Course Specification

Course Code: ARE 3101 **Course Title: Architectural Design (4)**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3101			
Year/level	Third year / Fourth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	0	8	0	8

2. Course Aims

No.	Aim
1	Provide the students with the capacity to prepare flexible and ecologically responsible designs by understanding technological designs. (AM5.1)

3. Course Learning Outcomes (CLOs)

CLO21	Create architectural, urban and planning designs that meet aesthetic and technical requirements
CLO22	Use the knowledge of design principles and modern technologies in the design of project.
CLO23	Produce designs that meet the requirements of building users
CLO24	Deal with the relation between people, buildings, and their surrounding environment

4. Course Contents

Topics	Week
Introduction of the project	1
Research for the project + Skiz1	2
Layout 1/500	3
Layout 1/500 + Ground floor plan 1/400	4
Layout 1/500 + Ground floor plan 1/400	5
Skiz1 (Layout 1/500 + Ground floor plan 1/200 + sections 1/200)	6
Layout 1/500 + Ground floor plan 1/200 + sections 1/200	7
sections 1/200 + Elevations 1/200	8
sections 1/200 + Elevations 1/200	10
Skiz 2(Layout 1/500 + Ground floor plan 1/200 + sections 1/200+	11

sections 1/200 + Elevations 1/200+Prespective)	
All Project observation	12
All Project observation	13
Semifinal project	14
Final project	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO21	√		-	√		√	-	√	-	-		-
CLO22		√	-		√		-	√	-	-	√	-
CLO23		√	-		√		-	√	-	-	√	-
CLO24		√			√			√			√	

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO21,CLO22,CLO23,CLO24
3	Discussions	CLO23
4	Mid Term Exam	CLO21,CLO22,CLO23,
5	Class works	CLO21,CLO22,CLO23,CLO24
6	Projects	CLO21,CLO22,CLO23,CLO24
7	Researches	CLO23
8	Reports	-
9	Presentations	CLO23
10	Quiz	-
11	Skiz	CLO21,CLO22,CLO23,CLO24

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	15
7	Researches	2
8	Reports	-

9	Presentations	2
10	Quiz	-
11	Skiz	6,11

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	60	60	5	5
	Class works			10	10
	Projects			10	10
	Researches			3	3
	Presentations			2	2
	Skiz			10	10
	Mid-term exam			20	20
Final Exam	Written exam	40	40	40	40
Total		100	100	100	100

7. List of References

[1] Lee Hwa-Jeong, (2020), "ACA: Architecture competition annual. Vol 14 (Education / Culture/ Welfare & Sports)", Published by Archiworld Co.Ltd, Seoul, South Korea , ISBN-13: 978-8957708194.

[2] Jihad Awad, , (2020), "Top International Architects - DESIGN CONCEPTS IN ARCHITECTURE (4 volumes)", Universal Publisher & Distributor Est., Abu Dhabi - U.A.E..

[3] Ernst Neufert (Author), Peter Neufert (Author) ,Bousmaha Baiche (Editor), Nicholas Walliman(Editor), (2012), "Neufert s Architects Data 4th Edition", published by Wiley–Blackwell, ISBN:

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduction of the project	1	CLO21
Research for the project + Skiz1	1	CLO21
Layout 1/500	1	CLO22,CLO23
Layout 1/500 + Ground floor plan 1/400	1	CLO22,CLO23
Layout 1/500 + Ground floor plan 1/400	1	CLO22,CLO23
Skiz1 (Layout 1/500 + Ground floor plan 1/200 + sections 1/200)	1	CLO21,CLO22,CLO23
Layout 1/500 + Ground floor plan 1/200 + sections 1/200	1	CLO21,CLO22,CLO23,CLO24
sections 1/200 + Elevations 1/200	1	CLO21,CLO22,CLO23,CLO24

sections 1/200 + Elevations 1/200	1	CLO21,CLO22,CLO23,CLO24
Skiz 2(Layout 1/500 + Ground floor plan 1/200 + sections 1/200+ sections 1/200 + Elevations 1/200+Prespective)	1	CLO21,CLO22,CLO23,CLO24
All Project observation	1	CLO21,CLO22,CLO23,CLO24
All Project observation	1	CLO21,CLO22,CLO23,CLO24
Semifinal project	1	CLO21,CLO22,CLO23,CLO24
Final project	1	CLO21,CLO22,CLO23,CLO24

10. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	CLO21	Create architectural, urban and planning designs that meet aesthetic and technical requirements
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences
		CLO23	Produce designs that meet the requirements of building users
		CLO24	Deal with the relation between people, buildings, and their surrounding environment

Title	Name	Signature
Course coordinator	**Assoc. Prof. Mohamed Mostafa**	
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

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Course Specification

Course Code: ARE 3161 **Course Title: Elective Course (1) Spatial Composition & Aesthetics in Architecture**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3161			
Year/level	Third year / Fourth Level			
Specialization	Minor			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	-	3

2. Course Aims

No.	Aim
1	Use scientific methods that ensure meeting the needs of present and future generations in terms of social, cultural, environmental, and economic aspects(AM2.2)
2	Enable the graduates to continue their education and self-learning and qualifying for additional scientific degrees.(AM6.1)

3. Course Learning Outcomes (CLOs)

CLO5	evaluate findings and use statistical analyses and Architectural judgment.
CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

4. Course Contents

No.	Topics	Week
1	Illustrate and highlights the impact of aesthetics on architectural form and compositions through the study of theories and principles of artistic composition and philosophical approaches	1
2	How to Creativity and visual perception of spatial formations are analyzed to give students the vocabulary and experience needed	2

	for creative design.	
3	How to evaluate buildings form in modern architecture	3
4	How to evaluate buildings form in islamic architecture	4
5	How to evaluate buildings form in roman architecture	5
6	How to evaluate buildings form in pharaonic architecture	6
7	How to evaluate buildings form in modern architecture in other countries	7
8	develop basic thinking, visualizing and problem-solving skills , in order to apply these skills to a realistic simple creative project	8
9	Create creative and artistic projects	10
10	Study Internal and external spaces hierarchy and interaction	11
11	study of theories and principles of interior design	12
12	study of surfaces: Textures, Forms and visual illusions, Theories of colors, Color schemes and its different effects, The effects of natural and artificial lighting In spaces	13
13	International examples and concepts in interior design.	14
14	Final presentation in Example	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods												
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation	
CLO5	√	√	-	√	-	√	√	√	√	-	-		
CLO22	√	-	-	√	-	√	√	√	√	-	√		

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO5,CLO22
3	Discussions	CLO22
4	Mid Term Exam	CLO5,CLO22
5	Class works	CLO5,CLO22
6	Projects	-
7	Researches	CLO5,CLO22
8	Reports	-
9	Presentations	CLO22
10	Quiz	-

11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	-
7	Researches	3-4-13
8	Reports	-
9	Presentations	3-4-13
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Class works			%5	5
	Researches			%15	15
	Presentations			%5	5
	Mid-term exam			%20	20
Final Exam	Written exam	%50	50	%50	50
Total		%100	100	%100	100

7. List of References

- Aragüez, M. and Psarra, S. (2015), 'Spatial and social patterns of an urban interior: The Architecture of SAANA'. In: Karimi, K., Vaughan, L., Sailer, K., Palaiologou, G. and Bolton, T. (eds.), Proceedings of the 10th International Space Syntax Symposium, London: UCL, Volume7, ISSN: 2044-7507.
- DAVID CHAPELL & ANDREW WILLS,(2019)," The Architect in Practice" Feasibility Study & Project Management: A Practical Guide, **Wiley-Blackwell**, 11thEd,ISBN13 978-1118907733.
- A Guide to the Project Management Body of Knowledge (PMBOK® Guide), (2021) by Project Management Institute , 7th Ed,ISBN13 978-1935589679.
- Leland M. Roth, (2019),"Understanding Architecture Its Elements, History, and Meaning ", Routledge, New york, 3rd Ed, ISBN10 9780813349039

8. Facilities required for teaching and learning

White board
Data show

9. Matrix of Course Content with Course CLO's

No.	Topics	Aim	CLO's
1	Illustrate and highlights the impact of aesthetics on architectural form and compositions through the study of theories and principles of artistic composition and philosophical approaches	1	CLO22
2	How to Creativity and visual perception of spatial formations are analyzed to give students the vocabulary and experience needed for creative design.	1	CLO5,CLO22
3	How to evaluate buildings form in modern architecture	1	CLo5,CLO22
4	How to evaluate buildings form in Islamic architecture	1	CLO5,CLO22
5	How to evaluate buildings form in roman architecture	1	CLO5,CLO22
6	How to evaluate buildings form in pharaonic architecture	1	CLO5,CLO22
7	How to evaluate buildings form in modern architecture in other countries	2	CLO22
8	develop basic thinking, visualizing and problem-solving skills , in order to apply these skills to a realistic simple creative project	2	CLO22
9	Create creative and artistic projects	2	CLO22
10	Study Internal and external spaces hierarchy and interaction	1	CLO22
11	study of theories and principles of interior design	1	CLO22
12	study of surfaces: Textures, Forms and visual illusions, Theories of colors, Color schemes and its different effects, The effects of natural and artificial lighting In spaces	1	CLO22
13	International examples and concepts in interior design.	1	CLO22
15	Final presentation in Example	1	CLO5,CLO22

10. Matrix of ProgramP LOs with Course CLOs

Program PLOs		Course CLOs	
PLO2	Develop and conduct appropriate experimentation and/or simulation, analyse and interpret data, assess, and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.	**CLO5**	evaluate findings and use statistical analyses and objective engineering judgment.
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	**CLO22**	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

Title	Name	Signature
Course coordinator	**Dr. Hend Ali**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

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Course Specification

Course Code: ARE 3161 **Course Title: Elective Course (1) Architectural Rendering**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3162			
Year/level	Third year / Fourth level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	-	3

2. Course Aims

No.	Aim
1	Use methods that ensure meeting the needs of present and future generations in terms of aesthetics aspects (AM2.2)
2	Enable the graduates to continue their education and self-learning and qualifying for additional scientific degrees.(AM6.1)

3. Course Learning Outcomes (CLOs)

CLO.3	Conduct simulation to draw conclusions.
CLO.22	Use adequate related fine arts and technologies.

