



Program Specification of Architectural Engineering and Design



2024/2023



Architectural and design Engineering Program Specification

Academic year: 2023-2024



Content

Main Topics	Page No.
1. General	1
1. Basic Information	1
2. Staff Members	1
B. Professional Information	1
1. Introduction	1
2. Program mission	2
3. General and executive objectives of the program	2
4. Distinctive features of the program	3
5. Job opportunities	3
6. The attributes of the program alumni	3
7. The competences of the graduate	7
8. Learning Outcomes of the program (LO's)	10
9. Duration of the program	13
10. Program structure	14
11. Program Levels / Courses	13
12. Program study plan	20-24
13. The tree diagram of the courses	25
14. The contribution between the courses and the LOs of the program	26
15. Teaching and learning methods included in the program	30
16. Student Assessment Methods	31
17. Program Admission Requirements	32
18. Program evaluation methods	34
19. Course Contents	34-51
Appendixes	
Appendix 1: Report of external evaluation	
Appendix 2: Report of Internal evaluation	
Appendix 3: Staff Members	
Appendix 4: The mission of the program contributes the mission of the institute.	
Appendix 5: The teaching and learning strategies of the program	
Appendix 6: The contribution between the courses and the teaching and learning methods of the program	
Appendix 7: The contribution between the courses and the assessment methods of the program	
Appendix 8: Course Specifications	



List of Table	Page No.
Table (1): The contribution between the attribute of the program alumni and the objectives of the program	5-6
Table (2): The compatibility of the attributes of the program alumni with program mission	6
Table (3): The relation between the program objectives and the competence of the graduate	8-10
Table (4) The relation between the competencies and the learning out comes of the program	11-12
Table (5) Identification of the credit hours of the program	13
Table (6): The subject area of the program	13
Table (7): The courses corresponding to the levels	13-18
Table (8): Program study plan	19-23

List of Matrixes	Page No.
Matrix (1) of contribution between The attributes of the program: (AP) and NARS Attributes of the Alumni: (AN)	4
Matrix (2): The contribution between the graduate competencies of the program and the competencies of the graduate of NARS 2018	8
Matrix (3): The relation between the competencies and the learning out comes of the program	13
Matrix (4): The contribution between the Competences of the graduate and the courses of the program/ the action plan	26-29
Matrix (5): The Compatibility of learning out comes of the program (LOs) with teaching and learning methods	30-31
Matrix (6): Compatibility of learning out comes of the program (LOs) with Assessment methods	32



Program Specification For the academic year 2023/2024

A. General

1. Basic Information

Faculty / Institute:	Higher Valley Institute of Engineering and Technology in Obour – Qalyubia
Department:	Architecture and Design
Program Title:	Architecture and Design
Nature of the program:	Mono
Scientific Department responsible for the program:	Department of Architecture and Design
Head of Department:	Dr. Fahima EL Shahed
Program Coordinator:	Dr. Nadia Ahmed
External evaluator:	Prof. dr. Gehan Ebrahim (Appendix 1)
Date of external evaluation:	September 2022
Internal evaluator:	The Institute's Internal Evaluation Committee
Date of Internal evaluation:	July 2023
Date of approval from the higher ministry of education/ no. of registration	27/1/2008
Date of program Operation:	2009- 2010
Date of the Department council approval	Department council's board meeting in 25-9-2023

2. Staff Members

Architectural and design Engineering Program is taught by 24 highly qualified staff members, 7 of them are full time employed and 7 are part time staff in addition to 10 full time employed staff members for teaching the basic science and civil subjects. (Appendix 3)

B. Professional Information

1. Introduction

Architecture and Design is a branch of engineering which is based on various architectural designs and application of construction fitted with various accomplished general basic sciences, applied researches and economic fundamentals. This branch is responsible for teaching the student how to Construct and develop cities within urban realms. The discipline of architecture engineering is based on the following:

- Gaining knowledge and skills from human and physical sciences, humanities and fine and applied arts.
- Addressing the accommodation of all human activity in all places under all conditions.



- Understanding the physical places as: historical, cultural, social spaces and political and virtual environments.
- Proposing forms and configures the built environment.

The program aims to provide the student with areas of knowledge and skills that suit the needs of the labour market and cope with the accelerated technological progress in light of the Fourth Industrial Revolution. Also, it seeks to develop the student skills for self- learning to be able to achieve progress lonely or with others; .so he has to be trained to take responsibility in form of producing researches or reports to know how to obtain, analyse and classify new data, also he has to be trained to involve through the global issues and solve problems related to the society within projects. So, the program of Architecture and Design focuses on increasing students' ability to receive information, think critically, solve problems, attend field trainings so that they are able to keep pace with the rapid development, the needs and systems of the labour market.

The current program fulfills the NARS requirements of Architectural Engineering set by NQAE (national quality assurance in Egypt), as these standards are permitted in 2-10-2021 by the academic committee counsel. And approved in 25-10-2021 by the department committee counsel.

And the program is supported by internal reviser committee and external revisor.

2. Program Mission

- Preparing a generation of creative architects.
- Preparing a generation capable of dealing with the needs, techniques and systems of the labour market in line with the needs of the age and the requirements of all category of society.
- Preparing a generation that has the competitive ability in the fields of scientific research and architectural applications at the local and regional levels.

The mission of the program contributes the mission of the High valley institute for engineering and technology as shown in appendix (4)

3. General and Executive Objectives of the Program:

a. Develop the philosophy of architectural design and urban planning according to the needs of all category of society within the framework of sustainable development 2030.

O1- Develop students' creative and imaginative skills in the design process.

O2- Develop students' abilities to develop strategies to solve societal problems.

O3- Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.

b. The ability to train students and providing professional and scientific advisory services to serve the community in the field of architecture and urbanism.

O4- Training students on projects that adopt a solution to contemporary societal problems especially the disable society.

O5- preparing the students to conduct professional drawings related to the standards and the legislations.

c. Enabling students to compete in the labor market and keep pace with the rapid technological progress.

O6- Developing students' professional skills and the ability to self- and continuous learning.

O7- Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.



- O8- Students gain experiences in effective communication with the surrounding community.
- O9- preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.

d. Develop the Qualification of the graduate to connect with the scientific research system and integration with societal and environmental problems and trying to solve them.

- O10- Develop analysis skills through simulation methods.
- O11- Provide students with the skills to conduct scientific research

4. Distinctive Features of The Program:

- The educational program provides scientific content that keeps pace with sustainable development goals 2030 by adopting the “Design for all” philosophy within the educational program courses
- The graduate of the program is able to work in a number of agencies concerned with architecture and urban planning.
- The program provides an ideal environment for the teaching and learning process and meets the reference ratios for the quality of education.
- The program applies the credit hours system according to an approved regulation that ensures continuous development by 20% annually.
- The program is linked to the historical status of the Institute since its inception.

5. Job Opportunities

- Consultancy bureau (architecture, planning, urban design).
- Research centers (construction - architecture - planning - housing and population studies - environmental studies - construction building technology).
- Construction companies (architectural and implementation).
- Economic and feasibility studies of projects.
- Quality and modernization entities.
- Planning, management and follow-up.
- Improvement programs.
- Interior design.
- Landscape design.
- Real estate investment field.

6. The Attributes of The Program Alumni:

The Program adopted the attributes of the Engineers of NARS 2018 to be attributes of the program alumni.

a. NARS Attributes of the Alumni: (AN)

2. Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations;
3. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation;
4. Behave professionally and adhere to engineering ethics and standards;



5. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance;
6. Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community;
7. Value the importance of the environment, both physical and natural, and work to promote sustainability principles;
8. Use techniques, skills and modern engineering tools necessary for engineering practice;
9. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies;
10. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner;
11. Demonstrate leadership qualities, business administration and entrepreneurial skills.

b. The attributes of the program: (Ap)

1. Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations;
2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation;
3. Behave professionally and adhere to engineering ethics and standards;
4. Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance;
5. Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community;
6. Put sustainability's guiding principles into practice while minimizing energy usage and respecting the physical environment and natural resources.
7. Use techniques, skills and modern engineering tools necessary for engineering practice;
8. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies;
9. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner;
10. Demonstrate leadership qualities, business administration and entrepreneurial skills.
11. Create designs and join projects that meet the disables needs.

Matrix (1) of contribution between The attributes of the program: (AP) and NARS Attributes of the Alumni: (AN)

NARS Attributes of the Alumni: (AN)	The attributes of the program: (AP)										
	AP1	AP2	AP3	AP4	AP5	AP6	AP7	AP8	AP9	AP10	AP11
AN1											
AN2											
AN3											
AN4											
AN5											
AN6											
AN7											
AN8											
AN9											
AN10											



The attributes of the program alumni contribute with both of the mission and the objectives of the program as shown in table (1), (2).

