept development

Week 8	Midterm Exam
Week 9	Development of plans (zoning & circulation)
Week 10	Development of plans (building structure)
Week 11	Second submission: plans and physical model
Week 12	Development of elevations & sections
Week 13	Pre-final submission
Week 14	Solving minor problems: functional, formal & structural
Week 15	Final submission
Week 16	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	<p>Joseph De Chiara, 2001, "Time-Saver Standards for Building Types". 1-</p> <p>Ernst Neufert & Peter Neufert, 2012, "Neufert Architects' Data". 2-</p> <p>Sibylle Kramer, 2010, "Colleges & Universities – Educational Spaces". 3-</p> <p>Katy Lee, 2011, "University Architecture". 4-</p>	Yes
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Regional Contemporary Architecture		Module Delivery
Module Type	C		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ARC 422		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UG	Semester of Delivery	8
Administering Department	ARC	College	COE
Module Leader	Rana Mahfoodh Hamid	e-mail	rana.mahfoodh@uomosul.edu.iq
Module Leader's Acad. Title	lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Bayda Hanna Saffo	e-mail	bayda.saffo@uomosul.edu.iq
Peer Reviewer Name		e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none"> 1. to provide students with an introduction to regional contemporary architecture, its key trends and concepts. 2. to provide students with experience of writing and analysing buildings and architectural theory. 3. to provide a critical overview of the major architectural movements in the region. 4. to give a historical and cultural context that influenced regional contemporary architecture. 5. to develop a critical knowledge of problems faced by architects in the 20th and 21st centuries.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. An ability to skillfully communicate orally with a gathering of people and in writing with various managerial levels. 2. An ability to perceive ethical and professional responsibilities in engineering cases and make brilliant judgments taking into account the consequences in worldwide financial, ecological and societal considerations. 3. An ability to perceive the continual necessity for professional knowledge growth and how to find, assess, assemble and apply it properly. <p>An ability to work adequately on teams and to set up objectives, plan activities, meet due dates, and manage risk and uncertainty</p>
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	<p>Learning and teaching strategies refer to instructors' methods and approaches to facilitate student learning and achievement of module learning outcomes. These strategies aim to engage students, promote understanding, and enhance their knowledge and skills. Here are some common learning and teaching strategies that can be employed:</p>

	<ol style="list-style-type: none"> 1. Lectures and Presentations: Instructors can deliver lectures and presentations introducing key concepts, theories, and principles related to regional contemporary architecture. These sessions can provide a foundational understanding of the subject matter and help students grasp fundamental knowledge. 2. Case Studies and Real-Life Examples: Incorporating case studies and real-life examples allows students to see the practical application of regional contemporary architecture. Analyzing and discussing real-world projects can deepen their understanding of design, construction, and problem-solving processes. 3. Interactive Discussions: Engaging students in discussions promotes active learning and critical thinking. Instructors can facilitate class discussions on specific topics, encouraging students to share their insights, ask questions, and explore different perspectives on regional contemporary architecture. 4. Group Activities and Projects: Collaborative group activities or projects enable students to work together to solve problems, design structures, or analyze case scenarios. This approach fosters teamwork, communication skills, and the application of learned concepts in a practical context. 5. Field Trips and Site Visits: Organizing field trips or site visits to new constructed projects. 6. Problem-Based Learning: Presenting students with real-world problems related to regional contemporary architecture encourages them to apply their knowledge, think critically, and develop problem-solving skills. Instructors can guide students through problem-solving, encouraging them to analyze, evaluate options, and propose solutions. 7. Formative Assessments and Feedback: Regular formative assessments, such as quizzes, assignments, or in-class exercises, help instructors gauge students' understanding and progress. Providing timely feedback allows students to identify areas for improvement and reinforces their learning. 8. Independent Study and Research: Encouraging students to engage in independent study and research promotes self-directed learning. Assigning relevant readings, research projects, or literature reviews on specific topics in regional contemporary architecture enables students to deepen their knowledge and explore areas of interest.
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			75

