	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	**Minor**			
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.

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	3
Structural systems and general layout.	4
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.	5
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.	6

Design of tension members.	7
Design of axially loaded compression members.	8
Design of axially loaded compression members.	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.	12
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.	13
Design of welded connections and details of welded connections.	14
Design of welded connections and details of welded connections.	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	Written exam	CLO.2, CLO.6
2	Discussions	CLO.2, CLO.6
3	Mid Term Exam	CLO.2
4	Class works	-
5	Projects	-
6	Researches	-
7	Reports	CLO.2
8	Presentations	-
9	Quiz	CLO.6
10	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Written Exam	16

2	Discussions	Weekly
3	Mid-term Exam	9
4	Class work	-
5	Projects	-
6	Researches	-
7	Reports	Bi-weekly
8	Presentations	-
9	Quiz	4 ,10
10	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
LMS
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	CLO.2, CLO.6
Structural systems and general layout.	1	CLO.2, CLO.6
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.	1	CLO.6
Loads, Classification of Sections, Slenderness Ratios and Buckling Lengths and Analysis and design concepts, ASD, LRFD design concepts.	1	CLO.6
Design of tension members.	1	CLO.6
Design of axially loaded compression members.	1	CLO.6
Design of axially loaded compression members.	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	CLO.2, CLO.6
Design of non-pretension, pretention bolted connections (Shear, Tension & Shear + Tension) and details of bolted connections.	1	CLO.2, CLO.6
Design of welded connections and details of welded connections.	1	CLO.2, CLO.6
Design of welded connections and details of welded connections.	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.

Title	Name	Signature
Course coordinator	**Dr. Medhat Mahmoud Momtaz**	
Head of Department	**Assoc. Prof. Dr. Reham Othman**	
Date of Approval	**7/10/2024**	

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 / fourth level			
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 (Los)	Teaching and Learning Methods											
	Lectures	Assignment	Labs	Research and Reports	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	LOs
1	Discussions	CLO15-CLO22
2	Mid Term Exam	CLO22
3	Researches	CLO15-CLO22
4	Presentations	CLO15-CLO22
5	Quiz	CLO22
6	Written exam	CLO22

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Discussions	weekly
2	Mid Term Exam	7
3	Researches	4 & 12
4	Presentations	4 & 12
5	Quiz	4 & 12
6	Written exam	16

6.3 Weighting of Assessments

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

7. List of References

- architecture from Functional to deconstructive ISBN 9789770528464-2023 publisher Anglo-Egyptian Library Muhammad Tawfiq Abdel Gawad
- Salah Zaitoon: The Architecture of the Twentieth Century, 1993. 4th Edition. ISBN-13: 978-1118745083.
- De Bono, E., Serious Creativity (2023): Using the Power of Lateral Thinking to Create New Ideas, Harper Collins, 6th Edition Publisher : Harpercollins. ISBN-13: 978-0887305665
- د/طارق ابو عوف (2015) كتاب المبدأ التصميمي Design concept، مكتبة الأنجلو المصرية.
- Ali Raafat: Content and Form between Rational and Emotional, 2023.

8. Facilities required for teaching and learning

Lecture/LMS
Whiteboard
Lecture room equipped with e-learning tools (internet, mike, etc.)
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 20th century	1	CLO.22
2	The Industrial Revolution and its impact on architectural trends and the creation of new types of buildings	1	CLO.22
3	Chicago Louis Sullivan School	1	CLO.22,
4	Researches discussion	1	CLO.15-CLO.22
5	Art nouveau and Antonio Gaudi School	1	CLO.22
6	Formalism Theory	1	CLO.22
8	Technological theory	1	CLO.22
9	Mendelssohn's Expressionist Theory	1	CLO.22
10	Organic Theory	1	CLO.22
11	Structural theory	1	CLO.22
12	Quiz& Researches discussion and presentation	1	CLO.15- CLO.22
13	deconstruction theory Zaha Hadid ,Frank Gerry	1	CLO.22
14	revision	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	**Assoc. Prof. Rania Badawy**	
Head of Department	**Assoc. Prof. Reham Osman**	
Date of Approval	**17/9/2024**	