Table (1): The contribution between the attribute of the program alumni and the objectives of the program

Executive Objectives of the Program	The attribute of the program alumni
O1- Develop students' creative and imaginative skills in the design process	Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.
	Create designs and join projects that meet the disables needs.
O2- Develop students' abilities to develop strategies to solve societal problems.	Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation
	Demonstrate leadership qualities, business administration and entrepreneurial skills.
	Create designs and join projects that meet the disables needs.
O3- Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve the goals of sustainable development 2030.	Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community
	Value the importance of the environment, both physical and natural, and work to promote sustainability principles
O4- Training students on projects that adopt a solution to contemporary societal problems.	Master a wide spectrum of engineering knowledge and specialized skills and can apply acquired knowledge using theories and abstract thinking in real life situations
	Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community.
	Create designs and join projects that meet the disables needs.
	Behave professionally and adhere to engineering ethics and standards.
O5- preparing the students to conduct professional drawings related to the standards and the legislations.	Behave professionally and adhere to engineering ethics and standards;
O6- Developing students' professional skills and the ability to self- and continuous learning.	Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post-graduate and research studies
O7- Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modelling process.	Use techniques, skills and modern engineering tools necessary for engineering practice.
O8- Students gain experiences in effective communication with the surrounding community.	Work in and lead a heterogeneous team of professionals from different engineering specialties and assume responsibility for own and team performance
	Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.
O9- Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.	Use techniques, skills and modern engineering tools necessary for engineering practice;



Follow Table (1): The contribution between the attribute of the program alumni and the objectives of the program

Executive Objectives of the Program	The attribute of the program alumni
O10- Develop analysis skills through simulation methods.	Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation
O11- Provide students with the skills to conduct scientific research.	Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation
	Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies

Table (2): The compatibility of the attributes of the program alumni with program mission

Program Mission	The attribute of the program alumni
Preparing a generation of creative architects	Communicate effectively using various methods, tools and languages with different categories to deal with academic/professional challenges in a critical and creative way.
	Apply critical and systemic analytical thinking to identify, diagnose and solve complex and different engineering problems.
Preparing a generation capable of dealing with the needs, techniques and systems of the labor market in line with the needs of the times and the requirements of all segments of society.	Communicate effectively using various methods, tools and languages with different categories to deal with academic/professional challenges in a critical and creative way.
	Apply critical and systemic analytical thinking to identify, diagnose and solve complex and different engineering problems.
	Take responsibility and lead a diverse team of different specialized professionals.
	Recognize its role in promoting the engineering field and contributing to the development of the profession and society.
	Appreciate the importance of the environment, both physical and natural, and work to promote the principles of sustainability.
	Master a wide range of engineering knowledge and specialized skills and be able to apply the knowledge gained using theories and abstract thinking in real-life situations.
	Demonstrate leadership qualities, business management and entrepreneurial skills.
	Create designs and join projects that meet the disables needs.
	Use modern engineering techniques, skills and tools necessary to practice engineering.
Act professionally and adhere to professional ethics.	
Prepare a generation that has competitiveness in the fields of scientific research and architectural applications at the local and regional level.	Take full responsibility for self-learning and self-development, and participate in the Demonstrate leadership qualities, business management and entrepreneurial skills.
	Use modern engineering techniques, skills and tools necessary to practice engineering.
	Create designs and join projects that meet the disables needs.
	Act professionally and adhere to professional ethics. Continuous learning and demonstration of the ability to participate in graduate and research studies. Matrix that matches the graduate's specifications with the mission of the program



7- The Competences of The Graduate

The Program adopted the competencies of the graduate of NARS 2018 for Engineering and Architectural Engineer.

General competences of the engineer of the institute (C):

- C1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.
- C2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.
- C3. 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.
- C4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- C5. Practice research techniques and methods of investigation as an inherent part of learning.
- C6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.
- C7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
- C8. Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
- C9. Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
- C10. Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.

Specialized competencies of the architect of the program (CR)

- CR1. Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements, using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.
- CR2. Produce designs that meet building users' requirements through understanding the relationship between people and buildings, and between buildings and their environment; and the need to relate buildings and the spaces between them to human needs and scale.
- CR3. Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and engineering problems associated with building designs.
- CR4. Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved.
- CR5. Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.



Matrix (2): The contribution between the graduate competencies of the program and the competencies of the graduate of NARS 2018

Competencies of the program		Competencies of NARS 2018														
		General competencies										Specific competences				
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	B5
General Competencies of the engineer of the institute	C1															
	C2															
	C3															
	C4															
	C5															
	C6															
	C7															
	C8															
	C9															
	C10															
Competencies of the architect of the program	CR1															
	CR2															
	CR3															
	CR4															
	CR5															

The relation between the program objectives and the competence of the graduate is studied in table below.

Table (3): The relation between program objectives and the competence of graduate

The program objectives	The competence of the graduate
O1- Develop students' creative and imaginative skills in the design process.	C3. 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.
	C9. Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
	CR1. Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements, using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.
O2- Develop students' abilities to develop strategies to solve societal problems.	C6. Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.
	C9. Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
O3- Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.	C1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.
	CR3. Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and engineering problems associated with building designs.



Follow table (3): The relation between program objectives and the competence of graduate

The program objectives	The competence of the graduate
O4- Training students on projects that adopt a solution to contemporary societal problems.	C1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.
	C3. 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.
	CR1. Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements, using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.
	CR2. Produce designs that meet building users' requirements through understanding the relationship between people and buildings, and between buildings and their environment; and the need to relate buildings and the spaces between them to human needs and scale.
O5- preparing the students to conduct professional drawings related to the standards and the legislations.	CR4. Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved.
O6- Developing students' professional skills and the ability to self- and continuous learning.	C5. Practice research techniques and methods of investigation as an inherent part of learning.
	C4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
	C10. Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.
	CR5. Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.
O7- Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modelling process	C4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
O8- Students gain experiences in effective communication with the surrounding community.	C7. Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
	C8. Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
O9- preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.	CR3. Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and engineering problems associated with building designs.
	CR4. Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved.
O10- Develop analysis skills through simulation methods.	C2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.



Follow table (3): The relation between program objectives and the competence of graduate

The program objectives	The competence of the graduate
O11- Provide students with the skills to conduct scientific research.	C5. Practice research techniques and methods of investigation as an inherent part of learning.
	C8. Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
	CR5. Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect’s role in the processes of bidding, procurement of architectural services and building production.

8. The Learning Out-Comes of The Program (LOs):

The program has three domains for the learning out comes: Cognitive Domains, Psychomotor Domains, and Affective Domains. And these learning out comes are related to the competencies of the graduate as Shown in table (4):

a. Cognitive Domains (LOs):

- Lo1. Identify, formulate basic science and mathematics.
- Lo2. Simulate, analyze and interpret data.
- Lo3. Assess and evaluate findings.
- Lo4. Use statistical analyses and objective engineering judgment to draw conclusions.
- Lo5. Display 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.
- Lo6. Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- Lo7. State the factors affecting the engineering projects.
- Lo8. Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- Lo9. State the relation between the building and the factors affecting its design, as; the environment, the people needs, scale required and the culture.
- Lo10. Identify structural design, construction, technology and engineering problems associated with building designs.
- Lo11. Display adequate knowledge of industries, organizations, regulations and procedures involved into projects.
- Lo12. State the role of the architect in the construction industry, including the architect’s role in the processes of bidding, procurement of architectural services and building production.

b. Psychomotor Domains (LOs):

- Lo13. Solve complex engineering problems.
- Lo14. Apply engineering fundamentals, basic science and mathematics.
- Lo15. conduct and develop appropriate experimentation.
- Lo16. Apply engineering design processes to produce cost-effective solutions that meet specified needs.
- Lo17. Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.



- Lo18. Conduct techniques and methods of investigation as researches and reports.**
- Lo19.** Plan, supervise and monitor implementation of engineering projects.
- Lo20.** Use contemporary tools to implement engineering design drawings, and presentations.
- Lo21.** Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- Lo22.** Produce designs that meet building users' requirements.
- Lo23.** Produce environmental, conservation and rehabilitation designs.
- Lo24.** Generate working drawings and workshop drawings matching to the designs.
- Lo25.** Integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery.
- Lo26.** Prepare design reports. project briefs and documents.

c. Affective Domains (LOs):

- Lo27.** Work efficiently as an individual and share in team works.
- Lo28.** Communicate to convey ideas verbally, numerically, graphically, and using symbols effectively with a range of audiences.
- Lo29.** Use creative, innovative and flexible thinking.
- Lo30.** Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
- Lo31.** Practice self-learning and other learning strategies.
- Lo32.** Use presentations to Transform design concepts into buildings and integrate plans into overall planning

Table no (4): The relation between the competencies and the learning out comes of the program

no	The competency	The learning out comes		
		Cognitive Domains	Psychomotor Domains	Affective Domains
1	Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.	1. Identify, formulate complex engineering problems	1. solve complex engineering problems 2. apply engineering fundamentals, basic science and mathematics	
2	Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.		1. Develop and conduct appropriate experimentation 2. simulation, analyze and interpret data 3. use statistical analyses and objective engineering judgment to draw conclusions.	
3	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.	1. Consider global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline 2. Detect the principles and contexts of sustainable design and development.	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	
4	Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.	identify contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.	Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.	