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4, 13	LO # 1 – 2
	Assignments	2	10% (10)	4, 13	LO # 3 – 4
	Projects / Lab.				
	Report	1	20% (20)		LO # 1-4
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-4
	Final Exam	3 hr	50% (50)	16	LO # 1-4
Total assessment			Total assessment	100% (100 Marks)	

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to regional contemporary architecture.
Week 2	The period of establishing the regional contemporary architecture
Week 3	The effective factors on regional built environment changes
Week 4	International factors on regional contemporary architecture
Week 5	Contemporary Architects
Week 6	Traditional, conservative trend
Week 7	Architect Hassan Fathy and the most work
Week 8	Modern architectural styles in the region, Traditional architecture sympathy with international trend style
Week 9	Medterm exam
Week 10	Modern architectural styles in Iraq ,Architecture sympathy with international trends style
Week 11	Local particularity between tradition and modernism

Week 12	Architecture in the Arab Gulf ,Examples and projects
Week 13	Examples of projects
Week 14	Reports Discussion
Week 15	Reports Discussion
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1- Radzinowicz, D., Bure, G. d. (2010). Talk about Contemporary Architecture. United Kingdom: Flammarion. 2- Canizaro, V. B. (2007). Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition. United States: Princeton Architectural Press.	No

	3- Al-Asad, M. (2012). Contemporary Architecture and Urbanism in the Middle East. Italy: University Press of Florida. "nassar, h. f. (2004). contemporary architecture trends in the arab world"analytical study" an application on the eastern arab countries. Egypt: كلية الهندسة.	
Recommended Texts	1. Damluji, S. S. (2006). The Architecture of the United Arab Emirates. United Kingdom: Garnet. 2. Ragette, F. (2003). Traditional Domestic Architecture of the Arab Region. Germany: Edition Axel Menges. Constructing Identity in Contemporary Architecture: Case Studies from the South. (2009). Germany: Lit.	No
Websites		

Grading Scheme مخطط الدرجات				
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.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Theories of Urban Design		Module Delivery	
Module Type	Core		Theory	✓
Module Code	ARC 423		Lecture	✓
ECTS Credits	3		Lab	
SWL (hr/sem)	75		Tutorial	✓
			Practical	
			Seminar	✓
Module Level		UGIV	Semester of Delivery	
Administering Department		ARC	8	
Administering Department		ARC	College	
Administering Department		ARC	COE	
Module Leader	Faris Ataallah Matloob		e-mail	faris.matloob@uomosul.edu.iq
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification	
Module Leader's Acad. Title		Lecturer	Ph.D.	
Module Tutor	Dr. Usama H. Ali		e-mail	usamahumadi@uomosul.edu.iq
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date			Version Number	
Scientific Committee Approval Date			1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>Introduce students to the urban design field in its general and applied context, highlighting its role in the field creating successful built environments. .15</p> <p>Present a clear idea of the key principles and current issues of urban design and its fundamental theories. .16</p> <p>Acquiring students an understanding of the physical, socio- cultural, and technological forces, and their role in shaping the urban environment needed for a better life for society .17</p> <p>enable students dealing with issues such as urban space concept, space- mass relation, functions of urban space and space body when designing urban areas. .18</p> <p>Providing students with the basic skills on how to use the physical elements of the built environment in achieving urban design objectives. .19</p> <p>to the significance of urban design theories in creating built environmentsIntroduce students that are suitable for human's well being .20</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p style="text-align: center;">On successful completion of this course, students will be able to:</p> <p style="text-align: right;">-1 explain a general knowledge on urban design field and its position within the city development process.</p> <p style="text-align: right;">-2 classify the key issues and objectives of urban design and identify the physical elements and design principles that are related to achieving them.</p> <p style="text-align: right;">-3 Listing main theories of urban design and its role in achieving successful built environment for human being.</p> <p style="text-align: right;">-4 recognize and identify problems that built environments are suffering from and find treatments to handle them according to urban design principles.</p> <p style="text-align: right;">-5 analyze and deconstruct different urban spaces according to key urban design principles.</p> <p style="text-align: right;">-6 explain the role of urban design in promoting urban sustainability and human 's wellbeing.</p>
Indicative Contents المحتويات الإرشادية	<p>The definition of urban design, its importance and its position within the overall configuration process of the built environment. .17</p> <p>The importance of urban space, its enclosure and containment. .18</p>