Course Specification

Course Code: ARE 3163 **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	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)

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 & Project Evaluation	1
Levels and stages of Architectural Criticism & Project Evaluation	2
How do you write an architecture critique	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
Critical issues in applied reality for contemporary Egyptian arch. Part 1	8
Critical issues in applied reality for contemporary Egyptian architecture. Part2	10
How to make effective critertion for critical article.	11
Project of Architectural Criticism of Down Town of Cairo.	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
CLO5	√	√	-	√	-	√	-	√	√	√	-	-
CLO.22	√	√	-	√	-	-	-	-	-	-	-	-

7. Students' Assessment

6.1 Students' Assessment Method

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

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Written exam	16
2	Discussions	weekly
3	Mid Term Exam	9
4	Class works (Assignments)	6-10

5	Projects	-
6	Researches	15
7	Reports	15
8	Presentations	10-15
9	Quiz	-
10	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Assignments			%10	10
	Researches and reports			%10	10
	Presentation			%5	5
	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
LMS
White board
Data show

10. Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Concepts and Benefits of Architectural Criticism & Project Evaluation	1	CLO.5
Levels and stages of Architectural Criticism & Project Evaluation	1	CLO. 5
How do you write an architecture critique	2	CLO.5
Types and classifications of architectural criticism	1	CLO.22
Architectural criticism intellectual trends	1	CLO.22
Emphasizing the multiplicity of architectural thinking.	2	CLO.22

Techniques of evaluating projects are discussed.		
Critical issues in applied reality for contemporary Egyptian arch. Part 1	1	CLO.22
Critical issues in applied reality for contemporary Egyptian architecture. Part2	2	CLO5-CLO.22
How to make effective critertion for critical article.	1	CLO.22
Prject of Architectural Criticism of Down Town of Cairo.	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	**Dr. Nesma Helmy**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**7/10/2024**	

Course Specification

Course Code: ARE 3162 **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 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)

CLO3	Conduct appropriate experimentation and/or simulation to draw conclusions.
CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

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)	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
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	CLOs
1	Fianl exam	CLO.3- CLO.22
2	Discussions	CLO.3- CLO.22
3	Mid Term Exam	CLO.3- CLO.22
4	Class works	CLO3
5	Projects	CLO3
6	Researches	-
7	Reports	-
8	Presentations	-
9	Modeling and Simulation	CLO22
10	Quiz/Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Final exam	16
2	Discussions	weekly
3	Mid Term Exam	9
4	Class works	weekly
5	Projects	11-15
6	Researches	-
7	Reports	-
8	Presentations	-
9	Modeling and Simulation	10
10	Quiz/Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion	Discussions	%50	50	%5	5
	Class works			%7	7
				%3	3
	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

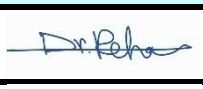
Lecture/Classroom
White board
Data show

9. Matrix of Course Content with Course LO's

No.	Topics	Aim	CLO's
1	Studying the new materials of presentation	1	CLO.3
2	Studying properties of materials	1	CLO.3
3	How to use color and materials with sketches (plans -layouts)	1	CLO.22
4	How to use color and materials with sketches (Elevations -Sections)	1	CLO.22
5	Train the student how to do presentation for the architectural areas and spaces - internal and external	2	CLO.22
6	How to represent various material in 3D color and Texture	2	CLO.22
7	How to make models to create ability for architectural imagination.	2	CLO.22
8	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
10	Applying 2d presentaion in sample project	1,2	CLO.3- CLO.22
11	Applying 3d presentaion in sample project	1,2	CLO.3- CLO.22
12	Create model for sample project	1,2	CLO.3- CLO.22
13	Add effecting on drawings	1,2	CLO.3- CLO.22
14	submitting final project	1,2	CLO.3- CLO.22

10. Matrix of Program LOs with Course Los

Program LOs		Course Los	
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 appropriate experimentation and/or 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.	CLO.22	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	**7/10/2024**	

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 for creative design.	2
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	8
8	develop basic thinking, visualizing and problem-solving skills , in order to apply these skills to a realistic simple creative project	9
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