Follow table no (4): The relation between the competencies and the learning out comes of the program

no	The competency	The learning out comes		
		Cognitive Domains	Psychomotor Domains	Affective Domains
5	Practice research techniques and methods of investigation as an inherent part of learning.		Practice research techniques and methods of investigation	
6	Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.	Identify consideration of other trades requirements.	Plan engineering projects monitor implementation of engineering projects	
7	Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.			Work efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
8	Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.			Communicate to convey ideas verbally, numerically, graphically, and using symbols effectively
9	Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.	Use creative, innovative and flexible thinking		1. Manage effectively tasks, time, and resources. 2. acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
10	Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.			Maintain engagement in self-directed learning and life-long education.
11	Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements, using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.	using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.	Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements	
12	Produce designs that meet building users' requirements through understanding the relationship between people and buildings, and between buildings and their environment; and the need to relate buildings and the spaces between them to human needs and scale.	understanding the relationship between people and buildings, and between buildings and their environment; and the need to relate buildings and the spaces between them to human needs and scale.	Produce designs that meet building users' requirements	
13	Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and engineering problems associated with building designs.	understanding of: structural design, construction, technology and engineering problems associated with building designs.	Generate ecologically responsible, environmental conservation and rehabilitation designs	
14	Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved.	1. Classify the constraints of: project financing, project management, cost control and methods of project delivery Predict the knowledge of industries, organizations, regulations and procedures involved.	1. Transform design concepts into buildings integrate plans into overall planning	
15	Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.	understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.	Prepare design project briefs and documents	



Matrix no (3): The relation between the competencies and the learning out comes of the program

Learning out comes		Competencies of the program														
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	CR1	CR2	CR3	CR4	CR5
Cognitive Domains (LOs)	Lo1	*														
	Lo2		*													
	Lo3		*													
	Lo4		*													
	Lo5			*												
	Lo6				*											
	Lo7						*									
	Lo8							*				*				
	Lo9												*			
	Lo10													*		
	Lo11														*	
	Lo12															*
Psychomotor Domains (LOs)	Lo13	*														
	Lo14	*														
	Lo15		*													
	Lo16			*												
	Lo17				*											
	Lo18					*										
	Lo19						*									
	Lo20							*								
	Lo21										*					
	Lo22											*				
	Lo23												*			
	Lo24													*		
	Lo25														*	
	Lo26															*
Affective Domains (LOs)	Lo27						*									
	Lo28							*								
	Lo29								*							
	Lo30									*						
	Lo31										*					
	Lo32														*	

9. Duration of The Program:

The duration of study to obtain a bachelor’s degree is five academic years, starting with a general preparatory school year for all students, and the specialization after that is according to the student’s desire, inclinations and readiness, and is determined by the capacity of the departments. The study begins and ends in each semester by a decision of the Supreme Council of Universities.

The student has to pass 179 credit hours to fulfill the program as 169 hrs. Represent obligatory courses and 10 credit hours are for optional (elective) courses, as shown in table (5).

Totally credit hour 179 hour divided as levels as follows:



- Level one: 34 unit
- Level two: 36 unit
- Level three: 36 unit
- Level four: 37 unit divided as (31unit mandatory + 6unit elective)
- Level five: 36 unit divided as (32unit mandatory + 4unit elective)

Table no. (5): identification of the credit hours of the program

Total hours / unit	179 hour/ unit
	169 hour / unit
	10 hour / unit
lecture	138 hours
tutorial	160 hours
lab	34 hours

10. Program Structure :subject area of the program as the program legislation

The program is divided into (5) subject areas as shown in table (6)

Table no. (6): The subject area of the program

Subject area	Total hour	percentage
Basic science courses	24	13.4 %
Humanitarian – social science- general culture courses	17	9.5 %
Specialization courses	130	72.6 %
English courses	6	3.4 %
Field training courses	2	1.1 %

11. Program Levels / Courses

Table no. (7): The courses corresponding to the levels

Req	No	Code	Course	C.H	Weekly number of hours			Level	Semester
					Lecture	Exercise	Practical		
Institute Req.	1	BASE303	Engineering economics	3	2	2	0	3 or 4	First (Fall)
	2	BASE307	Contracts, Bids & Liabilities	2	2	0	0	Fifth	First (Fall)
	3	BASE308	Seminar	0	2	0	0	Fifth	Second (Spring)
	4	BASE309	Human Rights	0	2	0	0	Fourth	Second (Spring)
Institute Req. (optional 1-6 hrs.)	5	BASE102	Development of personal skills	3	2	2	0	Fourth	Second (Spring)
	6	BASE302	Art of etiquette and protocol	3	2	2	0	Fourth	Second (Spring)
	7	BASE401	Communication skills	3	2	2	0	Fifth	Second (Spring)
	8	BASE404	Negotiation skills	3	2	2	0	Fifth	Second (Spring)
Institute req. (optional 2 -6)	9	BASE109	Project management organization development	3	2	2	0	Second	Second (Spring)
	10	BASE201	Principles of business administration	3	2	2	0	Second	Second (Spring)
	11	BASE202	Principles of public relation	3	2	2	0	Second	Second (Spring)



Follow table no. (6): The courses corresponding to the levels

Req. Level	No	Code	Course	C.H	Weekly number of hours			Level	Semester
					Lecture	Exercise	Practical		
Institute req. (optional 2-6 hrs.)	12	BASE203	Production management	3	2	2	0	Second	Second (Spring)
	13	BASE206	Society and individual science	3	2	2	0	Second	Second (Spring)
	14	BASE207	Fundamental of management	3	2	2	0	Fourth	Second (Spring)
	15	BASE301	Principles of financial and management accounting	3	2	2	0	Fourth	Second (Spring)
	16	BASE305	Principles of organizational behavior	3	2	2	0	Fourth	Second (Spring)
	17	BASE306	Research methods	3	2	2	0	Fourth	Second (Spring)
	18	BASE402	Feasibility studies	3	2	2	0	Fourth	Second (Spring)
Basic science req. (Math)	19	MATH 101	Calculus 1	3	2	2	0	First	First (Fall)
	20	MATH 102	Calculus 2	3	2	2	0	First	Second (Spring)
	21	MATH 301	Probability and statistics	3	2	2	0	Second	First (Fall)
Basic science req. (Physics)	22	PHYS101	Classical mechanical, sound, heat	3	2	2	0	First	First (Fall)
	23	PHYS111	General physics laboratory (1)	1	0	0	3	First	First (Fall)
	24	PHYS102	Electricity and magnetism	3	2	2	0	First	Second (Spring)
	25	PHYS112	General physics laboratory (2)	1	0	0	3	First	Second (Spring)
Basic science req. (Chems.)	26	CHEM 101	General chemistry 1 for engineers	3	2	2	0	First	First (Fall)
	27	CHEM 111	General chemistry lab	1	0	0	3	First	First (Fall)
Basic science req.	28	CECE 101	Fundamental to computer programming	3	2	0	3	First	Second (Spring)
Basic science req. (English core)	29	ENGL 101	Elementary English	3	2	2	0	First	Second (Spring)
	30	ENGL 102	Lower intermediate English	3	2	2	0	Second	First (Fall)
	31	ENGL 201	intermediate English	3	2	2	0	These courses aim to develop the student's skills in the English language and are based on his/her desire and are not included in the number of credit hours required	
	32	ENGL 202	Upper intermediate English	3	2	2	0		
	33	ENGL 301	Advanced English	3	2	2	0		
	34	ENGL 302	Research writing and corresponds	1	0	2	0		
Engineering core req.	35	ENGR 101	Introduction to engineering	2	2	0	0	First	First (Fall)
	36	ENGR 105	Production engineering	2	2	0	0	First	Second (Spring)
	37	ENGR 102	Engineering Drawing and projection	2	1	2	0	First	First (Fall)
	38	ENGR 103	Engineering mechanics 1	3	2	2	0	First	First (Fall)
	39	ENGR 104	Engineering mechanics 2	3	2	2	0	First	Second (Spring)
	40	ENGR 203	Strength and testing of materials	3	2	2	0	Second	First (Fall)
Architecture core req.	41	ARCH 213	History of architecture 1	2	2	0	0	Second	Second (Spring)
	42	ARCH 215	History of architecture 2	2	2	0	0	Third	First (Fall)
	43	ARCH 219	Theory of architecture 1	2	2	0	0	Second	Second (Spring)
	44	ARCH 304	Theory of architecture 2	2	2	0	0	Third	First (Fall)