4. Course Contents

Topics	Week
Studying the new materials of presentation	1
Studying properties of materials	2
How to use color and materials with sketches (plans -layouts)	3-4
How to use color and materials with sketches (Elevations -Sections)	4-5
Train the student how to do presentation for the architectural areas and spaces - internal and external	6

How to represent various material in 3D color and Texture	7
How to make models to create ability for architectural imagination, Mid Term Exam	8-9
Studying of surfaces: Textures, Forms and visual illusions, Theories of colors, Color schemes and its different effects, the effects of natural and artificial lighting in spaces and how to make it in models	10
Applying 2d presentaion in sample project	11
Applying 3d presentaion in sample project	12
Create model for sample project	13
Add effecting on drawings	14
submitting final project	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO.3	√	√	-	-	√	-	-	-	-	-	-	-
CLO.22	√	-√	-	-	√	-	-	√	-	-	-	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	Los
1	Attendance	-
2	Written exam	CLO.22
3	Discussions	CLO.22
4	Mid Term Exam	CLO.22
5	Class works	CLO.3-CLO.22
6	Projects	CLO.3-CLO.22
7	Researches	-
8	Reports	-
9	Presentations	-
10	quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16

3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	11-15
7	Researches	-
8	Reports	-
9	Presentations	-
10	quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Class works			%10	10
	Projects			%15	15
	Mid-term exam			%20	20
Final Exam	Written exam	%50	50	%50	50
Total		%100	100	%100	100

7. List of References

- Uffelen,C. (2013)The Book of Drawings + Sketches: Architecture.. Braun Publishing. ISBN-10 : 3037681500
- Afflerbach, F. (2017). Basics Freehand Drawing. Germany: Walter de Gruyter GmbH, ISBN:9783035612714
- Herzberger, E. (1998). Freehand Drawing for Architects and Designers: Watercolor, Colored Pencil, and Black and White techniques: Publisher: Whitney Library of Design, New York.
- Pauwels,W.(2009)Compendium: Colour & Texture. Publisher : Beta-Plus (Acc), ISBN-10 : 9089440127- Library Book Code:A-d/15

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Studying the new materials of presentation	1	CLO22

Studying properties of materials	1	CLO22
How to use color and materials with sketches (plans -layouts)	2	CLO.22
How to use color and materials with sketches (Elevations -Sections)	2	CLO.22
Train the student how to do presentation for the architectural areas and spaces - internal and external	1	CLO.22
How to represent various material in 3D color and Texture	2	CLO.3- CLO.22
How to make models to create ability for architectural imagination.	2	CLO.3
Studying of surfaces: Textures, Forms and visual illusions, Theories of colors, Color schemes and its different effects, the effects of natural and artificial lighting in spaces and how to make it in models	1	CLO.3- CLO.22
Applying 2d presentaion in sample project	2	CLO.22
Applying 3d presentaion in sample project	2	CLO.3- CLO.22
Create model for sample project	1	CLO.22
Add effecting on drawings	1	CLO.22
submitting final project	1	CLO.22

1. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO2	Develop and conduct appropriate experimentation and/or simulation, analyse and interpret data, assess, and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.	**CLO 3**	Conduct simulation to draw conclusions.
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	**CLO22**	Use adequate related fine arts and technologies.

Title	Name	Signature

Course coordinator	**Assocc. Prof. Reham Othman**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

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Course Specification

Course Code: ARE 3161 **Course Title: Elective Course (1)**

Architectural Criticism & Project Evaluation

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3163			
Year/level	Third year / Fourth level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	-	3

2. Course Aims

No.	Aim
1	Train the students for innovative and analytical Criticism thinking in describing and analysing designs and problems (AM2.1)
2	Enable the graduates to continue their education and self-learning and qualifying for additional scientific degrees.(AM6.1)

3. Course Learning Outcomes (CLOs)

CLO.5	evaluate findings and use statistical analyses and objective engineering judgment.
CLO.22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

4. Course Contents

Topics	Week
Concepts and Benefits of Architectural criticism.	1
Discussions of concepts of integration and comprehensiveness in architectural solutions, Principles of architectural criticism	2
Criticism contributions to the enrichment of architectural culture in general and architectural culture in particular	3
Types and classifications of architectural criticism	4-5

Architectural criticism intellectual trends	6
Emphasizing the multiplicity of architectural thinking. Techniques of evaluating projects are discussed.	7-8
Introduction to the theoretical approaches of contemporary architectural thoughts.	9
How do you write an architecture critique	10
Sustainable development and its role in the architectural criticism	11
How to make effective critertion for criticism	12
Example for critires and their point of view in the criticism	13-14
submission of student researches	15

5. 6. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO2.1	√	√	-	√	-	√	-	√	√	-	-	-
CLO.22	√	√	-	√	-	-	-	-	-	-	-	-

7. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO5-CLO.22
3	Discussions	CLO5
4	Mid Term Exam	CLO5-CLO.22
5	Class works	CLO5-CLO.22
6	Projects	-
7	Researches	CLO5-CLO.22
8	Reports	CLO5-CLO.22
9	Presentations	CLO5
10	Laboratory	-
11	Quiz/Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	weekly

4	Mid Term Exam	9
5	Class works	6-10
6	Projects	-
7	Researches	15
8	Reports	15
9	Presentations	10-15
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Researches and reports			%10	10
	Presentation			%15	15
	Mid-term exam			%20	20
Final Exam	Written exam	%50	50	%50	50
Total		%100	100	%100	100

8. List of References

- Jane Rendell, (2011), Site-writing: The Architecture of Art criticism paperback- Publisher: I.B. Tauris ISBN:1845119991
- Jacky Bowring. (2020) .Landscape Architecture Criticism, 1st Edition, ISBN: 1138324264.

9. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

10. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Concepts and Benefits of Architectural criticism.	1	CLO.5
Discussions of concepts of integration and comprehensiveness in architectural solutions, Principles of architectural criticism	1	CLO. 5
Criticism contributions to the enrichment of architectural culture in general and architectural culture in particular	2	CLO.5
Types and classifications of architectural criticism	1	CLO.21
Architectural criticism intellectual trends	1	CLO.21

Emphasizing the multiplicity of architectural thinking. Techniques of evaluating projects are discussed.	2	CLO.22
Introduction to the theoretical approaches of contemporary architectural thoughts.	1	CLO.22
How do you write an architecture critique	2	CLO5-CLO.22
Sustainable development and its role in the architectural criticism	1	CLO.22
How to make effective critertion for criticism	2	CLO5-CLO.22
Example for critires and their point of view in the criticism	1	CLO.22
submission of student researches	1	CLO.22

11. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO2	Develop and conduct appropriate experimentation and/or simulation, analyse and interpret data, assess, and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.	**CLO5**	evaluate findings and use statistical analyses and objective engineering judgment.
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	**CLO22**	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

Title	Name	Signature
Course coordinator	**Assocc. Prof. Reham Othman**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

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Course Specification

Course Code: ARE 3103 **Course Title: Theories of Architecture (3)**

1. Basic information

Program Title	Architecture department			
Department offering the program	Architecture department			
Department offering the course	Architecture department			
Course Code	ARE 3103			
Year/Level	Third-year / First-semester			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	4	-	-	4

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills, cultural knowledge of history, fine arts, and local and international heritage. (AM3.1)

3. Course Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.
CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies, and human sciences

4. Course Contents

Topics	Week
A general introduction to Architecture in the first half of the twentieth century	1
The Industrial Revolution and its impact on architectural trends and the creation of new types of buildings	2
Chicago Louis Sullivan School	3
Art nouveau and Antonio Gaudi Schoolmulti-cultural	4
Formalism Theory Part 1	5
Formalism Theory Part 2	6
Technological theory	7
Mendelssohn's Expressionist Theory	8
Organic Theory Part 1	10
Organic Theory Part 2	11
Structural theory	12
deconstruction theory Zaha Hadid	13
deconstruction theory Frank Gerry	14
The basics of designing models of buildings	15

5. Teaching and Learning methods

Course Learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research	Projects	Presentation	Site Visits	Discussion and Dialogue	Brainstorm	E-Learning	Self-learning	Modeling and simulation
CLO15	√	-	-	√	-	-	√	√	√	√	√	-
CLO22	√	-	-	√	-	-	√	√	√	√	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	----------
3	Written exam	CLO.15, CLO.22
4	Discussions	CLO.15, CLO.22
5	Mid Term Exam	CLO.15, CLO.22
6	Presentations	CLO.15, CLO.22
7	Researches	CLO.15, CLO.22
8	Reports	-
9	classwork	CLO.15, CLO.22
10	Quiz	CLO.15, CLO.22
11	Skiz	-

6.2 Assessment Schedule

No	Assessment Method	Weeks
1	Attendance	-
3	Written exam	16
4	Discussions	-
5	Mid Term Exam	9
6	Presentations	Bri-week
7	Researches	4 & 12
8	Reports	-
9	classwork	Bri-week
10	Quiz	4 & 12
11	Skiz	-

6.3 Weighting of Assessments			
	Assessment Method	**Weights%**	**Weights**
Teacher Opinion	Discussions	5%	5
	Mid-term exam	20%	20
	classwork	10%	10
	Researches	10%	10
	Quiz	5%	5
Final Exam	Written exam	50%	50
Total		100%	100

7. List of References

- architecture from Functional to deconstructive ISBN 9789770528464-2016 publisherAnglo-Egyptian Library Muhammad Tawfiq Abdel Gawad
- Salah Zaitoon: The Architecture of the Twentieth Century, 1993. 4th Edition. ISBN-13: 978-1118745083.
- Donald Watson (Author), Michael J. Crosbie (Author) (2004): Time Saver Standards for Architectural Design Data. Publisher: McGraw Hill ISBN-13: 978-0071432054.
- De Bono, E., Serious Creativity) 1992): Using the Power of Lateral Thinking to Create New Ideas, Harper Collins, Publisher : Harpercollins. ISBN-13: 978-0887305665
- K. Michael Hays (Editor)) 2000), Architecture Theory since 1968. Publisher: The MIT Press, ISBN-13 : 978-0262581882.
- د/على رأفت)2007): كتاب ثلاثية الإبداع المعماري (المضمون والشكل) بين العقلانية والوجدانية، مركز أبحاث إنتركونسلت.
- د/طارق ابو عوف)2015) كتاب المبدأ التصميمي Design concept، مكتبة الأنجلو المصرية.
- Ali Raafat: Content and Form between Rational and Emotional, 2007.