5. Teaching and Learning methods

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

6. Students' Assessment

6.1 Students' Assessment Method

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

10	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Written exam	15
2	Discussions	weekly
3	Mid Term Exam	7
4	Class works	weekly
5	Projects	-
6	Researches	3-4-13
7	Reports	-
8	Presentations	3-4-13
9	Quiz	-
10	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, statistical analyses and 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	**7/9/2024**	

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 ecologically responsible designs by understanding modern structural and technological designs(AM5.1)

3. Course Learning Outcomes (CLOs)

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
Calculation of quantities: Drilling works	3
Calculation of quantities: Concrete works	4
Calculation of quantities: reinforcement Concrete works (foundations and columns)	5
Calculation of quantities: reinforcement Concrete works (Roof, beams, lintels and parapets	6
Follow up and presentation of Collective research about types of finishing	8
Calculation of quantities: Brick works	9

Calculation of quantities: backfill works Specifications and Tenders, scrutinizing of tender, Accepting Tenders, Notice-Inviting tender	10
Calculation of quantities: isolation works	11
Calculation of quantities: plastering works	12
project delivery	13

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
CLO29	√	√	-	√	-	√	-	-		√	√	-
CLO30	√	√	-	√	-	√	-	√	√	√	√	√
CLO31	√	-	-	-	-	-	-	√	√	√	-	-

6.Students' Assessment

6.1 Students' Assessment Method

N	Assessment Method	CLOs
1	Written exam	CLO.29, CLO.30, CLO.31
2	Discussions	CLO.30, CLO.31
3	Mid Term Exam	CLO.30, CLO.31
4	Class works	CLO.29, CLO.30
5	Projects	-
6	Researches	CLO.29, CLO.30
7	Reports	-
8	Presentations	CLO.29, CLO.30
9	Quiz	-
10	Skiz	-

6.2 Assessment Schedule		
No.	**Assessment Method**	**Weeks**
1	Written exam	15
2	Discussions	weekly
3	Mid Term Exam	7
4	Class works	weekly
5	Projects	-
6	Researches	8- 10 – 12
7	Reports	-
8	Presentations	8- 10 – 12
9	Quiz	-
10	Skiz	-

6.3 Weighting of Assessments					
	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
Teacher Opinion	Discussions	40%	60	3%	5
	Researches			6%	10
	class works			14%	20
	Presentations			3%	5
	Mid-term exam			14%	20
Final Exam	Written exam	60%	90	60%	90
Total		100%	150	100%	150

7.List of References

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

2-خلوصي،محمد ماجد(2015).الكميات والمواصفات ج2.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

8.Facilities required for teaching and learning

Lecture hall
White board
Data show
LMS

9.Matrix of Course Content with Course CLO's

Topics	Aim	CLO's
Introduction to quantities and specifications	1	CLO.29
Elements of the total construction project cycle and processes.	1	CLO.29, CLO.31
Calculation of quantities: Drilling works	1	CLO.31
Calculation of quantities: Concrete works	1	CLO.30
Calculation of quantities: reinforcement Concrete works (foundations and columns)	1	CLO.30
Calculation of quantities: reinforcement Concrete works (Roof, beams, lintels and parapets	1	CLO.30
Follow up and presentation of Collective research about types of finishing	1	CLO.30
Calculation of quantities: Brick works	1	CLO.30
Calculation of quantities: backfill works Specifications and Tenders, scrutinizing of tender, Accepting Tenders, Notice-Inviting tender	1	CLO.29, CLO.30
Calculation of quantities: isolation works	1	CLO.29, CLO.30
Calculation of quantities: plastering works	1	CLO.29, CLO.30
project delivery	1	CLO.31

10. 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.	**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. Hadeel** Mahmoud	
Head of Department	**Assoc Prof. Dr. Reham Othman**	
Date of Approval	**17/9/2024**	

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 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

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	Written exam	CLO21,CLO22,CLO23,CLO24
2	Discussions	CLO23
3	Mid Term Exam	CLO21,CLO22,CLO23,
4	Class works	CLO21,CLO22,CLO23,CLO24
5	Projects	CLO21,CLO22,CLO23,CLO24
6	Researches	CLO23
7	Reports	-
8	Presentations	CLO23
9	Quiz	-
10	Skiz	CLO21,CLO22,CLO23,CLO24