Follow table no. (6): The courses corresponding to the levels

Req. Level	No.	Code	Course	C.H	Weekly number of hours			Level	Semester
					Lecture	Exercise / studio	Practical lab		
Architecture core requirement	45	ARCH 315	Modern and contemporary foundations of art and architecture	2	2	0	0	Fourth	Second (Spring)
	46	ARCH 318	Concepts of urban planning	2	2	0	0	Third	Second (Spring)
	47	ARCH 201*	Architecture drawing	2	1	5	0	Second	First (Fall)
	48	ARCH 202	Computer application in architecture	1	0	0	3	Third	First (Fall)
	49	ARCH 205*	Building construction 1	2	1	5	0	Second	First (Fall)
	50	ARCH 206	Environmental control systems and design	2	2	0	0	Third	Second (Spring)
	51	ARCH 208	Three dimensional designs	2	1	0	3	Third	Second (Spring)
	52	ARCH 210*	Fundamentals of design and color and painting	2	1	3	0	Second	Second (Spring)
	53	ARCH 211*	Visual training	2	1	2	0	Second	First (Fall)
	54	ARCH 220*	Shade, shadow and perspective 1	2	1	5	0	Second	Second (Spring)
	55	ARCH 301*	Architecture design 1	3	1	7	0	Second	Second (Spring)
	56	ARCH 302*	Architecture design 2	3	1	7	0	Third	First (Fall)
	57	ARCH 305*	Shade, shadow and perspective 2	2	1	5	0	Third	First (Fall)
	58	ARCH 317*	Building construction 2	2	1	5	0	Second	Second (Spring)
	59	ARCH 320*	Building construction 3	2	1	5	0	Third	First (Fall)
	60	ARCH 330*	Building construction 4	2	1	5	0	Third	Second (Spring)
	61	ARCH 344	Acoustics and illumination	2	2	0	0	Fourth	First (Fall)
	62	ARCH 345*	Working drawing 1	3	2	4	0	Fourth	First (Fall)
	63	ARCH 401*	Interior design	2	1	0	7	Fifth	First (Fall)
	64	ARCH 402*	Architecture design 3	3	1	7	0	Third	Second (Spring)
	65	ARCH 403*	Architecture design 4	3	1	7	0	Fourth	First (Fall)
	66	ARCH 404*	Architecture design 5	3	1	7	0	Fourth	Second (Spring)
	67	ARCH 405*	Architecture design 6	3	1	7	0	Fifth	First (Fall)
	68	ARCH 406*	Working drawing 2	3	2	4	0	Fourth	Second (Spring)
	69	ARCH 407*	Urban design and landscape	3	1	7	0	Fourth	First (Fall)
	70	ARCH 414*	Housing	3	1	7	0	Fifth	First (Fall)
	71	ARCH 420*	Urban and regional planning	3	1	7	0	Fourth	Second (Spring)
72	ARCH 422*	Working drawing 3	3	2	4	0	Fifth	First (Fall)	
73	ARCH 425	Technical installation	2	2	0	0	Fourth	First (Fall)	
74	ARCH 429*	Working drawing 4	3	2	4	0	Fifth	Second (Spring)	
75	ARCH 490*	Senior project 1	3	1	7	2	Fifth	First (Fall)	
76	ARCH 491*	Senior project 2	3	1	7	2	Fifth	Second (Spring)	
77	ARCH 390	Internship in architecture	2	2	0	0	Fifth	Second (Spring)	
Structure requirements	78	CVVE 250	Field plan and topographic surveying	3	2	2	0	Third	Second (Spring)
	79	CVVE350	Structural analysis 1	3	2	2	0	Second	First (Fall)
	80	CVVE351	Structural analysis 2	3	2	2	0	Second	Second (Spring)
	81	CVVE352	Soil mechanics and foundation	3	2	2	0	Third	First (Fall)
	82	CVVE353	Structural steel design	3	2	2	0	Fourth	Second (Spring)
	83	CVVE354	Reinforced concrete design1	3	2	2	0	Third	First (Fall)
	84	CVVE355	Reinforced concrete design2	3	2	2	0	Third	Second (Spring)



Follow table no. (6): The courses corresponding to the levels

Req. Level	No.	Code	Course	C.H	Weekly number of hours			Level	Semester
					Lecture	Exercise / studio	Practical lab		
Architecture Elective Course (Optional 10 hrs.)	85	ARCH 207*	Interior construction	2=3	2=3	0	0		
	86	ARCH 209**	photography	2	2	0	0		
	87	ARCH 210	Interior materials	2	2	0	0		
	88	ARCH 212	Virtual reality studio in architecture	2	1	0	3	Fifth	First (Fall)
	89	ARCH 230*	Free hand drawing and modeling	2	2	0	0		
	90	ARCH 231	sculpture	2	2	0	0		
	91	ARCH 303	Geographical information system	2	1	0	3	Fourth	First (Fall)
	92	ARCH 316	Advanced computer – aid architectural design	2	1	0	3	Fourth	First (Fall)
	93	ARCH 319	Islamic architecture in Egypt and Syria	2	2	0	0		
	94	ARCH 321	Islamic architecture in Spain and north Africa	2	2	0	0		
	95	ARCH 322	World art survey 1	2	2	0	0		
	96	ARCH 323**	Illustration and rendering	2	2	0	0		
	97	ARCH 324**	Advanced representation	2	1	0	3	Fourth	Second (Spring)
	98	ARCH 325**	Modeling and rendering	2	2	0	0		
	99	ARCH 326	Global issues in architecture	2	2	0	0		
	100	ARCH 328	Architectural criticism	2	2	0	0		
	101	ARCH 332 #	Design for conservation	2	2	0	0	Fifth	First (Fall)
	102	ARCH 333	Architectural and urban design for residential building	2-3	2-3	0	0		
	103	ARCH 334	Architectural and urban design for public building	2-3	2-3	0	0		
	104	ARCH 335	Architectural and urban design for service complexes	2	2	0	0		
105	ARCH 336	Architectural design for industry	2	2	0	0			
106	ARCH 337	Architectural design of centers	2-3	2-3	0	0			
108	ARCH 339	Architecture and planning in the country side	2	2	0	0			
109	ARCH 341 *	Furniture design basic	2	2	0	0			
110	ARCH 342**	Film production 1	2	2	0	0			
111	ARCH 343	Critical discourse in design	2	2	0	0			
112	ARCH 345**	Web design1	2	2	0	0			
113	ARCH 346	World art survey 2	2	2	0	0			
114	ARCH 347	Vernacular architecture	2	2	0	0			
115	ARCH 348	Urban conservation	2	2	0	0			
116	ARCH 408 *	Structural design in wood	2	2	0	0			
117	ARCH 409**	Film production 2	2	2	0	0			
118	ARCH 410	Selected topics in architectural engineering	1-3	2	0	0			
119	ARCH 411**	Animation	2	2	0	0			



Follow table no. (6): The courses corresponding to the levels

Req. Level	No.	Code	Course	C.H	Weekly number of hours			Level	Semester
					Lecture	Exercise/studio	Practical lab		
Architecture Elective Course (Optional 10 hrs.)	120	ARCH 412**	Web design2	2	2	0	0		
	121	ARCH 413	Sit planning	2	2	0	0		
	122	ARCH 415	Comparative studies in architectural conservation	2-3	2	0	0		
	123	ARCH 416 #	Methods of architectural conservation	2-3	2	0	0		
	124	ARCH 417	Design of buildings resistant to earth quakes	2-3	2	0	0		
	125	ARCH 418	Sustainable architecture	2-3	2	0	0	Fifth	Second (Spring)
	126	ARCH 419	Urban planning in developing countries	2-3	2	0	0		
	127	ARCH 421	Urban sociology	2	2	0	0		
	128	ARCH 423	Green architecture	2-3	2	0	0		
	129	ARCH 42#	Selected topics in restoration	1-3	2	0	0		
	130	ARCH 480	Public Park integrated studio	2-3	2	0	0		

Minor or concentration * Interior Design # in Conservation ** in Multimedia Design or Urban Planning or any minor from any other major.



The Elective courses in architecture are most popular among students; as they are essential in the labor market



These elective courses in architecture are opened at the request of the students and are in the fourth or fifth level

Note:

The Program Board on August 30, 2021, And the Academic Council on September 4, 2021, approved the recommendation submitted by the Promotion and Development Committee regarding the action plan to improve the following:

- The actual hours of the practical courses match the credit hours as missioned in the reference standard of The Ministry of Higher Education 2020.
- Revis the prerequisite for the elective course Advanced Computer Applications in Architecture.