8. Facilities required for teaching and learning

Lecture/Classroom
Whiteboard
Data show

9. Matrix of Course Content with Course CLOs

No.	Topics	Aim	CLO's
1	A general introduction to Architecture in the first half of the twentieth century	1	CLO.15, CLO.22,
2	The Industrial Revolution and its impact on architectural trends and the creation of new types of buildings	1	CLO.15, CLO.22,
3	Chicago Louis Sullivan School	1	CLO.15, CLO.22,
4	Art nouveau and Antonio Gaudi School	1	CLO.15, CLO.22,
5	Formalism Theory Part 1	1	CLO.15, CLO.22,
6	Formalism Theory Part 2	1	CLO.15, CLO.22,
8	Technological theory	1	CLO.15, CLO.22,
9	Mendelssohn's Expressionist Theory	1	CLO.15, CLO.22,
10	Organic Theory Part 1	1	CLO.15, CLO.22,
11	Organic Theory Part 2	1	CLO.15, CLO.22,
12	Structural theory	1	CLO.15, CLO.22,
13	deconstruction theory Zaha Hadid	1	CLO.15, CLO.22,
14	deconstruction theory Frank Gerry	1	CLO.15, CLO.22,

10.	Matrix of Program LOs with Course CLOs		
Program PLOs		**Course CLOs**	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams.
PLO11	Create architectural, urban, and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies, and human sciences.	CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies, and human sciences

Title	Name	Signature
Course coordinator	**Dr. Rania Badawy**	
Head of Department	**Dr. Reham osman**	
Date of Approval	**1-10-2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

	Ministry of Higher Education **Higher Institute of Engineering and Technology** **Architecture Eng. Department**	

Course Specification

Course Code: CVE 3131 **Course Title: Steel Structures Design**

1. Basic information

Program Title	Architecture Engineering Program			
Department offering the program	Architecture Engineering Program			
Department offering the course	Civil Engineering Department			
Course Code	CVE 3131			
Year/level	third year / fourth level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	2	0	4

2. Course Aims

No.	Aim
1	Train the students for innovative and creative thinking, describing and solving steel structures design problems and requirements (AM2.1).

3. Course Learning Outcomes (CLOs)

CLO2	Solve complex engineering problems by applying engineering fundamentals, basic science, and mathematics.by applying engineering fundamentals, basic science, and mathematics.
CLO6	Apply engineering design processes to produce cost-effective solutions in steel projects.

4. Course Contents

Topics	Week
Introduction, Philosophies of steel structure.	1
Systems and Uses, Materials, Design in steel structure.	2
Structural systems and general layout.[1]	3
Structural systems and general layout.[2]	4
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.[1]	5
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths	6

and Analysis and design concepts, ASD, LRFD design concepts.[2]	
Design of tension members.	7
Design of axially loaded compression members.[1]	8
Design of axially loaded compression members.[2]	10
Types of connections in steel structures (simple connection, shear connection, moment connections)	11
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.[1]	12
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.[2]	13
Design of welded connections and details of welded connections.[1]	14
Design of welded connections and details of welded connections.[2]	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO2	√	√	-	√	-	-	-	√	-	-	√	-
CLO6	√	√	-	-	-	-	-	√	√	-	-	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO.2, CLO.6
3	Discussions	CLO.2, CLO.6
4	Mid Term Exam	CLO.2
5	Class works	-
6	Projects	-
7	Researches	-
8	Reports	CLO.2
9	Presentations	-
10	Quiz	CLO.6
11	Skiz	-

6.2 Assessment Schedule		
No.	**Assessment Method**	**Weeks**
1	Attendance	Weekly
2	Written Exam	16
3	Discussions	Weekly
4	Mid-term Exam	9
5	Class work	-
6	Projects	-
7	Researches	-
8	Reports	Bi-weekly
9	Presentations	-
10	Quiz	4 ,10
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
Teacher Opinion	Discussions	40%	40	5%	5
	Reports			5%	5
	Quiz			10%	10
	Mid-term exam			20%	20
Final Exam	Written exam	60%	60	60%	60
Total		100%	100	100%	100

7. List of References

1. Brockenbrough, R. & Merritt, F., "Structural Steel Designer's Handbook", 6th Edition, McGraw Hill, 2019. ISBN-10: 1260440796
2. Branko E. Gorenc & others, "Steel Designers' Handbook", University of New South Wales Press, 2013. ISBN-10: 1742233414
3. Ch. Salman& E. Johnson, " Steel Structures design and Behavior ", 5th Edition, Pearson, 2009. ISBN-10: 0131885561
4. Egyptian Code of Practice ASD, LRFD, 2010.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLOs
Introduction, Philosophies of steel structure.	1	CLO.2,
Systems and Uses, Materials, Design in steel structure.	1	CLO.2
Structural systems and general layout.[1]	1	CLO.2, CLO.6
Structural systems and general layout.[2]	1	CLO.2, CLO.6
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.[1]	1	CLO.6
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.[2]	1	CLO.6
Design of tension members.	1	CLO.6
Design of axially loaded compression members.[1]	1	CLO.6
Design of axially loaded compression members.[2]	1	CLO.6
Types of connections in steel structures (simple connection, shear connection, moment connections)	1	CLO.2
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.[1]	1	CLO.2, CLO.6
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.[2]	1	CLO.2, CLO.6
Design of welded connections and details of welded connections.[1]	1	CLO.2, CLO.6
Design of welded connections and details of welded connections.[2]	1	CLO.2, CLO.6

10.	Matrix of Program PLOs with Course Clos		
Program PLOs		**Course CLOs**	
PLO1	Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science, and mathematics.	CLO2	Solve complex engineering problems by applying engineering fundamentals, basic science, and mathematics.by applying engineering fundamentals, basic science, and mathematics.
PLO3	Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical, and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.	CLO6	Apply engineering design processes to produce cost-effective solutions in steel projects.

Title	Name	Signature
Course coordinator	**Dr. Medhat Mahmoud Momtaz**	
Head of Department	**Assoc. Prof. Dr. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Ministry of Higher Education
Higher Institute of Engineering and Technology
Architecture Eng. department

Course Specification

Course Code: Are 3104 Course Title: Quantities and specifications

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3104			
Year/level	Third year /Fourth Level			
Specialization	Major			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	3	0	5

2. Course Aims

No.	Aim
1	Provide the students with the capacity to prepare flexible and responsible designs by understanding modern structural and technological designs, and their ability to prepare project documents, submit bids and purchase architectural services to produce projects. (AM5.1)

3. Course Learning Outcomes (CLOs)

CLO28	Transform design concepts into buildings and integrating plans into comprehensive planning within restrictions: Financing issues and Project management
CLO29	Transform design concepts into buildings and integrating plans within restrictions with regulations
CLO30	Prepare design project briefs and documents
CLO31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

4. Course Contents

Topics	Week
Introduction to quantities and specifications	1
Elements of the total construction project cycle and processes.	2
project delivery methods, and contracts	3
tenders, scrutinizing of tender, Accepting Tenders, Notice-Inviting tender	4

The Quantity Survey	5
Calculation of quantities	6
Calculation of quantities: Concrete works	7
Calculation of quantities: reinforcement Concrete works	8
Calculation of quantities: Brick works	10
Calculation of quantities: plastring works	11
Calculation of quantities: finishings,	12
Calculation of quantities:sanitary & electricity works	13
Purposes of approximate estimates - types - Methods for preparing approximate estimates & numerical based on methods	14
Specifications: specifications,types- basic requirements in writing a good specification.-	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research	Projects	Presentation	Site Visits	Discussion	Brain storm	E-Learning	Self-learning	Modeling and simulation
CLO28	√	√	-	-	-	-	-	-	√			-
CLO29	√	√	-	-	-	-	-	-		√	√	-
CLO30	√	-	-	√	-	-	-	√	√		√	-
CLO31	√	-	-	√	-	-	-	-	-	√	√	-

6.Students' Assessment

6.1 Students' Assessment Method

N	Assessment Method	CLOs
1	Attendance	----------
2	Mid Term Exam	CLO.28,CLO.29, CLO.30, CLO.31
3	Researches	CLO.28,CLO.29
4	classwork	CLO.30, CLO.31
5	Final Exam	CLO.28,CLO.29, CLO.30, CLO.31
6	Projects	-
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-

11	Skiz	-

6.2 Assessment Schedule

No	Assessment Method	Weeks
1	Attendance	weekly
2	Mid Term Exam	9
3	Researches	6,8,10,12
4	classwork	weekly
5	Final Exam	16
6	Projects	-
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Attendance	60	60	--	--
	Mid Term Exam			30	30
	Researches			10	10
	classwork			20	20
Final Exam	Written exam	90	90	90	90
Total		150	150	150	150

6. List of References

[1] Hinze, J. (2010). Construction Contracts. (3d Edition). McGraw-Hill Book Company, New York, ISBN-10 : 0073397857.