	<p>Key urban design characteristics and how to meet them using the physical elements of the built environment. .19</p> <p>Key theories of urban design, their principles and their effects in creating different cities and settlements. .20</p> <p>Issues of sustainable urban design. .21</p>
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>Encouraging students' active participation through pre-lecture readings and class discussions. .5</p> <p>Promoting an interactive learning environment by implementing reverse learning, where students explore and research important technologies, contemporary building materials, and new architectural applications, leading to meaningful discussions and a deeper understanding of the subject matter. .6</p>

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل			75

Module Evaluation تقييم المادة الدراسية						
		As	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes		2	20% (20)	4,10	2,3
	Report		1	15% (15)	13	2,3,4,5,6
	Report seminar		1	5% (5)	14,15	2,3,4,5,6
Summative assessment	Midterm Exam		1 hr	10% (10)	12	1,2,3,4
	Final Exam		3 hr	50% (50)	16	3, 4,5,6
Total assessment				100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction to the course – : Define urban design, its goals, design characteristics .
Week 2	Urban space, enclosure and containment
Week 3	Quality of public realm
Week 4	Robustness

Week 5	Making connections
Week 6	Sustainable urban design
Week 7	Cognitive studies
Week 8	Spatial organization
Week 9	Space syntax theory
Week 10	Urban design theories
Week 11	Urban design theories
Week 12	Mid Term Exam
Week 13	Rationality in urban design
Week 14	Report seminar
Week 15	Report seminar
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	-	
Recommended Texts	<ul style="list-style-type: none"> DETR & CABE 2000. By Design: Urban Design in the Planning System, Great Britain, Crown. ● BENTLEY, I. 1985. Responsive environments, Routledge ● DAVIES, L. 2000. Urban design compendium. London: English Partnership. ● Hillier, B; (2007) Space is the machine: a configurational theory of architecture. [Book]. Space Syntax: London, UK. ● 	Yes most of them
Websites		

Grading Scheme				
مخطط الدرجات				
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
<p>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.</p>				

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Science of Statistics		Module Delivery	
Module Type	B		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC424			
ECTS Credits	4			
SWL (hr/sem)	100			
Module Level	UGIII	Semester of Delivery	8	
Administering Department	ARC	College	COE	
Module Leader		e-mail		
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	M.A	
Module Tutor		e-mail		
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Basic probability and statistics with applications and examples in engineering. Elementary probability, random variables and their distribution, random processes, statistical inference, linear regression, correlation and basic design of experiments with application to quality assurance, reliability, and life testing
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل			100

Module Evaluation					
تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4, 13	LO #1, 2, and 3
	Assignments	1	10% (10)	6	LO #3
	Projects / Lab.	4 hr	20% (20)	12	LO #3 and 4
	Report				
Summative assessment	Midterm Exam	4 hr	30% (30)	15	LO #1-4
	Final Exam	3 hr	30% (30)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	Discussion
Week 6	Discussion
Week 7	
Week 8	
Week 9	

Week 10	
Week 11	Discussion
Week 12	Discussion
Week 13	Discussion
Week 14	Discussion
Week 15	Final submission
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	-1	No
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Landscape Design		Module Delivery	
Module Type	C		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 425			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level		UGIV	Semester of Delivery	
Administration Department		ARC	College	
Module Leader		Dr. Ahmed Alomary	e-mail	
Module Leader's Acad. Title		Asst. Professor	Module Leader's Qualification	
Module Tutor		Dr. Omer Adel	e-mail	
Peer Reviewer Name		Dr. Rawaa Abawi	e-mail	
Scientific Committee Approval Date			Version Number	
			1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		None	Semester
Co-requisites module		None	Semester

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1-Develop an understanding of the principles and theories of landscape design. 2- Develop practical skills in landscape design. 3- Foster creativity and design thinking. 4- Cultivate an understanding of environmental sustainability in landscape design 5- Enhance critical thinking and problem-solving skills characteristics, constraints, and opportunities. 6- Foster effective communication and presentation skills.