6.2 Assessment Schedule

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

10	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. Prof. Reham Othman** **Assoc. Prof. Yasmin Talaat** **Dr. Hadeer Abdelsamie**	  
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**17/9/2024**	

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 and Design and implement more inclusive architectural and urban projects while exploiting modern technologies through proper planning and participatory work. (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
Sections phase of students project	8
Follow up elevations of students project	10
Elevations phase of students project	11
Plumping phase of students project	12
Final project (Full drawings of preliminary stage)	13

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	Written exam	Clo30, Clo31
2	Presentation	Clo30, Clo31
3	Discussions	Clo30, Clo31
4	Mid Term Exam	Clo30, Clo31
5	Class works (Assignment)	Clo30, Clo31
6	Projects	Clo30, Clo31
7	Research and Reports	Clo31

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Written exam	16
2	Presentation	Week 3
3	Discussions	weekly
4	Mid Term Exam	7
5	Class works	weekly
6	Projects	From week 5 To 15
7	Research and Reports	week 15

6.3 Weighting of Assessments					
	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
Teacher Opinion	Class works	60	60	25	25
	Project			15	15
	Mid-term exam			20	20
Final Exam	Written exam	40	40	60	60
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(2015) ، 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
LMS

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	**Assoc. Prof. Marwa Emad**	
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**17/09/2024**	

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	Use data analysis, objective engineering udgment, and simulation (AM1-1).

3. Course Learning Outcomes (CLOs)

CLO16	Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
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

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 Importing AutoCAD Drawings(DWG):	5
Spline Modifiers: Commands: Lathe	6
Spline Modifiers: Commands: , Sweep, Bevel Profile	7
3D Commands Windows & Doors in 3DMAX.	8
2D Commands: Loft.	9
- Editable poly: Part (1)- Selection & Soft Selection. Part (2)- Edit Vertices & Edges. Part (3)- Edit Polygon & Geometry.	10
Using 2D and 3D commands to create models of interior spaces and furniture. Lightings (Part 1+ Part 2) / Materials (Part 1+ Part 2)/ Cameras. Render	11
Starting final project using 3DMAX skills.	12
Final project evaluation for all required drawings.	13

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	Written exam	CLO21,CLO22
2	Mid Term Exam	CLO21,CLO22
4	Class works	CLO16CLO21,CLO22
5	Projects	CLO21,CLO22
6	Researches	-
7	Reports	-
8	Presentations	-
9	Quiz	-
10	Skiz	-

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

6.3 Weighting of Assessments

	Assessment Method	**Weights%**	**Weights**	**Weights%**	**Weights**
	Class works	50	50	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 in writing – with a range of audiences using contemporary tools.

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, 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. Marwa Emad**	
Head of Department	**Assoc. Prof. Reham Othman**	
Date of Approval	**17/09/2024**	

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 / fourth level			
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
CLO22	use Adequate knowledge of history, related fine arts, culture, local heritage, technologies and human sciences

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
CLO13	√	-	-	√	-	√	-	√	-	√	√	-
CLO21	√	-	-	√	-	√	√	√	-	√	√	-
CLO22	√	-	-	√	-	-	√	-	-	-	√	-

6. Students' Assessment

6.1 Students' Assessment Method

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

6.2 Assessment Schedule

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

- The Story of Post-Modernism (2023): Five Decades of the Ironic, Iconic and Critical in Architecture 1st Edition by Charles Jencks ISBN-13978-0470688953Publisher Wiley
- Architecture from Functional to deconstructive ISBN 9789770528464-2021 publisher Anglo-Egyptian Library Muhammad Tawfiq Abdel Gawad
- Salah Zaitoon: The Architecture of the Twentieth Century. 4th Edition. ISBN-13: 978-1118745083.
- Architecture for the Poor: An Experiment in Rural Egypt (Phoenix Books) by Hassan Fathy (2020): ISBN-13 978-0226239163Publisher University of Chicago Press
- The Laguage of Postmodern Architecture Paperback –2020 by Charles Jencks six edition