٢-خلوصي،محمد ماجد(٢٠١٥).الكميات والمواصفات ج٢.دار النشر للجامعات،-ISBN: 9771721305

Library Book Code:A-a/41

[3] Towey, D. (2017). Construction Quantity Surveying: A Practical Guide for the Contractor's QS. United Kingdom: Wiley. ISBN:9781119312901

7. Facilities required for teaching and learning

Lecture hall
White board
Data show

8. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduction to quantities and specifications	1	CLO.28,CLO.29
Elements of the total construction project cycle and processes.	1	CLO.28,CLO.29, CLO.30, CLO.31
project delivery methods, and contracts	1	CLO.30
tenders, scrutinizing of tender, Accepting Tenders, Notice-Inviting tender	1	CLO.30
The Quantity Survey	1	CLO.28,CLO.29
Calculation of quantities	1	CLO.28,CLO.29, CLO.30, CLO.31
Calculation of quantities: Concrete works	1	CLO.3, CLO.4
Calculation of quantities: reinforcement Concrete works	1	CLO.3, CLO.4
Calculation of quantities: Brick works	1	CLO.30, CLO.31
Calculation of quantities: plastring works	1	CLO.30, CLO.31
Calculation of quantities: finishings,	1	CLO.30, CLO.31
Calculation of quantities:sanitary & electricity works	1	CLO.30, CLO.31
Purposes of approximate estimates - types - Methods for preparing approximate estimates & numerical based on methods	1	CLO.28,CLO.29, CLO.30, CLO.31
Specifications: specifications,types- basic requirements in writing a good specification.-	1	CLO.29, CLO.30

9. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO14	Transforming design concepts into buildings and integrating plans into comprehensive planning within restrictions: Financing Project - Project management - Cost control - Project delivery methods, having sufficient knowledge relevant industries, organizations, regulations and procedures.	**CLO28**	Transform design concepts into buildings and integrating plans into comprehensive planning within restrictions: Financing issues and Project management
		CLO29	Transform design concepts into buildings and integrating plans within restrictions with regulations

PLO15	Prepare design project briefs and documents and understand the architect's context in the construction industry including,This includes his role in the bidding and procurement of architectural services and the production of buildings	CLO30	Prepare design project briefs and documents
		CLO31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

Title	Name	Signature
Course coordinator	**Dr. Yasmin Talaat Ismail**	
Head of Department	**Assoc Prof. Dr. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Course Specification

Course Code: ARE3102 **Course Title: Working Drawings (1)**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE3102			
Year/level	Third year / Fourth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	0	6	0	6

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills, Demonstrate an entire set of working drawings presenting a complete set of documents for an architectural project with weight on structural, construction and technical working Details. (AM3-1, AM3-2)

3. Course Learning Outcomes (CLOs)

Clo30	Prepare design project briefs and documents
Clo31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

4. Course Contents

Topics	Week
Introduce the basics of detailed execution drawings.	1
Exercises on the preparation of detailed location and assembly drawings including detailed sections	2
Detailed space drawings and assembly drawings for the coordination between different professions	3
Finishing Tables , signs, Symbols in working drawings	4
Follow up lay out of students project	5

Follow up plans of students project	6
Plans phase of students project	7
Follow up sections of students project	8
sections phase of students project	10
Follow up elevations of students project	11
elevations phase of students project	12
Follow up plumping of students project	13
Plumping phase of students project	14
Final project (Full drawings of preliminary stage)	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
Clo30	√	√	-	-	√	√	-	√	√	-		-
Clo31	√	√	-	√	√	√	-	√	√	-	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	Clo30, Clo31
3	Discussions	Clo30, Clo31
4	Mid Term Exam	CLO.23, CLO.24, CLO.25
5	Class works	Clo31
6	Projects	Clo30, Clo31

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	From week 6 To 15

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Class works			25	25
	Project			15	15
	Mid-term exam			20	20
Final Exam	Written exam	40	40	40	40
Total		100	100	100	100

7. List of References

- Francis D. K. Ching(2020). Building Construction Illustrated 6th Edition. ISBN-10: 111958308X.
- Edward Allen & Patrick Rand (2016); Architectural Detailing - 3rd Edition by Edward Allen & Patrick Rand (Paperback), UPC: 9781118881996.
- Chudley, Roy & Greeno, Roger (2014), Building Construction Handbook, 10th Ed, Routledge, NY. ISBN13: 978-0-415-83638-8
- Ching, Francis D. K.; Building Construction Illustration, Wiley , 4th Ed ,2012
- Elena M. S. Garrison (Editor)(2003) ; The Graphic Standards Guide to Architectural Finishes: Using MASTERSPEC to Evaluate, Select, and Specify Materials, The American Institute of Architects, ISBN: 978-0-471-44952-2.
- Dennis J. Hall, Nina M. Giglio(2016); Architectural Graphic Standards, 12th Edition Mitchell, American Institute of Architects, ISBN: 978-1-118-90950-8.
- محمد أحمد عبدالله(٢٠١٥) ، الرسومات التنفيذية والتفاصيل المعمارية، مكتبة الأنجلو المصرية، القاهرة، ISBN: 9789770520475

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Lecture room
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduce the basics of detailed execution drawings.	1	-
Exercises on the preparation of detailed location and assembly drawings including detailed sections	1	Clo30, Clo31
Detailed space drawings and assembly drawings for the coordination between different professions	1	Clo30, Clo31
Finishing Tables , signs, Symbols in working drawings	1	Clo30, Clo31
Follow up lay out of students project	1	Clo30, Clo31
Follow up plans of students project	1	Clo30, Clo31
Plans phase of students project	1	Clo30, Clo31

Follow up sections of students project	1	Clo30, Clo31
sections phase of students project	1	Clo30, Clo31
Follow up elevations of students project	1	Clo30, Clo31
elevations phase of students project	1	Clo30, Clo31
Follow up plumping of students project	1	Clo30, Clo31
Plumping phase of students project	1	Clo30, Clo31
Final project (Full drawings of preliminary stage)	1	Clo30, Clo31

10. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO15	Prepare design project briefs and documents and understand the architect's context in the construction industry including, This includes his role in the bidding and procurement of architectural services and the production of buildings	**CLO30**	Prepare design project briefs and documents
		CLO31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

Title	Name	Signature
Course coordinator	**Dr. Marwa Emad**	
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**1/10/2021**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Course Specification

Course Code: ARE 3102 **Course Title: Architectural Design (5)**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3102			
Year/level	Third year (4^{th} Level)			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	0	8	0	8

2. Course Aims

No.	Aim
1	Apply the students for innovative and creative thinking, and solving design problems and requirements of principles of Design and applying it to architectural projects and urban spaces between buildings. (AM2.1)

3. Course Learning Outcomes (CLOs)

CLO23	Produce designs that meet the requirements of building users
CLO25	Produce designs with the scale of humanity and its needs
CLO27	choose the structural design, construction, technology used

4. Course Contents

Topics	Week
Introduction of the project	1
Lecture on the principles of designing commercial centers + presentation of explaining similar examples	2
Lecture on the foundations of hotel design + general website delivery	3
presentation of research	4
Research Analysis of Similar projects	5
Layout 1/500 + Ground floor plan 1/200 + sections 1/200	6
Lecture on the foundations of designing companies and administrative	7

buildings	
sections 1/200 + Elevations 1/200	8
Circulation networks integrated with open spaces	10
Layout 1/500 + Ground floor plan 1/200 + sections 1/200+ sections 1/200 + Elevations 1/200+Prespective	11
Environmental studies and sustainability + delivery of sectors, facades and perspectives for the project	12
All Project observation	13
Semifinal project	14
Final project	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO23	-	-	-	√			√	-	√	-	-	-
CLO25	√	-	-	√				-	√	-	-	-
CLO27	√	-	-	√	√	√		-		-	-	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO23,CLO25 ,CLO27
3	Discussions	-
4	Mid Term Exam	CLO23,CLO25 ,CLO27
5	Class works	CLO٢٣,CLO25,CLO27
6	Projects	CLO25 ,CLO27
7	Researches	CLO23,CLO25,CLO27
8	Reports	-
9	Presentations	CLO25
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-

2	Written exam	16
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	14,15
7	Researches	5
8	Reports	-
9	Presentations	2,4
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
	Class works	٪٦٠	٦٠	10	10
	Projects			20	20
	Researches			5	5
	Presentations			5	5
	Mid-term exam			20	20
Final Exam	Written exam	40	40	40	40
Total		100	100	100	100

7. List of References

[1] Joseph De Chiara (Author, Editor), Michael J. Crosbie (Author, Editor),Time-Saver Standards for Building Types, 7th Edition, United States of America, 2001, ISBN:9780070163874, 0070163871.

[2] D P Kothari and I J Nagrath, “Modern power System Analysis", Fourth edition, published by Tata McGraw-Hill, 2001, ISBN:9780071077750, 0071077758.

[3] Ernst Neufert (Author), Peter Neufert (Author) ,Bousmaha Baiche (Editor), Nicholas Walliman (Editor), “Neufert s Architects Data 4th Edition”, published by Wiley–Blackwell, 2012, ISBN:9781405192538, 1405192534.