Action Plan:

A. Commitment to the number of credit hours and redistribute the number of actual hours in practical courses as follows:

Course Name	Course Code	New Distribution of actual hours to match the Credit hours					Pervious			
		Credit	Lect.	lab	Studio	Total	Lect.	Studio	Lab	Total
Architectural Design 1, 2, 3, 4, 5 & 6	ARCH 301, ARCH 302, ARCH 402, ARCH 403, ARCH 404, ARCH 405	3	1	0	7	8	2	6	0	8
Senior Project 1 & 2	ARCH 490, ARCH 491	3	1	2	7	10	2	8	0	10
Interior Design	ARCH 401	2	1	0	7	8	2	6	0	8



Course Name	Course Code	New Distribution of actual hours to match the Credit hours					Pervious			
		Credit	Lect.	lab	Studio	Total	Lect.	Studio	Lab	Total
Building Construction 1, 2, 3 & 4	ARCH 205, ARCH 317, ARCH 320, ARCH 330	2	1	0	5	6	2	4	0	6
Working Drawing 1, 2, 3 & 4	ARCH 345, ARCH 406, ARCH 422, ARCH 429	3	2	0	4	6	2	4	0	6
Urban design and landscape	ARCH 407	3	1	0	7	8	2	6	0	8
Urban and regional planning	ARCH 420	3	1	0	7	8	2	6	0	8
Housing	ARCH 414	3	1	0	7	8	2	6	0	8
Shade, Shadow & Perspectives 1 & 2	ARCH 220, ARCH 305	2	1	0	5	6	2	4	0	6
Geographical Information System (GIS)	ARCH 303	2	1	3	0	4	2	0	2	4
Advanced Computer-Aided Architectural Design	ARCH 316	2	1	3	0	0	0	0	3	
Advanced Representation	ARCH 324	2	1	3	0	0	Not explained			

B. Modify the prerequisite for the elective course of “Advanced Computer-Aided Architectural Design (ARCH 316)” to be a major course in line with the course description as follows:

Course Title	Course Code	Credit Hrs.	Modify to be a Major Course		Previous	
			Prerequisite (Major Course)		Prerequisite (Elective Course)	
			Code	Course Title	Code	Course Title
Advanced Computer-Aided Architectural Design	ARCH 316	3	ARCH 202	Computer Application in Architecture	ARCH 212	Virtual Reality Studio in Architecture



12. Program study plan

Table no. (8): Program study plan

First level- 1st term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	PHYS101	Classical mechanical, sound, heat	3	2	2	0	30	20	50	0	100
2	PHYS111	General physics laboratory (1)	1	0	0	3	50	10	40	0	100
3	CHEM 101	General chemistry 1 for engineers	3	2	2	0	30	20	50	0	100
4	CHEM 111	General chemistry lab	1	0	0	3	50	10	40	0	100
5	MATH 101	Calculus 1	3	2	2	0	30	20	50	0	100
6	ENGR 101	Introduction to engineering	2	2	0	0	30	20	50	0	100
7	ENGR 102	Engineering Drawing and projection	2	1	2	0	30	20	50	0	100
8	ENGR 103	Engineering mechanics 1 (statics)	3	2	2	0	30	20	50	0	100

First level- 2nd term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	PHYS102	Electricity and magnetism	3	2	2	0	30	20	50	0	100
2	PHYS112	General physics laboratory (2)	1	0	0	3	50	10	40	0	100
3	MATH 102	Calculus 2	3	2	2	0	30	20	50	0	100
4	CECE 101	Fundamental to computer programming	3	2	0	3	30	20	50	0	100
5	ENGR 105	Production engineering	2	2	0	0	30	20	50	0	100
6	ENGR 104	Engineering mechanics 2 (Dynamics)	3	2	2	0	30	20	50	0	100
7	ENGL 101	Elementary English	3	2	2	0	30	20	50	0	100



Second level – 1st term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	ARCH 201*	Architecture drawing	2	0	4	0	40	20	40	0	100
2	ARCH 205*	Building construction 1	2	1	5	0	25	15	60	0	100
3	ARCH 211*	Visual training	2	1	2	0	40	20	40	0	100
4	CVEE350	Structural analysis 1	3	2	2	0	25	15	60	0	100
5	ENGR 203	Strength and testing of materials	3	2	2	0	25	15	60	0	100
6	MATH 301	Probability and statistics	3	2	2	0	30	20	50	0	100
7	BASE309	Human Rights	0	2	0	0	30	20	50	0	100
8	ENGL 102	Lower intermediate English	3	2	2	0	30	20	50	0	100

Second level- 2nd term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	ARCH 213	History of architecture 1	2	2	0	0	25	15	60	0	100
2	ARCH 219	Theory of architecture 1	2	2	0	0	25	15	60	0	100
3	ARCH 220*	Shade, shadow and perspective 1	2	1	5	0	40	20	40	0	100
4	ARCH 210*	Fundamentals of design and color and painting	2	1	2	0	40	20	40	0	100
5	ARCH 301*	Architecture design 1	3	1	7	0	40	20	40	0	100
6	ARCH 317*	Building construction 2	2	1	5	0	25	15	60	0	100
7	CVEE351	Structural analysis 2	3	2	2	0	25	15	60	0	100
8	Base 306	Research Methods	3	2	2	0	30	20	50	0	100



Third level 1st term

No.	Code	Course	C.H	Weekly number of hours			Making				Total marks
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	
1	ARCH 302*	Architecture design 2	3	1	7	0	40	20	40	0	100
2	ARCH 320*	Building construction 3	2	1	5	0	25	15	60	0	100
3	ARCH 202	Computer application in architecture	1	0	0	3	40	20	40	0	100
4	ARCH 215	History of architecture 2	2	2	0	0	25	15	60	0	100
5	ARCH 304	Theory of architecture 2	2	2	0	0	25	15	60	0	100
6	CVVE 250	Field plan and topographic surveying	3	2	2	0	25	15	60	0	100
7	CVVE354	Reinforced concrete design1	3	2	2	0	40	20	40	0	100
8	BASE303	Engineering economics	3	2	2	0	30	20	50	0	100

Third level 2nd term

No	Code	Course	C.H	Weekly number of hours			Making				Total marks
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	
1	ARCH 402*	Architecture design 3	3	1	7	0	40	20	40	0	100
2	ARCH 330*	Building construction 4	2	1	5	0	25	15	60	0	100
3	ARCH 318	Concepts of urban planning	2	2	0	0	25	15	60	0	100
4	ARCH 206	Environmental control systems and design	2	2	0	0	25	15	60	0	100
5	ARCH 208	Three dimensional designs	2	1	2	0	40	20	40	0	100
6	ARCH 305*	Shade, shadow and perspective 2	2	1	5	0	40	20	40	0	100
7	CVVE355	Reinforced concrete design2	3	2	2	0	40	20	40	0	100
8	CVVE352	Soil mechanics and foundation	3	2	2	0	40	20	40	0	100



Forth level - 1st term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	ARCH 403*	Architecture design 4	3	1	7	0	40	20	40	0	100
2	ARCH 345*	Working drawing 1	3	2	4	0	40	20	40	0	100
3	ARCH 407*	Urban design and landscape	3	1	7	0	40	20	40	0	100
4	ARCH 344	Acoustics and illumination	2	2	0	0	25	15	60	0	100
5	ARCH 425	Technical installation	2	2	0	0	25	15	60	0	100
6	ARCH 303	Geographical information system	2	2	0	2	25	15	60	0	100
7	ARCH 316	Advanced computer – aid architectural design	2	1	0	3	25	15	60	0	100
8	CVEE353	Structural steel design	3	2	2	0	25	15	60	0	100

Forth level - 2nd term

No.	Code	Course	C.H	Weekly number of hours			Making				
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	Total marks
1	ARCH 404*	Architecture design 5	3	1	7	0	40	20	40	0	100
2	ARCH 406*	Working drawing 2	3	2	4	0	40	20	40	0	100
3	ARCH 420*	Urban and regional planning	3	1	7	0	40	20	40	0	100
4	ARCH 315	Modern and contemporary foundations of art and architecture	2	2	0	0	25	15	60	0	100
5	ARCH 324**	Advanced Representation	2	2	0	2	25	15	60	0	100
6	BASE401	Communication skills	3	2	2	0	30	20	50	0	100
7	BASE404	Negotiation skills	3	2	2	0	30	20	50	0	100