	7- Cultivate an appreciation for the cultural, social, and historical contexts of landscape design.
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>1-Demonstrate an understanding of design principles and elements and apply them effectively in landscape design projects.</p> <p>2-Conduct comprehensive site analysis, considering factors such as topography, climate, soil conditions, and cultural context.</p> <p>3-Develop creative and innovative landscape design concepts that address client needs, site constraints, and sustainability considerations.</p> <p>4-Utilize appropriate design tools and technologies, including computer-aided design (CAD) software and visual communication techniques, to effectively present design ideas.</p> <p>5-Apply ecological principles and sustainable design strategies to enhance the environmental performance of landscape design projects.</p> <p>6-Evaluate and select appropriate plant materials, hardscape elements, and construction techniques for landscape design projects.</p> <p>7-Critically analyze and evaluate landscape design projects, considering their aesthetic, functional, and cultural aspects, as well as their environmental and social impacts.</p> <p>8-Demonstrate effective communication skills by presenting and articulating design concepts, ideas, and solutions to both technical and non-technical audiences.</p>
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>1-Overview of different types of landscapes (urban, residential, public, etc.)</p> <p>2-Design Principles and Elements</p> <p>3-Site Analysis and Assessment</p> <p>4-Concept Development</p> <p>5-Design Development and Documentation:</p> <p>6-Sustainable Design Practices</p> <p>7- Design Communication and Presentation:</p> <p>Freehand sketching and drawing techniques</p> <p>Computer-aided design (CAD) software and other design tools</p> <p>3D modeling and visualization techniques</p> <p>8- Case Studies and Examples</p>
<p>Learning and Teaching Strategies</p> <p>استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<p>1-Project-based learning: Provide students with hands-on, real-world projects that simulate the challenges they will face as landscape designers. This approach allows them to apply their knowledge and problem-solving skills in a practical context.</p> <p>2- Field trips and site visits: Take students to various landscapes, such as parks, gardens, and urban spaces, to observe and analyze different design approaches. Encourage them to document their observations, take measurements, and engage in discussions about the design principles used in those spaces.</p> <p>3-Design critiques and peer feedback: Create a studio environment where students can present their design concepts and receive constructive feedback from both their peers and the instructor. Encourage students to explain their design choices and consider different perspectives, fostering critical thinking and communication skills.</p> <p>4-Visual aids and technology: Utilize visual aids like sketches, drawings, diagrams, and photographs to illustrate design principles, techniques, and case studies. Additionally, incorporate relevant technology such as computer-aided design (CAD) software, virtual reality (VR) tools, to enhance students' understanding and engagement.</p>

	<p>5- Sustainable design principles: Emphasize the importance of sustainable and environmentally conscious design practices. Incorporate lessons on topics such as water conservation, native plant selection, ecological restoration, and the use of renewable materials.</p> <p>6- Case studies and research: Assign students to research and analyze notable landscape designs, both historical and contemporary. By studying successful projects, students can gain insights into design principles, material selection, spatial organization, and the integration of various elements.</p>
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Student Workload (SWL) الحمل الدراسي للطالب محسوب ل ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	47	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			125

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Report	1	5% (5)	2	1,7
	Weekly activity	5	5% (5)	2, 4,6,8,10	3,7,8
	Concept submission	1	5% (5)	2	2-3
	first phase submission	1	5% (5)	5	1,2,3,4
	Pre-final submission	1	10% (10)	11	1,2,3,4,5 ,7,8
	Final submission	1	20% (20)	15	1,2,3,4,5,6,7,8
Summative assessment	day sketches	3 hr/2	20% (20)	4.12	1,2.3.4.8
	Final Exam	3 hr	30% (30)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Introduction ,definitions , references ,
Week 2	Review of international landscape design projects
Week 3	History of Landscape design,
Week 4	How to start landscape Design
Week 5	Foundation of landscape Architecture
Week 6	Site furniture and fixture
Week 7	Site furniture and fixture
Week 8	Water in Landscape design
Week 9	Interactive Spaces
Week 10	Sustainable landscape design
Week 11	Sustainable landscape design
Week 12	Landscape detailing
Week 13	Landscape detailing
Week 14	Planting design
Week 15	Report discussion
Week 16	Final Exam