[4] Greenwood, “Electrical Transients in Power Systems", Second Edition, published by Wiley India Pvt. Limited, 2017, ISBN:9788126527298, 8126527293.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO’s

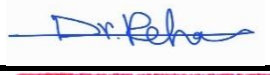
Topics	Aim	CLO's

Introduction of the project	1	CLO23,CLO25
Lecture on the principles of designing commercial centers + presentation of explaining similar examples	1	CLO23,CLO24,CLO27
Lecture on the foundations of hotel design + general website delivery	1	CLO23,CLO25,CLO27
presentation of research	1	CLO23,CLO27
Research Analysis of Similar projects	1	CLO23,CLO27
Layout 1/500 + Ground floor plan 1/200 + sections 1/200	1	CLO23,CLO25 ,CLO27
Lecture on the foundations of designing companies and administrative buildings	1	CLO23,CLO25
sections 1/200 + Elevations 1/200	1	CLO25, CLO27
Circulation networks integrated with open spaces	1	CLO25,CLO27
Layout 1/500 + Ground floor plan 1/200 + sections 1/200+ sections 1/200 + Elevations 1/200+Prespective	1	CLO23,CLO25Z, ,CLO27
Environmental studies and sustainability + delivery of sectors, facades and perspectives for the project	1	CLO24,CLO26 ,CLO27
All Project observation	1	CLO23,CLO25 ,CLO27
Semifinal project	1	CLO23,CLO25 ,CLO27
Final project	1	CLO23,CLO25 ,CLO27

10. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO23	Produce designs that meet the requirements of building users
		CLO25	Produce designs with the scale of humanity and its needs
		CLO27	choose the structural design, construction, technology used

Title	Name	Signature
Course coordinator	**Assocc. Prof. Mohamed Mostafa** **Dr. Nesma Helmy**	

Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

	Ministry of Higher Education **Higher Institute of Engineering and Technology** **Architecture Eng. Department**	

Course Specification

Course Code: ARE 3261 **Course Title:** Elective Course (2): Interior Design

1. Basic information

Program Title	Architecture Engineering Department			
Department offering the program	Architecture Engineering Department			
Department offering the course	Architecture Engineering Department			
Course Code	**ARE 3261**			
Year/level	Third year / Fourth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	0	3

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills, to reflect and integrate relevant interior design criteria such internal and external spaces, visual, texture, shaping and optical illusion, color theories, color combinations and their various effects, natural and artificial lighting through participatory work (AM3.1)

3. Course Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams.
CLO23	Produce designs that meet the requirements of building users
CLO24	Deal with the relation between people, buildings, and their surrounding environment

4. Course Contents

Introduces the scope of studying Interior design	1
Theories and Basics of Interior Architecture Design and its styles	2
Study of internal and external spaces and their gradation	3
Interaction between internal and external spaces	4
The study of various treatments of horizontal and vertical determinants	5
The study of movement, visual and temporal sequence in internal and	6

external spaces	
The study of surfaces in terms of texture, shaping and optical illusion	7
Color theories, color combinations and their various effects	8
Natural lighting and its impact on internal and external spaces and surfaces	10
Artificial lighting and its impact on internal and external spaces and surfaces	11
Global trends in interior design.	12
Analysis of some Projects in interior design	13
Submission of Semi final.	14
Presentation and submission of final project.	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO15	√	-	-	√	-	-	-	√	√	√	-	-
CLO23	-	-	-	-	√	√	-	-	-	-	√	-
CLO24	√	-	-	√	√	√	-	-	-	√	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	ClOs
1	Attendance	-
2	Final exam	CLO15,CLO23,CLO24
3	Discussions	CLO15
4	Mid Term Exam	CLO15, CLO24
5	Projects	CLO23, CLO24
6	Researches	CLO15, CLO24
7	Presentations	CLO23, CLO24
8	Reports	-
9	Presentations	-
10	Quiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	Weekly
2	Final exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Projects	14,15

6	Researches	7,10
7	Presentations	7, 14
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-
8	Reports	

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	50	50	5	5
	Projects			10	10
	Researches			10	10
	Presentations			5	5
	Mid-term exam			20	20
Final Exam	Final exam	50	50	50	50
Total		100	100	100	100

7. List of References

- Porzio, Francesca, "Modern House Interior Design", Independently published, **2021.** ASIN: B09STSZGK9.
- Gura, Judith & Falls, Sarah, "The Interior Design Reader", Allworth Press, **2019.**
- Dodsworth, Simon, "The Fundamentals of Interior Design", Second Edition, Bloomsbury, 2015.
- Mitton, Maureen, "Interior Design Visual Presentation: A Guide to Graphics, Models and Presentation Techniques", Wiley, 2012.
- يونس خنفر، "أسس التصميم الداخلي وتنسيق الديكور"، دار مجدلاوي للنشر والتوزيع، ٢٠١٦.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduces the scope of studying Interior design	1	CLO24
Theories and Basics of Interior Architecture Design and its styles	1	CLO24
Study of internal and external spaces and their gradation	1	CLO15,CLO23
Interaction between internal and external spaces	1	CLO24

The study of various treatments of horizontal and vertical determinants	1	CLO15,CLO23
The study of movement, visual and temporal sequence in internal and external spaces	1	CLO15,CLO23,CLO24
The study of surfaces in terms of texture, shaping and optical illusion	1	CLO15,CLO23
Color theories, color combinations and their various effects	1	CLO15,CLO23
Natural lighting and its impact on internal and external spaces and surfaces	1	CLO24
Artificial lighting and its impact on internal and external spaces and surfaces	1	CLO24
Global trends in interior design.	1	CLO15,CLO23
Analysis of some Projects in interior design	1	CLO15,CLO23
Submission of Semi final.	1	CLO15,CLO23
Presentation and submission of final project.	1	CLO15,CLO23
Revision	1	CLO15,CLO24

10. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO23	Produce designs that meet the requirements of building users
		CLO24	Deal with the relation between people, buildings, and their surrounding environment

Title	Name	Signature
Course coordinator	**Assocc. Prof. Reham Othman**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

	Ministry of Higher Education **Higher Institute of Engineering and Technology** **Architecture Eng. Department**	

Course Specification

Course Code: ARE 3262 **Course Title:** Elective Course (2): Environmental design and energy conservation

1. Basic information

Program Title	Architecture Engineering Department			
Department offering the program	Architecture Engineering Department			
Department offering the course	Architecture Engineering Department			
Course Code	**ARE 3262**			
Year/level	Third year / Forth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	0	3

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills whether through direct education or e-learning, to reflect and integrate relevant environmental design and energy conservation criteria through proper participatory work (AM3.1)

3. Course Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary teams to analyze environmental design and energy conservation criteria.
CLO23	Produce designs that meet the requirements of energy conservation
CLO24	Deal with the relation between people, buildings, and their surrounding environment

4. Course Contents

Topics	Week
Introduces the scope of studying environmental design and energy conservation.	1
Ecological architecture: definitions, aims & concept	2
Green architecture: definitions & principles	3
Types of renewable and non-renewable energy sources	4
Heat transfer modes & heat exchanges in buildings	5
Identify the methods of passive design of heat acquisition	6
The use of solar energy in passive design	7

examples in the use of passive design	8
Natural ventilation & natural illumination	10
Design methods of cooling	11
Developing the integration of active and passive design	12
Environmentally Designed building models	13
Submission of Semi final.	14
Presentation and submission of final project.	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO15	-	-	-	√	-	√	-	√	√	-	√	-
CLO23	√	-	-	-	√	-	-	-	-	√	-	-
CLO24	√	-	-	√	√	√	-	√	-	√	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO15,CLO23,CLO24
3	Discussions	CLO15,CLO24
4	Mid Term Exam	CLO15,CLO24
5	Class works	-
6	Projects	CLO23,CLO24
7	Researches	CLO15,CLO24
8	Reports	-
9	Presentations	CLO15,CLO24
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	Weekly
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	-
6	Projects	14,15
7	Researches	7-10

8	Reports	-
9	Presentations	7-14
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Projects			%10	10
	Researches			%10	10
	Presentations			%5	5
	Mid-term exam			%20	20
Final Exam	Final exam	%50	50	%50	50
Total		%100	100	%100	100

7. List of References

- Pathak, Pankaj & Srivastava, Rajiv, "Alternative Energy Resources: The Way to a Sustainable Modern Society", Springer International Publishing, 2021. ISBN: 9783030579234.
- Ryan, Philip, "Renewable Energy", Bibliomundi, 2021.
- Gutiérrez, Rosa, & Hidalgo, Laura, "Elements of Sustainable Architecture", Routledge, 2020.
- Pearce, Annie, & Han, Yong, "Sustainable Buildings and Infrastructure Paths to the Future", second edition, Routledge, 2018.
- شفق الوكيل، محمد سراج، "المناخ وعمارة المناطق الحارة"، ط٤، عالم الكتب، الكويت، ٢٠١٥.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduces the scope of studying environmental design and energy conservation.	1	CLO24
Ecological architecture: definitions, aims & concept	1	CLO24
Green architecture: definitions & principles	1	CLO15,CLO24
Types of renewable and non-renewable energy sources	1	CLO23,CLO24
Heat transfer modes & heat exchanges in buildings	1	CLO15,CLO23,CLO24

Identify the methods of passive design of heat acquisition	1	CLO15,CLO23,CLO24
The use of solar energy in passive design	1	CLO15,CLO23,CLO24
examples in the use of passive design	1	CLO15,CLO23,CLO24
Natural ventilation & natural illumination	1	CLO24
Design methods of cooling	1	CLO24
Developing the integration of active and passive design	1	CLO15,CLO23,CLO24
Environmentally Designed building models	1	CLO15,CLO23,CLO24
Submission of Semi final.	1	CLO15,CLO23,CLO24
Presentation and submission of final project.	1	CLO15,CLO23,CLO24

10. Matrix of Program PLOs with Course Clos

Program PLos		Course Clos	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary teams to analyze environmental design and energy conservation criteria.
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO23	Produce designs that meet the requirements of energy conservation
		CLO24	Deal with the relation between people, buildings, and their surrounding environment

Title	Name	Signature
Course coordinator	**Dr. Yasmin Talaat**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
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	Ministry of Higher Education **Higher Institute of Engineering and Technology** **Architecture Eng. Department**	

Course Specification

Course Code: ARE 3264 **Course Title:** Elective Course (2): Design and development of rural communities

1. Basic information

Program Title	Architecture Engineering Department			
Department offering the program	Architecture Engineering Department			
Department offering the course	Architecture Engineering Department			
Course Code	**ARE 3264**			
Year/level	Third year / Fourth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	0	3