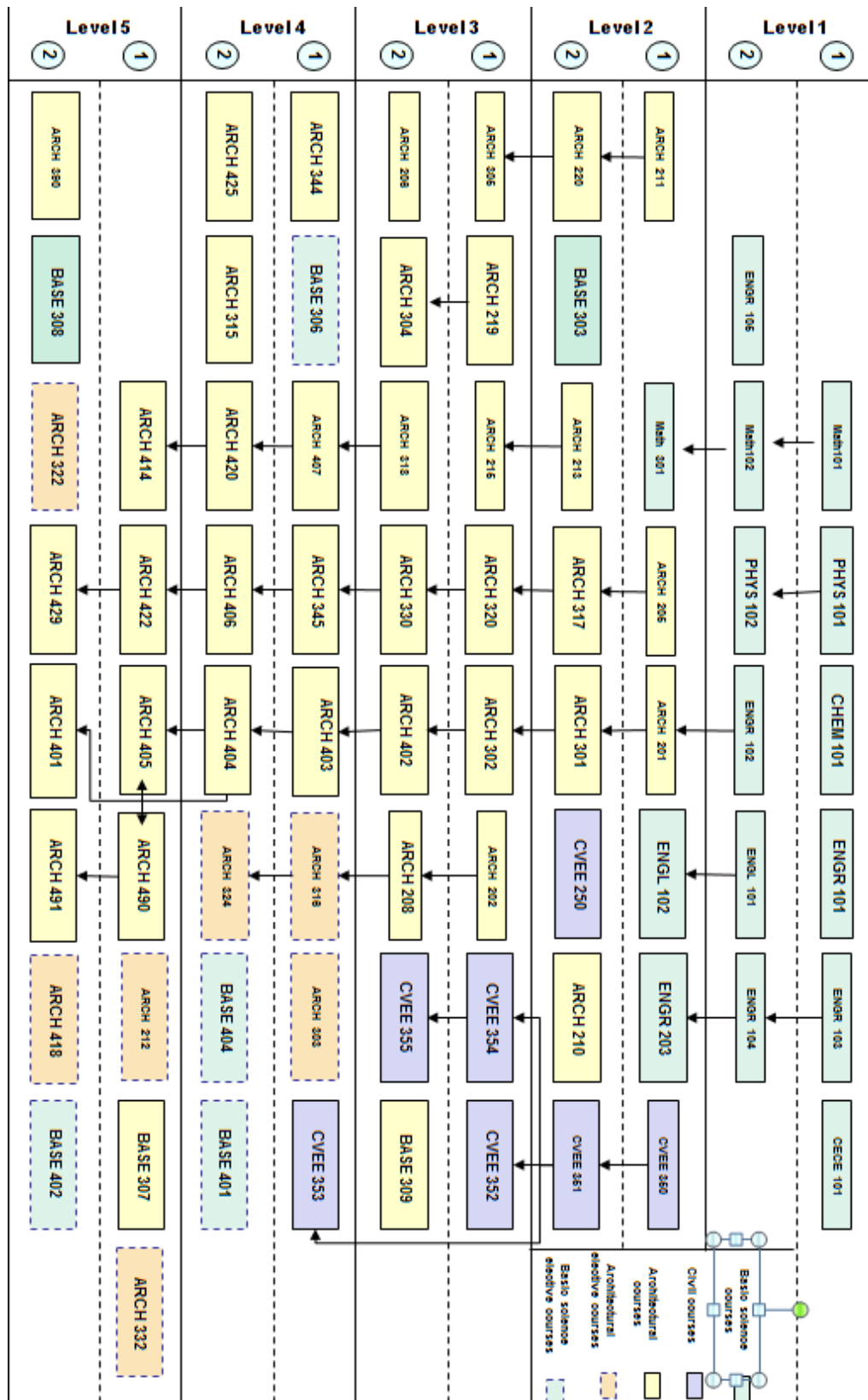
Fifth level- 1st term

No.	Code	Course	C.H	Weekly number of hours			Making				Total marks
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	
1	ARCH 490*	Senior project 1	3	1	8	1	40	20	40	0	100
2	ARCH 405*	Architecture design 6	3	1	7	0	40	20	40	0	100
3	ARCH 422*	Working drawing 3	3	2	4	0	40	20	40	0	100
4	ARCH 414*	Housing	3	1	7	0	40	20	40	0	100
5	ARCH 332 #	Design for conservation	2	2	0	0	25	15	60	0	100
6	BASE 307	Contracts, Bids& Liabilities	2	2	0	0	30	20	50	0	100

Fifth level- 2nd term

No.	Code	Course	C.H	Weekly number of hours			Making				Total marks
				Lecture	Tutorial / studio	Practical / Lab	Year work	Mid-term/ Practical exam	Final written exam	Practical / oral exam	
1	ARCH 491*	Senior project 2	3	1	8	1	40	20	40	0	100
2	ARCH 429*	Working drawing 4	3	2	4	0	40	20	40	0	100
3	ARCH 401*	Interior design	3	2	4	0	40	20	40	0	100
4	ARCH 390	Internship in architecture	2	2	0	0	40	20	40	0	100
5	ARCH 322	World Art Survey I	2	2	0	0	25	15	60	0	100
6	ARCH 418	Sustainable architecture	2	2	0	0	25	15	60	0	100
7	BASE308	Seminar	0	2	0	0	30	20	50	0	100
8	BASE 402	Feasibility Studies	3	2	2	0	30	20	50	0	100

13. The tree diagram of the courses



Note: In the academic year 2023-2024

- ARCH 425 is scheduled for the first semester rather than the second semester
- BASE 306 is scheduled for the second semester instead of the first semester



14. The contribution between the courses and the LOs of the program

Matrix no. (4): The contribution between the Competences of the graduate and the courses of the program/ the action plan

Requirement Levels	No.	Code	Course	Cognitive Domains (LOs)												Psychomotor Domains (LOs)												Affective Domains (LOs)									
				LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13	LO14	LO15	LO16	LO17	LO18	LO19	LO20	LO21	LO22	LO23	LO24	LO25	LO26	LO27	LO28	LO29	LO30	LO31	LO32		
Level 1	1	PHYS101	Classical mechanical, sound, heat	*		*	*								*		*		*											*							
	2	PHYS111	General physics laboratory 1	*		*	*								*																						
	3	CHEM 101	General chemistry 1 for engineers	*												*	*		*												*						
	4	CHEM 111	General chemistry lab	*		*	*								*		*		*												*						
	5	MATH 101	Calculus 1	*	*											*				*										*	*						
	6	ENGR 101	Introduction to engineering	*				*			*																										
	7	ENGR 102	Engineering Drawing and projection	*	*	*																*									*						
	8	ENGR 103	Engineering mechanics 1	*			*									*		*				*															
	9	PHYS102	Electricity and magnetism	*	*	*										*						*															
	10	PHYS112	General physics laboratory 2	*												*	*				*																
	11	MATH 102	Calculus 2	*	*	*											*											*		*							
	12	CECE 101	Fundamental to computer programming	*	*													*	*							*				*							
	13	ENGR 105	Production engineering	*							*						*	*			*																
	14	ENGR 104	Engineering mechanics 2	*	*											*					*																
	15	ENGL 101	Elementary English			*			*								*			*																	
Level 2	16	ARCH 201	Architecture drawing	*																	*								*		*	*	*				
	17	ARCH 205	Building construction 1	*				*																		*			*		*	*	*				
	18	ARCH 211	Visual training	*					*												*		*						*	*							
	19	CVEE350	Structural analysis 1	*	*		*		*			*																									



Follow Matrix no. (4): The contribution between the Competences of the graduate and the courses of the program/ the action plan

Requirement Levels	No.	Code	Course	Cognitive Domains (LOs)												Psychomotor Domains (LOs)												Affective Domains (LOs)								
				LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13	LO14	LO15	LO16	LO17	LO18	LO19	LO20	LO21	LO22	LO23	LO24	LO25	LO26	LO27	LO28	LO29	LO30	LO31	LO32	
Level 2	20	ENGR 203	Strength and testing of materials	*	*	*	*		*	*						*	*	*		*		*														
	21	MATH 301	Probability and statistics	*	*	*	*									*	*	*											*							
	22	BASE309	Human Rights	*	*	*	*									*	*	*		*		*							*	*				*		
	23	ENGL 102	Lower intermediate English	*	*	*	*									*	*	*				*						*	*							
	24	ARCH 213	History of architecture 1	*							*								*			*						*					*			
	25	ARCH 219	theory of architecture 1	*				*			*											*				*		*								
	26	ARCH 220	Shade, shadow and perspective 1	*																	*		*		*				*			*		*		
	27	ARCH 210	Fundamentals of design and color and painting	*															*		*		*					*	*							
	28	ARCH 301	Architecture design 1	*															*		*		*					*	*		*	*	*	*	*	
	29	ARCH 317	Building construction 2	*							*		*						*		*				*			*	*							
	30	CVEE351	Structural analysis 2	*	*	*	*									*	*					*							*	*						
31	BASE306	Research methods	*	*													*	*			*						*	*				*	*			
Level 3	32	ARCH 302	Architecture design 2	*							*								*		*		*					*	*		*	*				
	33	ARCH 320	Building construction 3	*							*						*				*		*						*	*		*	*			
	34	ARCH 202	Computer application in architecture	*													*				*		*						*	*		*	*		*	
	35	ARCH 215	History of architecture 2	*					*		*								*		*		*					*	*		*	*				
	36	ARCH 304	theory of architecture 2	*							*								*		*		*					*	*		*	*				
	37	CVEE 250	Field plan and topographic surveying	*	*				*								*				*		*					*	*		*	*				
	38	CVEE354	Reinforced concrete design1	*		*			*								*	*			*		*				*	*		*	*					
	39	BASE303	Engineering economics	*		*			*									*		*		*		*				*	*		*	*				
	40	ARCH 402	Architecture design 3	*															*		*		*		*			*	*		*	*				
	41	ARCH 330	Building construction 4	*								*							*		*		*		*		*	*		*	*					
	42	ARCH 318	Concepts of urban planning	*					*										*		*		*		*		*	*		*	*					