Delivery Plan (Weekly Practical. Syllabus) المنهاج الاسبوعي للعملي	
Week	Material Covered
Week 1	Site analysis
Week 2	Concept submission
Week 3	Landscape Design Project ,parks, plazas ,riverfronts ,urban open spaces ,public squares, pedestrians streets
Week 4	day sketch
Week 5	Submission of first phase presentation (assessment), Landscape Design Project
Week 6	Improve, developed design concept. Landscape Design Project
Week 7	Improve, developed design concept. Landscape Design Project
Week 8	Improve, developed design concept. Landscape Design Project
Week 9	Improve, developed design concept. Landscape Design Project
Week 10	Improve, developed design concept. Landscape Design Project
Week 11	Pre-final submission (assessment), Landscape Design Project
Week 12	day sketch
Week 13	Improve, developed design concept. Landscape Design Project
Week 14	Improve, developed design concept. Landscape Design Project
Week 15	Final submission (assessment)Landscape Design Project

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Foundations of landscape architecture : integrating form and space using the language of site design , Norman Booth.2009	No
Recommended Texts	Timesaver Standards for Landscape Architecture, Charles W. Harris and Nicholas D. Dines,1998	No
Websites	https://www.asla.org/ https://www.iflaworld.com/who-we-are	

Grading Scheme مخطط الدرجات				
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
<p>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.</p>				

Module DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Design methodology and programming		Module Delivery	
Module Type	C		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	ARC 426			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGIV	Semester of Delivery	8	
Administering Department	ARC	College	COE	
Module Leader	Ghada M. Younis , Bayda Hanna		e-mail	ghadayounis@uomosul.edu.iq
Module Leader's Acad. Title	Assestant Professor	Module Leader's Qualification	Msc	
Module Tutor		e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date		Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>1. Architectural education of spaces programming details , built theoretical approach for pre-design briefing of design project , as first step of understanding how program of project have been built .</p> <p>2. It aims to develop student's ability to raise intellectual & systematic thinking used in solving design problems</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Theoretical course which include Previous Methods and Programming and The Process of Design Problem Solving, also the course related with aspects of design products (function; Performance Methods, Analysis, Goals Delineation, Performance Requirements, Programming Concepts, Synthesis Evaluation and Development), (form; Formal Methods, Berkal and Boss Strategy, and Greg Lynn Strategy), and (expression, and Al-Nijaidy Strategy)
Indicative Contents المحتويات الإرشادية	Increasing methodological knowledge for students to planning design process according to scientific and recent methods, with analytical application for real projects to discover its Goals and positions of application .

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب ل ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل			75

Module Evaluation تقييم المادة الدراسية					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	20% (20)		
	Assignments				
	Projects / Lab.				
	Report	1	20% (20)		
Summative assessment	Midterm Exam	1hr	10%10		
	Final Exam	3 hr	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week	Material Covered
Week 1	Thinking , Patten of Thinking& perception schemes, Physiological definitions of thinking and productive thinking,
Week 2	Methodology and Epistemology
Week 3	Design Methodology
Week 4	Black box methodology in architectural design
Week 5	Glass box methodology in architectural design
Week 6	Projects Site & function analysis
Week 7	Projects synthesis
Week 8	Projects alternative evaluation
Week 9	Introduction , definition ,considerations of programming .
Week 10	Steps of design process , design constrains

Week 11	Methodology of design process .
Week 12	Concept of architectural programming , Pena model.
Week 13	Formation of concept in programming & design ,Durek framework of programming
Week 14	Steps of functional program /activities ,relationships ,zoning . Case study of programming and design concept formation .
Week 15	Architectural programming representations ,diagrams ,matrix .
Week 16	Examine

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Baker, G. H. DESIGN STRATIGIES IN ARCHITECTURE, An Approach to Analysis Form ,(2nd Ed.)Van Nostrand Reinhold Co. New York, 1996. Architectural Programming by Duerk (Structure of Design Process) by Al-Nijaidy (Animate Form) by Lynn (The Contrived Architectural Form in Design Methodology Framework) by Shubbar	Yes
Recommended Texts		No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
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