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills whether through direct education or e-learning, to reflect and integrate relevant development of rural communities' criteria through participatory work (AM3.1)

3. Course Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams to analyze the criteria of rural communities' development.
CLO23	Produce designs that meet the requirements of rural communities' development.
CLO24	Deal with the relation between people, buildings, and their surrounding environment

4. Course Contents

Topics	Week
Introduces the scope of studying the rural communities.	1
Methods of dealing with rural communities	2
Evaluation of rural development projects in third world countries	3
Evaluation of Egyptian experiences in rural housing development since the fifties	4
Evaluation of the studies of the construction Research Center for the design of rural housing	5
The impact of social aspects on the rural housing	6
The impact of economic aspects on the rural housing	7

The rural trend towards urbanization	8
Sustainable Rural Development	10
smart growth development patterns	11
greenway design: connectivity and edges	12
greenway zoning and subdivision techniques	13
Submission of Semi-final.	14
Presentation and submission of final project.	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO15	-	-	-	√	-	√	-	√	√	-	√	-
CLO23	√	-	-	-	√	-	-	-	-	√	-	-
CLO24	√	-	-	√	√	√	-	√	-	√	√	-

6. Students' Assessment

6.1 Students' Assessment Method

NO	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO15,CLO23,CLO24
3	Discussions	CLO15,CLO24
4	Mid Term Exam	CLO15,CLO24
5	Class works	-
6	Projects	CLO23,CLO24
7	Researches	CLO15,CLO24
8	Reports	-
9	Presentations	CLO15,CLO24
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	Weekly
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	-

6	Projects	14,15
7	Researches	7-10
8	Reports	-
9	Presentations	7-14
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Projects			%10	10
	Researches			%10	10
	Presentations			%5	5
	Mid-term exam			%20	20
Final Exam	Final exam	%50	50	%50	50
Total		%100	100	%100	100

7. List of References

- Arendt, Randall, "Rural by Design: Planning for Town and Country", Taylor & Francis, 2017.
- Thorbeck, Dewey, "Rural Design: A New Design Discipline", Taylor & Francis, 2013.
- Ellin, Nan, " Integral Urbanism", Taylor & Francis, 2013.
- هاشمي الطيب، "مدخل الى التنمية الريفية والمجتمع الريفي"، دار اليازوري العلمية للنشر والتوزيع، ٢٠٢١.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduces the scope of studying the rural communities	1	CLO24
Methods of dealing with rural communities	1	CLO24
Evaluation of rural development projects in third world countries	1	CLO15,CLO24
Evaluation of Egyptian experiences in rural housing development since the fifties	1	CLO23,CLO24
Evaluation of the studies of the construction Research Center for the design of rural housing	1	CLO15,CLO23,CLO24
The impact of social aspects on the rural housing	1	CLO15,CLO23,CLO24
The impact of economic aspects on the rural housing	1	CLO15,CLO23,CLO24

The rural trend towards urbanization	1	CLO15,CLO23,CLO24
Sustainable Rural Development	1	CLO24
smart growth development patterns	1	CLO24
greenway design: connectivity and edges	1	CLO15,CLO23,CLO24
greenway zoning and subdivision techniques	1	CLO15,CLO23,CLO24
Submission of Semi final.	1	CLO15,CLO23,CLO24
Presentation and submission of final project.	1	CLO15,CLO23,CLO24

10. Matrix of Program PLOs with Course CLos

Program PLos		Course CLos	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams to analyze the criteria of rural communities' development.
		CLO23	Produce designs that meet the requirements of rural communities' development.
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO24	Deal with the relation between people, buildings, and their surrounding environment

Title	Name	Signature
Course coordinator	**Dr. Hadeel Mahmoud**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Course Specification

Course Code: ARE 3202 **Course Title: Computer Applications in Architecture (2)**

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3202			
Year/level	Third year / Fourth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	2	-	4

2. Course Aims

No.	Aim
1	Provide the students with 3DMAX software knowledge that enables them to well present their design projects (AM1-1).

3. Course Learning Outcomes (CLOs)

CLO16	Communicate effectively – graphically, verbally and understanding computer techniques of design in three dimensions.
CLO21	Create architectural designs that meet aesthetic and technical requirements.
CLO22	Use Adequate knowledge of technologies and computer modeling, simulation, rendering and presentation techniques.

4. Course Contents

Topics	Week
Introduction to 3DS MAX and overview:	1
Command Panels – View Ports – Tool Bar – Menu Bar. Exploring interface, exploring 2D shapes, exploring 3D objects, exploring views and navigator, and move, rotate and scale.	2
Working with 3DS MAX: Clone Types- Pivot Point- Snapping Working with 3DS MAX: Commands: Array	3

Creating Shapes Vertex Operations, Segment Operations and Spline Operations.	4
Modifying Objects: Spline Modifiers: Commands: Extrude	5
Importing AutoCAD Drawings(DWG):	6
Spline Modifiers: Commands: Lathe, Sweep, Bevel Profile	7
3D Commands Windows & Doors in 3DMAX.	8
2D Commands: Loft.	10
- Editable poly: Part (1)- Selection & Soft Selection. Part (2)- Edit Vertices & Edges. Part (3)- Edit Polygon & Geometry.	11
Using 2D and 3D commands to create models of interior spaces and furniture. Lightings (Part 1+ Part 2) / Materials (Part 1+ Part 2)/ Cameras.	12
Render.	13
Starting final project using 3DMAX skills.	14
Final project evaluation for all required drawings.	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO16	√	√	√	-	√	-	-	-	-			
CLO21	√	√	√	-	√	-	-	-	-	√	√	√
CLO22	√	√	√	-	√	-	-	-	-	√	√	√

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO21,CLO22
4	Mid Term Exam	CLO21,CLO22
5	Class works	CLO16CLO21,CLO22
6	Projects	CLO21,CLO22
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-

11	Skiz	-

6.2 Assessment Schedule		
No.	**Assessment Method**	**Weeks**
1	Attendance	-
2	Written exam	16
3	Discussions	-
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	Week 14,15
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
	Class works			20	20
	Projects			10	10
	Mid-term exam			20	20
Final Exam	Written exam	50	50	50	50
Total		100	100	100	100

7. List of References

- Trevor Hill(2023). The Essential Beinners Guide to 3DS Max: A Handbook for Getting Started with the Basics (2023 Edition) (The Essential Beginners Guide to...) Kindle Edition, ASIN : B0BSRZ4CHC
- ASCENT (Authors) (2022). Autodesk 3ds Max 2022 Fundamentals, ISBN 101630574244
- DR.MARWA EMAD YOUTUBE CHANNEL.
- Autodesk 3dsmax website /3Ds MAX 2020.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Data show

9. Matrix of Course Content with CourseC LO's

Topics	Aim	LO's
Introduction to 3DS MAX and overview:	1	-
Command Panels – View Ports – Tool Bar – Menu Bar. Exploring interface, exploring 2D shapes, exploring 3D objects, exploring views and navigator, and move, rotate and scale.	1	CLO16,CLO21
Working with 3DS MAX: Clone Types- Pivot Point- Snapping Working with 3DS MAX: Commands: Array	1	CLO16,CLO21
Creating Shapes Vertex Operations, Segment Operations and Spline Operations.	1	CLO16,CLO21
Modifying Objects: Spline Modifiers: Commands: Extrude	1	CLO16,CLO21
Importing AutoCAD Drawings(DWG):	1	CLO16,CLO21
Spline Modifiers: Commands: Lathe, Sweep, Bevel Profile	1	CLO16,CLO21
3D Commands Windows & Doors in 3DMAX.	1	CLO16, CLO21,CLO22
2D Commands: Loft.	1	CLO16,CLO21
- Editable poly: Part (1)- Selection & Soft Selection. Part (2)- Edit Vertices & Edges. Part (3)- Edit Polygon & Geometry.	1	CLO16,CLO21
Using 2D and 3D commands to create models of interior spaces and furniture. Lightings (Part 1+ Part 2) / Materials (Part 1+ Part 2)/ Cameras.	1	CLO21
Render.	1	CLO21
Starting final project using 3DMAX skills.	1	CLO16,CLO21
Final project evaluation for all required drawings.	1	CLO16,CLO21

10. Matrix of Program PLOs with Course CLOs

ProgramP LOs		CourseC LOs	
PLO8	Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.	**CLO16**	Communicate effectively – graphically, verbally and understanding computer techniques of design in three dimensions.

PLO11	Prepare design project briefs and documents and understand the architect's context in the construction industry including, This includes his role in the bidding and procurement of architectural services and the production of buildings	CLO21	Create architectural designs that meet aesthetic and technical requirements.
		CLO22	Use Adequate knowledge of technologies and computer modeling, simulation, rendering and presentation techniques.

Title	Name	Signature
Course coordinator	**Dr. Marwa Emad**	
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

	Ministry of Higher Education Higher Institute of Engineering and Technology **Architecture department**	

Course Specification

Course Code: ARE 3203 **Course Title: Theories of Architecture (4)**

1. Basic information

Program Title	Architecture department			
Department offering the program	Architecture department			
qualify	Architecture department			
Course Code	ARE 3203			
Year/Level	third year / second Semester (2nd Semester)			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	4	-	-	4

2. Course Aims

No.	Aim
1	Provide the students with modern academic and technical skills, cultural knowledge of history, fine arts, and local and international heritage (AM3.1.)