Follow Matrix no. (4): The contribution between the Competences of the graduate and the courses of the program/ the action plan

Requirement Levels	No.	Code	Course	Cognitive Domains (LOs)												Psychomotor Domains (LOs)												Affective Domains (LOs)								
				LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13	LO14	LO15	LO16	LO17	LO18	LO19	LO20	LO21	LO22	LO23	LO24	LO25	LO26	LO27	LO28	LO29	LO30	LO31	LO32	
Level 3	43	ARCH 206	Environmental control systems and design	*				*											*				*					*	*							
	44	ARCH 208	Three dimensional designs	*																	*								*		*					
	45	ARCH 305	Shade, shadow and perspective 2	*														*						*						*	*					
	46	CVEE355	Reinforced concrete design2	*		*											*						*												*	
	47	CVEE352	Soil mechanics and foundation	*	*										*			*													*					
Level 4	48	ARCH 403	Architecture design 4	*												*		*		*		*						*	*							
	49	ARCH 345	Working drawing 1	*							*							*		*		*						*	*							
	50	ARCH 407	Urban design and landscape	*								*						*		*		*						*	*							
	51	ARCH 344	Acoustics and illumination	*	*		*					*					*		*		*		*					*	*							
	52	ARCH 303	Geographical information system	*	*																*		*					*	*							
	53	ARCH 316	Advanced computer – aid architectural design	*							*		*																							
	54	CVEE353	Structural steel design	*	*			*												*		*	*													
	55	ARCH 404	Architecture design 5	*															*		*	*						*	*		*					
	56	ARCH 406	Working drawing 2	*												*			*		*	*					*	*		*						
	57	ARCH 420	Urban and regional planning	*		*													*		*	*					*	*		*						
	58	ARCH 425	Technical installation	*														*	*	*	*	*				*	*		*					*		
	59	ARCH 315	Modern and contemporary foundations of art and architecture	*				*		*									*		*	*						*	*		*					
	60	ARCH 324	Advanced representation	*		*												*		*	*			*				*	*		*					*
	61	BASE401	Communication skills	*		*														*	*	*						*	*		*			*		
62	BASE404	Negotiation skills	*											*				*	*	*						*	*		*				*			
Level 5	63	ARCH 490	Senior project 1	*	*				*		*	*							*	*	*					*	*		*	*						
	64	ARCH 405	Architecture design 6	*								*						*	*	*	*	*	*			*	*		*	*						
	65	ARCH 422	Working drawing 3								*					*			*	*	*	*	*	*		*	*		*	*						



Follow Matrix no. (4): The contribution between the Competences of the graduate and the courses of the program/ the action plan

Requirement Levels	No.	Code	Course	Cognitive Domains (LOs)												Psychomotor Domains (LOs)												Affective Domains (LOs)										
				L01	L02	L03	L04	L05	L06	L07	L08	L09	L010	L011	L012	L013	L014	L015	L016	L017	L018	L019	L020	L021	L022	L023	L024	L025	L026	L027	L028	L029	L030	L031	L032			
Level 5	66	ARCH 414	Housing	*	*							*					*					*					*	*										
	67	ARCH 212	Virtual reality studio in architecture	*	*												*		*		*																	
	68	ARCH 332	Design for conservation	*	*			*	*		*								*	*																		
	69	BASE307	Contracts, Bids& Liabilities		*		*							*	*				*	*	*		*															
	70	ARCH 491	Senior project 2	*						*													*				*					*			*			
	71	ARCH 429	Working drawing 4	*															*	*							*	*										
	72	ARCH 401	Interior design	*				*												*	*				*													
	73	ARCH 390	Internship in architecture	*					*						*						*		*							*								
	74	ARCH 322	World art survey 1	*	*												*				*			*						*								
	75	ARCH 418	Sustainable architecture	*				*										*		*		*																
	76	BASE308	Seminar		*	*		*											*	*	*		*								*	*						
77	BASE402	Feasibility studies		*		*								*	*			*		*		*																



15. Teaching and Learning Methods Included in The Program:

- On line / face to face lectures
- Tutorials: sheets/ sketches
- Projects
- Problem solving
- Brain storming
- Practical: lab
- Discovering
- Site visit
- Reports/ researches
- Cooperative work
- Presentation
- Discussion
- Modeling

Note: Theoretical and basic courses used tutorial for sheets and exercises while applicable courses used studios for sketches and projects and practical courses used lab.

All the teaching and learning methods used in the program related to the teaching and learning strategy approved by the Academic Council in November 2021, appendix no (3), and these methods are compatible with learning out comes of the program (LOs) as shown in matrix no (5)

More over the program used to be developed by adding 2 hrs. as computer labs to the elective courses to push the student towards the global programs and tools of architecture needed in the Laboure market.

Matrix no. (5): Compatibility of learning out comes of the program (LOs) with teaching and learning methods

learning out comes of the program (LOs)	Teaching and learning methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Lo1													
Lo2													
Lo3													
Lo4													
Lo5													
Lo6													
Lo7													
Lo8													
Lo9													
Lo10													
Lo11													
Lo12													
Lo13													
Lo14													
Lo15													
Lo16													



Follow Matrix no. (5): Compatibility of learning out comes of the program (LOs) with teaching and learning methods

learning out comes of the program (LOs)	Teaching and learning methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Lo17													
Lo18													
Lo19													
Lo20													
Lo21													
Lo22													
Lo23													
Lo24													
Lo25													
Lo26													
Lo27													
Lo28													
Lo29													
Lo30													
Lo31													
Lo32													

16. Student Assessment Methods

- Quick Exams
- Mid-term exam
- Final Exam
- Exercises
- Projects
- Practical exam
- Oral exam
- Discussions
- Reports – Research
- Presentations
- Modeling

All the assessment methods used in the program are compatible with the teaching and learning methods, and these methods contribute with learning out comes of the program (LOs) as shown in matrix no (6).



Matrix no. (6): Compatibility of learning out comes of the program (LOs) with assessment methods

learning out comes of the program (LOs)	Assessment methods										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modelling
Lo1											
Lo2											
Lo3											
Lo4											
Lo5											
Lo6											
Lo7											
Lo8											
Lo9											
Lo10											
Lo11											
Lo12											
Lo13											
Lo14											
Lo15											
Lo16											
Lo17											
Lo18											
Lo19											
Lo20											
Lo21											
Lo22											
Lo23											
Lo24											
Lo25											
Lo26											
Lo27											
Lo28											
Lo29											
Lo30											
Lo31											
Lo32											

17. Program Admission Requirements:

a. Program Entry Requirements

The student has to Pass all of the courses shown in table below:

2 mathematic courses
Engineering drawing course
Courses of the preparatory level



b. Methods and rules for evaluating those courses enrolled in the program

▪ Rules for the evaluation of specialized practical subjects:

Senior project 1-2, Regional and Urban Planning, Housing, Architectural Design 1.2.3.4.5.6, Working Drawings 1.2.3.4, Architectural Drawing, Urban Design and Landscape, Structural steel design, Reinforced Concrete Design 1-2, Soil mechanics and foundation, Computer Applications in Architecture, Three-Dimensional Designs, Fundamentals of design and color and painting, Shade, Shadows and Perspective 1-2, Interior Design.

Student work	40 degrees
Mid-term exam	20 degrees
Final exam	40 degrees

▪ Rules for the evaluation of theoretical, specialized and optional subjects

Concept of urban planning, technical installations, structural analysis 1-2, history of architecture 1-2, theories of architecture 1-2, Environmental control systems and design, modern and contemporary foundations of art and architecture, building construction 1-2-3-4, environmental control, acoustics and illumination, Strength and testing of materials, Field plan and topographic surveying in addition to elective courses, (geographic information systems, sustainable architecture, advanced computer applications in architectural designs, advanced architectural presentation).