8. Facilities required for teaching and learning

Lecture
White board
LMS
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

Title	Name	Signature
Course coordinator	**Assoc Prof. Rania Badawy**	
Head of Department	**Assoc Prof. Reham Othman**	
Date of Approval	**7/10/2024**	

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	Use data analysis, objective engineering udgment, and simulation (**AM1.1)**

3. Course Learning Outcomes (CLOs)

CLO15	Function efficiently as an individual and as a member of multi-disciplinary and multi-cultural teams
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

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	Written exam	**CLO.21, CLO.22**
2	Discussions	**CLO.15**
3	Mid Term Exam	**CLO.21, CLO.22**
4	Class works	**CLO.21, CLO.22**
5	Projects	**CLO.15, CLO.21, CLO.22**
6	Researches	**CLO.15, CLO.22**
7	Reports	-
8	Presentations	-
9	Quiz	-
10	Skiz	-

6.2 Assessment Schedule

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

- Robert A. Beauregard," Advanced Introduction to Planning Theory", Edward Elgar Publishing, 2023, ISBN:9781788978903, 1788978900.
- Donald L. Elliott, “A Better Way to Zone: Ten Principles to Create More Livable Cities”, Island Press ,2022, ISBN:9781597261814, 1597261815.
- Gauzin-Muller, D., Sustainable Architecture and Urbanism: Concepts, Technologies,2020, Princeton Architectural Press, ISBN:9783764366599, 3764366591.
- Carmona, M., Heath, T., Oc, T. and Tiesdell, S.,”Public Places Urban Spaces.”, Published by Taylor & Francis,2022, ISBN:9781136020490, 1136020497.

8. Facilities required for teaching and learning

Lecture
Whiteboard
LMS
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**	
Head of Department	**Assoc Prof. Reham Othman**	
Date of Approval	**7/10/2024**	

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	Train the students for innovative and creative thinking, describing and solving design problems and requirements. (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 buildings	7

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	Written exam	CLO23,CLO25 ,CLO27
2	Discussions	-
3	Mid Term Exam	CLO23,CLO25 ,CLO27
4	Class works	CLO23,CLO25,CLO27
5	Projects	CLO25 ,CLO27
6	Researches	CLO23,CLO25,CLO27
7	Reports	-
8	Presentations	CLO25
9	Quiz	-
10	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	%60	60	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** **Assocc. Prof. Reham Othman**	
Head of Department	**Assocc. Prof. Reham Othman**	
Date of Approval	**1/10/2024**	

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

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 building users
CLO24	Deal with the relation between people, buildings, and their surrounding environment

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

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
	Discussions	50	50	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 buildings and their surrounding environment, with the necessity of linking the buildings and the spaces	CLO23	Produce designs that meet the requirements of building users
		CLO24	Deal with the relation between people, buildings, and their surrounding environment

	between them to the scale of humanity and its needs		

Title	Name	Signature
Course coordinator	**Dr. Yasmin Talaat Ismail**	
Head of Department	**Assoc Prof. Dr. Reham Othman**	
Date of Approval	**7/10/2024**	

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	Provide the students with modern academic and technical skills, cultural knowledge of history, fine arts, and local and international heritage (AM 3.1)

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
Lyout: 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	Written exam	CLO.27, CLO.31
2	Discussions	-
3	Mid Term Exam	CLO.27, CLO.31
4	Class works	-
5	Projects	CLO.27
6	Researches	--
7	Reports	-
8	Presentations	-
9	Quiz	-
10	Skiz	-

6.2 Assessment Schedule

No.	Assessment Method	Weeks
1	Written exam	16
2	Discussions	-
3	Mid Term Exam	9
4	Class works	-
5	Projects	14
6	Researches	8-13
7	Reports	-
8	Presentations	-
9	Quiz	-

10	Skiz	-

6.3 Weighting of Assessments

	Assessment Method	Weights%	Weights	Weights%	Weights
Teacher Opinion		60	60		
	Mid Term Exam			20	20
	Researches			10	10
	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] Chee Seong C., Varenyam A. (2021). Building Materials for Sustainable and Ecological Environment . ISBN : 9789811617065, 9811617066

[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	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	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	**7/10/2024**	