3. Course Learning Outcomes (CLOs)

CLO12	Practice research techniques and methods of investigation as an inherent part of learning.
CLO21	Create architectural, urban, and planning designs that meet aesthetic and technical requirements of postmodern architecture
CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and Architectural trends and theories that developed over the twentieth century

4. Course Contents

Topics	Week
Motives for the emergence and stages of development of modern architecture, Architects, schools of thought, and the causes of the crisis	1
New developments and impetus for the emergence of advanced modernity architecture - and its crisis	2
The birth of modernist architecture/the crisis of modernist architecture-/trends emerging from the problems of modernist architecture	3
Critics' classifications of contemporary architecture	4
The theoretical basis for historical evidence of contemporary architecture.	5
Reasons for the Emergence of postmodern architecture	6
Directions for responding to technical progress and addressing environmental	7
Historical guide to contemporary architecture at egypt.	8
Pioneering Architects in Egypt (Hassan Fathy)	10
Pioneering Architects in Egypt (Tawfiq Abdel)	11
Pioneering Architects in Egypt (Abdel-Baqi Ibrahim)	12
The most important Egyptian architectural works and their analysis	13
Urban spaces in the local heritage architecture	14
Revision	15

5	Teaching and Learning Methods											
Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and Simulation
CLO12	√	-	-	√	-	√	-	√	-	√	√	-
CLO21	√	-	-	√	-	√	√	√	-	√	√	-
CLO22	√	-	-	√	-	-	√	-	-	-	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLos
1	Attendance	---
2	Written exam	CLO12, CLO21, CLO22
3	Discussions	CLO12, CLO22
4	Mid Term Exam	CLO12, CLO21
5	Class works	-
6	Projects	-
7	Researches	CLO12, CLO21
8	Reports	-
9	Presentations	CLO12,CLO21
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	weekly
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	-
6	Projects	-
7	Researches	5 – 12
8	Reports	-
9	Presentations	5 -8-12
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	50%	50	5%	5
	Researches			15%	15
	Presentations			10%	10
	Mid-term exam			20%	20
Final Exam	Written exam	50%	50	50%	50
Total		100%	100	100%	100

7. List of References

Obateru, Oluremi & Obateru, Rotimi, "Cities and Planning in history", 1st edition, Penthouse Publications, Nigeria, 2019. ISBN: 978 978 56205 4 2

- Cartledge, Paul. "Ancient Greece: a very short introduction", Vol. 286. Oxford University Press, 2011. ISBN: 0199601348
- محمد مهدي، "العمارة والبيئة: تخطيط المدن والعمارة البيئية"، ط1، دار الكتاب الحديث، 2019.
- خلف الدليمي، "تخطيط المدن: نظريات – أساليب – معايير - تقنيات"، ط1، دار صفاء للطباعة والنشر والتوزيع، 2015. رقم التسجيل: 9789957249250
- شفق الوكيل، "التخطيط العمراني مبادئ – أسس - تطبيقات"، ج1، مكتبة الكتب العربية، 2006. رقم التسجيل: 9771739190
- أحمد خالد علام، "تاريخ تخطيط المدن"، مكتبة الأنجلو المصرية، 1998.

8. Facilities required for teaching and learning

Lecture/Classroom
White board
Lecture room equipped with e-learning tools (internet, mike, etc.)
Moodle and Microsoft teams
Data show

9. Matrix of Course Content with Course LO's

Topics	Aim	CLO's
Motives for the emergence and stages of development of modern architecture, Architects, schools of thought, and the causes of the crisis	1	CLO21
New developments and impetus for the emergence of advanced modernity architecture - and its crisis	1	CLO21
The birth of modernist architecture/the crisis of modernist architecture-/trends emerging from the problems of modernist architecture	1	CLO21, CLO22
Critics' classifications of contemporary architecture	1	CLO21, CLO22
The theoretical basis for historical evidence of contemporary architecture.	1	CLO21, CLO22
Reasons for the Emergence of postmodern architecture	1	CLO21, CLO22
Directions for responding to technical progress and addressing environmental	1	CLO12, CLO21, CLO22
Historical guide to contemporary architecture at egypt.	1	CLO12, CLO21, CLO22
Pioneering Architects in Egypt (Hassan Fathy)	1	CLO21, CLO22
Pioneering Architects in Egypt (Tawfiq Abdel)	1	CLO21, CLO22
Pioneering Architects in Egypt (Abdel-Baqi Ibrahim)	1	CLO21, CLO22
The most important Egyptian architectural works and their analysis	1	CLO21, CLO22
Urban spaces in the local heritage architecture	1	CLO21, CLO22
Revision	1	CLO21, CLO22

10. Matrix of Program LOs with Course Los

Program Los		Course Los	
PLO5	Exercise and application of scientific research techniques and methods as an integral part of learning.	**CLO12**	Practice research techniques and methods of investigation as an inherent part of learning.
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	**CLO21**	Create architectural, urban and planning designs that meet aesthetic and technical requirements
		CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

itle	Name	Signature
Course coordinator	**Dr. Rania badawy**	
Head of Department	**Dr. Reham osman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Course Specification

Course Code: ARE 3204 **Course Title: Urban planning**

1. Basic information

Program Title	Architecture department			
Department offering the program	Architecture department			
Department offering the course	Architecture department			
Course Code	ARE 3204			
Year/Level	third year / Forth Level			
Specialization	**Major**			
Teaching Hours	Lectures	Tutorial	Practical	Total
	1	4	-	5

2. Course Aims

No.	Aim
1	Work efficiently by using data analysis, survey, and simulation to produce innovative urban planning solutions in slims and at the local, regional, and international levels and able to plan, supervise and follow up the implementation of urban projects. (AM1.1)

3. Course Learning Outcomes (CLOs)

CLO15	Work efficiently in a multidisciplinary and cultural team.
CLO21	Search efficiently using Advanced search methods and survey.
CLO22	Studying Planning levels and stages process and how to applicate it.

4. Course Contents

Topics	Week
A general introduction to Urban Planning and the definition.	1
The difference between rural and urban, types of planning	2
Planning levels and stages of the planning process+ Research about field study	3
The planning unit of the city, the survey form, the base map	4
Functional structure of the city and locations and classification of cities	5
The master plan (concept, objectives, characteristics)	6
Hierarchy of residential cells and roads	7
Urban Lift Analysis (Determinants - Problems - Possibilities)	8
Preparation of the general plan (stages of analysis)	10
Preparation of the general plan (stages of preparation of alternatives)	11

Planning rates for services	12
Sustainable urban planning	13
Submission of semifinal project	14
Submission of final project	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research	Projects	Presentation	Site Visits	Discussion	Brain storm	E-Learning	Self-learning	Modeling and simulation
CLO15	√	-	-	√	√	-	-	-	-	-		-
CLO21	√	√	-		√	-	-	√	-	-	√	-
CLO22	√	√	-	√	√	-	-	√	-	-	√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-------
2	Written exam	**CLO.15**
3	Discussions	**CLO.15, CLO.21, CLO.22**
4	Mid Term Exam	**CLO.15, CLO.21, CLO.22**
5	Class works	**CLO.15, CLO.21, CLO.22**
6	Projects	**CLO.15, CLO.21, CLO.22**
7	Researches	**CLO.15, CLO.21, CLO.22**
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	weekly
4	Mid Term Exam	9
5	Class works	weekly
6	Projects	14,15
7	Researches	3
8	Reports	-

9	Presentations	-
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	50%	50	5%	5
	Class works			10%	10
	Projects			10%	10
	Researches			5%	5
	Mid-term exam			20%	20
Final Exam	Written exam	50%	50	50%	50
Total		100%	100	100%	100

7. List of References

a. Robert A. Beauregard," Advanced Introduction to Planning Theory", Edward Elgar Publishing, 2020, ISBN:9781788978903, 1788978900.
b. Donald L. Elliott, “A Better Way to Zone: Ten Principles to Create More Livable Cities”, Island Press ,2008, ISBN:9781597261814, 1597261815.
c. Gauzin-Muller, D., Sustainable Architecture and Urbanism: Concepts, Technologies,2002, Princeton Architectural Press, ISBN:9783764366599, 3764366591.
d. Carmona, M., Heath, T., Oc, T. and Tiesdell, S.,”Public Places Urban Spaces.”, Published by Taylor & Francis,2012, ISBN:9781136020490, 1136020497.

8. Facilities required for teaching and learning

Lecture/Classroom
Whiteboard
Data show

9. Matrix of Course Content with Course CLOs

Topics	Aim	cLO's
A general introduction to Urban Planning and the definition.	1	**CLO.22**
The difference between rural and urban, types of planning	1	**CLO.22**
Planning levels and stages of the planning process+ Research about field study	1	**CLO.15, CLO.21, CLO.22**
The planning unit of the city, the survey form, the base map	1	**CLO.15, CLO.21**
Functional structure of the city and locations and classification of cities	1	**CLO.22**
The master plan (concept, objectives, characteristics)	1	**CLO.22**
Hierarchy of residential cells and roads	1	**CLO.22**

Urban Lift Analysis (Determinants - Problems - Possibilities)	1	**CLO.3, CLO.5**
Preparation of the general plan (stages of analysis)	1	**CLO.3, CLO.5**
Preparation of the general plan (stages of preparation of alternatives)	1	**CLO.15, CLO.21**
Planning rates for services	1	**CLO.15, CLO.21**
Sustainable urban planning	1	**CLO.22**
Submission of semifinal project	1	**CLO.15, CLO.21, CLO.22**
Submission of final project	1	**CLO.15, CLO.21, CLO.22**

10. Matrix of Program PLOs with Course CLOs

Program PLOs		**Course CLOs**	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.
PLO11	Create architectural, urban and planning designs that meet aesthetic and technical requirements using Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences.	CLO21	Create architectural, urban and planning designs that meet aesthetic and technical requirements
		CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

Title	**Name**	**Signature**
Course coordinator	**Assoc.Prof. Rania Badawy** **Dr. Nesma Helmy**	
Head of Department	**Assoc.Prof. Reham osman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Course Specification

Course Code: Are 3263 Course Title: Specialized Elective Course (2) Urban Design

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3263			
Year/level	Third year / Forth Level			
Specialization	Major			
Teaching Hours	Lectures	Tutorial	Practical	Total
	2	1	0	3

2. Course Aims

No.	Aim
1	Design and implement more inclusive urban projects with the larger scale of groups of buildings, infrastructure, streets, and public spaces, entire neighbourhoods and districts, and entire cities, with the goal of making urban environments that are equitable, beautiful, performative, and sustainable (AM3.2)

3. Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams.
CLO23	Produce designs that meet the requirements of urban environments users by analysing visual elements, urban form, grain, texture, and social fabric of existing lively streets
CLO24	Deal with the relation between people, buildings, and their surrounding environment including buildings,paths,nodes,landmarks,edges and district

4. Course Contents

Topics	Week
Introduction : Urban Design principles	1
Historical Development of urban design	2
analysis of visual elements, urban form, grain, texture, and social fabric of existing lively streets	3
Principles of Urban design- Mental Map	4

Elements of Urban design: Buildings-paths-Nodes	5
Elements of Urban design: Landmarks-edges-district	6
Principles of functional program development of the urban planning team: idea of school unit, idea of the sustainable development.Hierarchy of service centers.	7
visual form of city analysis: visual image & visual elements of visual form	8
the socio-urban fabric and its integration between urban development and the economic aspects to achieve sustainability	10
National models and examples for development with an application of urban areas or existing urban corridors.	11
international models and examples for development with an application of urban areas or existing urban corridors.	12
Analysis and redesign of urban spaces.	13
submission of Semi final projects.	14
Presentation and submission of final projects.	15

5. Teaching and Learning methods

Course learning Outcomes (LOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	Projects	Presentation	Site Visits	Discussion and Dialogue	Brain storm	E-Learning	Self-learning	Modeling and simulation
CLO15	√		-	√			√	√	√	√		-
CLO23			-		√	√	√		√		√	-
CLO24	√	√	-	√	√	√					√	-

6. Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	
2	Mid Term Exam	CLO15,CLO23
3	Projects	CLO15,CLO23,CLO24
4	Researches	CLO15,CLO23
5	**Assignment**	CLO15
6	Written Exam	CLO15,CLO23,CLO24
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule		
No	**Assessment Method**	**Weeks**
1	Attendance	weekly
2	Mid Term Exam	9
3	Projects	14,15
4	Researches	4,7,10
5	Assignment	weekly
6	Written Exam	16
7	Researches	-
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments					
	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
	Discussions			10	10
	Mid Term Exam			20	20
	Projects			10	10
	Researches			5	5
	Assignment			5	5
Final Exam	Written exam	50	50	50	50
Total		100	100	100	100

7. List of References

[1] Lynch, K. (1960) . The image of the city.(2nd edition). MIT Press,ISBN 0-262-62001-4
[2] Adam R. & Randall T. (2009) .Sustainable Urban Design: An Environmental Approach",(2nd edition) Taylor & Francis, ISBN-10 : 0415447828
[3] London F.(2020)(Healthy Placemaking: Wellbeing Through Urban Design",RIBA Publishing,1st edition, ISBN-10 : 1859468837

8. Facilities required for teaching and learning

Lecture hall
White board
Data show

9. Matrix of Course Content with Course CLO's

No.	Topics	Aim	CLO's
1	Introduction : Urban Design principles	1	CLO24
2	Historical Development of urban design	1	CLO24
3	analysis of visual elements, urban form, grain, texture, and social fabric of existing lively streets	1	CLO15,CLO24
4	Principles of Urban design- Mental Map	1	CLO15,CLO24
5	Elements of Urban design: Buildings-paths-Nodes	1	CLO15,CLO24
6	Elements of Urban design: Landmarks-edges-district	1	CLO15,CLO24
7	Principles of functional program development of the urban planning team: idea of school unit, idea of the sustainable development.Hierarchy of service centers.	1	CLO15,CLO24
8	visual form of city analysis: visual image & visual elements of visual form	1	CLO15,CLO24
9	the socio-urban fabric and its integration between urban development and the economic aspects to achieve sustainability	1	CLO15,CLO24
10	National models and examples for development with an application of urban areas or existing urban corridors.	1	CLO24
11	international models and examples for development with an application of urban areas or existing urban corridors.	1	CLO24
12	Analysis and redesign of urban spaces.	1	CLO15,CLO24
13	submission of semi final projects.	1	CLO15,CLO24
14	Presentation and submission of final projects.	1	CLO15,CLO24

10. Matrix of Program PLOs with Course CLOs

Program PLOs		Course CLOs	
PLO7	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams.	CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi- cultural teams.
PLO12	Produce designs that meet the requirements of building users by understanding the relationship between people and buildings, and between the	CLO23	Produce designs that meet the requirements of urban environments users by analysing visual elements, urban form, grain, texture, and social fabric of existing lively streets

	buildings and their surrounding environment, with the necessity of linking the buildings and the spaces between them to the scale of humanity and its needs	CLO24	Deal with the relation between people, buildings, and their surrounding environment including buildings,paths,nodes,landmarks,edges and district

Title	Name	Signature
Course coordinator	**Dr. Yasmin Talaat Ismail**	
Head of Department	**Assoc Prof. Dr. Reham Othman**	
Date of Approval	**1/10/2022**	

برنامج الهندسة المعمارية
المعهد العالي للهندسة والتكنولوجيا
بالتجمع الخامس

Ministry of Higher Education
Higher Institute of Engineering and Technology
Architecture Eng. department

Course Specification

Course Code: Are 3205 Course Title: Working Drawings (2)

1. Basic information

Program Title	Architecture Engineering			
Department offering the program	Architecture Engineering			
Department offering the course	Architecture Engineering			
Course Code	ARE 3205			
Year/level	Third year /Forth Level			
Specialization	Major			
Teaching Hours	Lectures	Tutorial	Practical	Total
	----	6	0	6

2. Course Aims

No.	Aim
1	,whether through Provide the students with modern academic and technical skills direct education or e-learning, to implement more inclusive architectural projects by design working drawings while exploiting modern technologies through proper planning and participatory work. (AM3.1)

3. Course Learning Outcomes (CLOs)

CLO27	choose the structural design, construction, technology used
CLO31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

4. Course Contents

Topics	Week
Introduction to working drawings	1
Building structure systems for short spans	2
Application of techniques used in preparation of working drawings sheets	3
Release of the project	4
Plans drawings: Basement floor plan +Ground floor plan +First floor plan	5
Section drawings	6
Wall Section drawings	7
Elevation drawings	8

Layout: Soft Scape	10
Layout: Hard scape	11
Details of certain and specific points of the project 1	12
Details of certain and specific points of the project 2	13
Semi Final project Submission	14
Final project Submission	15

5. Teaching and Learning methods

Course learning Outcomes (CLOs)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research	Projects	Presentation	Site Visits	Discussion	Brain storm	E-Learning	Self-learning	Modeling and simulation
CLO27	√	-	-		√	-	-	-	-	-	√	-
CLO31	√	-	-	-	√	-	-	-	-	√	-	-

6.Students' Assessment

6.1 Students' Assessment Method

No.	Assessment Method	CLOs
1	Attendance	-
2	Written exam	CLO.27, CLO.31
3	Discussions	-
4	Mid Term Exam	CLO.27, CLO.31
5	Class works	-
6	Projects	CLO.27
7	Researches	--
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Attendance	-
2	Written exam	16
3	Discussions	-
4	Mid Term Exam	9
5	Class works	-

6	Projects	14
7	Researches	8-13
8	Reports	-
9	Presentations	-
10	Quiz	-
11	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Attendance	60	60	--	--
	Mid Term Exam			20	20
	Researches			10	20
	Project			30	30
Final Exam	Written exam	40	40	60	60
Total		100	100	100	100

6. List of References

[1] Bert B. ,Basics (2018).Basics fundamentals of presentation- Detail Drawing. Germany: Walter de Gruyter GmbH

[2] Allen, E. & Rand,P. (2016). Architectural Detailing: Function, Constructibility, Aesthetics .Wiley (3rd ed.) ISBN : 1118881990

[3] Singh G. (2019). Building Construction and Materials. Amit Publisher and Distributors ISBN:9788189401214

7. Facilities required for teaching and learning

Lecture hall
White board
Data show

8. Matrix of Course Content with Course CLO's

No.	Topics	Aim	CLO's
1	Introduction to working drawings	1	CLO.27, CLO.31
2	Building structure systems for short spans	1	CLO.27, CLO.31
3	Application of techniques used in preparation of working drawings sheets	1	CLO.27

4	Release of the project	1	CLO.27, CLO.31
5	Plans drawings: Basement floor plan +Ground floor plan +First floor plan	1	CLO.31
6	Section drawings	1	CLO.31
7	Wall Section drawings	1	CLO.31
8	Elevation drawings	1	CLO.31
9	Layout: Soft Scape	1	CLO.27
10	Layout: Hard scape	1	CLO.27
11	Details of certain and specific points of the project 1	1	CLO.27, CLO.31
12	Details of certain and specific points of the project 2	1	CLO.27, CLO.31
13	Semi Final project Submission	1	CLO.27, CLO.31
14	Final project Submission	1	CLO.27, CLO.31

9. Matrix of Program PLOs with Course CLos

Program PLOs		Course CLos	
PLO13	Preparing environmentally responsible designs to preserve and rehabilitate the environment through an understanding of the structural design, construction, technology used and associated engineering problems Building designs	CLO26	Prepare environmentally responsible designs to preserve and rehabilitate the environment
		CLO27	choose the structural design, construction, technology used
PLO15	Prepare design project briefs and documents and understand the architect's context in the construction industry including, this includes his role in the bidding and procurement of architectural services and the production of buildings	CLO30	Prepare design project briefs and documents
		CLO31	Manage the architect's context in the construction industry including his role in the bidding and procurement of architectural services

Title	Name	Signature
Course coordinator	**Dr. Yasmin Talaat Ismail**	
Head of Department	**Assoc Prof. Dr. Reham Othman**	
Date of Approval	**1/10/2022**	

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