Student work	25 degrees
Mid-term exam	15 degrees
Final exam	60 degrees

▪ Rules for the Evaluation of Humanities, Basic Sciences, English and Compulsory Engineering Subjects:

Engineering Economics, Contracts, Tenders and Commitments, Seminar, Human Rights, Development of Skills Structure, Negotiation Skills, Scientific Research Methods, Project Feasibility Studies, Calculus 1-2, Probabilistic Applications and Statistics, Physics 1, Electrical and Magnetic, General Chemistry 1, Fundamentals in Computer Programming, English 1-2, Engineering Introduction, Production Engineering, Engineering Drawing and Projection, Statics, Dynamics.

Student work	30 degrees
Mid-term exam	20 degrees
Final exam	50 degrees

▪ Rules for the evaluation of laboratory materials:

Lab (1) General Physics, Lab (2) General Physics, Lab (1) General Chemistry.

Student work	50 degrees
Mid-term exam	10 degrees
Final exam	40 degrees



18. Program Evaluation Methods

evaluator	The way	Sample
Final level students	questionnaire form	10% from students
graduators	questionnaire form	10% from students
Business owners	Business owners	Business owners
External evaluator	review report	Some courses of the program
another method		

19. Course Contents:

Core Courses (Institute Requirements)

Code	Course Name	Credit Hours	Prerequisite
BASE 102	Development of Personal Skills	3	-

This course aims to develop the critical thinking of students, their negotiation skills, presentation skills, public speaking skills, leadership skills and self-evaluation.

Code	Course Name	Credit Hours	Prerequisite
BASE 109	Project Management & Organization Development	3	-

Inter-group dynamics, organizations as systems, process of organizational development, intervention strategies, organizational diagnosis, team building, structural intervention, behavioral change, resistance to change, and implementation strategies.

Code	Course Name	Credit Hours	Prerequisite
BASE 201	Principles of Business Administration	3	

Definition of management, need for management, emergence of the professional manager, the challenge of management, historical trends in management trends and practices, functions of the manager (planning, organizing, staffing, leading and controlling), management in a changing environment, social responsibility and ethical behavior.

Code	Course Name	Credit Hours	Prerequisite
BASE 202	Principles of Public Relations	3	

An overview of the public relations profession in the Middle East. Public-relations principles and techniques, current public relations problems, possible solutions.

Code	Course Name	Credit Hours	Prerequisite
BASE 203	Production Management	3	

Production concept and its development-motion and time study- Management of production function elements through system approach (Inputs operation process, outputs), feasibility studies of the industrial projects, marketing techniques, economical studies, plant site location and plant layout manufacturing in under developed countries.

Code	Course Name	Credit Hours	Prerequisite
BASE 206	Society & Individual Science	3	

Survey of psychology including methods of study and the nature of psychological phenomena. Primary sources of behavior, development, sensation and perception, consciousness and thought, conditioning and learning, memory and language.



Code	Course Name	Credit Hours	Prerequisite
BASE 207	Fundamentals of Management	3	-

The study of the principles of Management and their application to business enterprises. Special emphasis on financial analysis, management of working capital, cost of capital, capital budgeting, long term financing, dividend policy and internal finance.

Code	Course Name	Credit Hours	Prerequisite
BASE 301	Principles of Financial & Managerial Accounting	3	

Theories and practices relating to product costing in manufacturing and service industries. Costing Systems, job order costing, long term order costing, process costing by joint product costing, standard costing.

Code	Course Name	Credit Hours	Prerequisite
BASE 302	Art of Etiquette & protocol	3	-

This course is designed to educate students the art of etiquette and protocol. It introduces them to the art of dealing with people in public places. Introduction to the role of diplomatic, political and psychological influence of the behavior of people.

Code	Course Name	Credit Hours	Prerequisite
BASE 303	Engineering Economics	3	Math201

Economic and cost concepts, the time value of money, single, multiple and series of cash flows, gradients, functional notation, nominal and effective interest rates, continuous compounding, rates of return. Computation and applications, economic feasibility of projects and worth of investments, comparison of alternatives. Replacement, depreciation and B.E. analysis. Introduction to risk analysis.

Explores the economics concepts and theories of planning. Covers the bases and methods of economic analysis of engineering projects and the application of these principles in understanding economic activity of private and public engineering companies at various micro- and macroeconomic levels.

Code	Course Name	Credit Hours	Prerequisite
BASE 305	Principles of Organization Behavior	3	-

The historical development of Organizational behavior, foundation of individual behavior in organizations (motivation, attitudes, values, perception, learning and personality), informal organizations, communication and group dynamics, leadership, job satisfaction conflict, organization change and development.

Code	Course Name	Credit Hours	Prerequisite
BASE 306	Methods Research	3	

Develops the skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, critical thinking. Provides training in the use and integration of sources, library and online research.

Code	Course Name	Credit Hours	Prerequisite
BASE 307	Contracts, Bids & Liabilities	2	

Contract definition, formation principles of a contract, performance or breach of contract obligations, termination of agreements, types of construction contracts and legal implications, specifications, legal organizational structures (agency, proprietorship, partnership, corporation).



Code	Course Name	Credit Hours	Prerequisite
BASE 308	Seminar	0	

Engineering Topics conducted on a Weekly or Monthly Basis discussions with speakers from Industry and professors from the different Departments. Students should at least attend one seminar every year.

Code	Course Name	Credit Hours	Prerequisite
BASE 309	Human Rights	0	

The course aims to identify the nature and concepts of human rights, the origin, sources, types of human rights and their applications in the engineering field and their relationship to the ethics and duties of the profession as well as the international institutional framework to deal with human rights issues and mechanisms for the protection of these rights at the international and national levels. It also addresses the definition of non-governmental organizations working in the field of human rights.

Code	Course Name	Credit Hours	Prerequisite
BASE 401	Communication Skills	3	

Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids and Ethics of the engineering proficiency with emphasis on each departmental ethical and professional Licensure topic.

Code	Course Name	Credit Hours	Prerequisite
BASE 402	Feasibility Studies	3	

This course introduces students to the meaning, importance, and effects of feasibility study. It also deals with the analysis of decision problems under uncertainty, partial information, risk and competition. Considers the analytic hierarchy process outranking procedures and multi-attribute utility theory.

Code	Course Name	Credit Hours	Prerequisite
BASE 404	Negotiation Skills	3	-

Negotiation styles and processes to help students conduct and review negotiations. Workshop format integrating intellectual and experiential learning. Exercises, live and field examples, individual and small group reviews.

English Course Description

Students are required to take an evaluation exam and accordingly can be decided which level to be admitted. Minimum requirements of English courses are 6 credit hours.

Code	Course Name	Credit Hours	Prerequisite
ENGL 101	Elementary English (1)	3	Exam

Develops proficiency in critical expository writing, critical reading and greater fluency in expression. Focuses on the writing process with an emphasis on developing the student's voice, organizing and developing ideas independently within the context of academic writing. Introduces library research and use of sources. Introductory level English.

Code	Course Name	Credit Hours	Prerequisite
ENGL 102	Elementary English (1)	3	ENGL 101 or exam -

Develops the skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, critical thinking. Provides training in the use and integration of sources, library and online research. With Emphasis on the language skills.



Mathematics Course Description

Code	Course Name	Credit Hours	Prerequisite
Math101	Calculus I	3	--

Limits of one-variable functions, continuity and differentiability. Extreme and Curve sketching. Related rates. Linear approximation. Differentiation of Trigonometric functions. Applications of the derivative.

Credit Hours	Prerequisite	Credit Hours	Prerequisite
Math102	Calculus II	3	Math101 or exam

Definite and indefinite integrals. The fundamental theorem of calculus and applications of the definite integral. Area, arc length, volumes and surfaces of revolution. Differentiation and integration of Exponential, Logarithmic, Trigonometric and other transcendental functions. Techniques of integration. Numerical integration. Improper integrals

Credit Hours	Prerequisite	Credit Hours	Prerequisite
MATH 301	Probability & Statistics	3	Math 102

The course introduces students to some important statistical concepts and techniques that are of common application in engineering. Covers graphical and numerical summaries of data, plotting data, probabilities of random events, random variables, properties of density and distribution functions, measures of location and dispersion, expected values, independence of random variables, scaling and adding random variables, the binomial Poisson and normal distributions, the central limit theorem, hypothesis testing, confidence intervals, t test, paired t test, standard errors, least squares, residuals, correlation, examples of regression, quality control, clustering of rare events.

Physics Course Description

Code	Course Name	Credit Hours	Prerequisite
PHYS 101	Classical Mechanics, Sound, Heat	3	
PHYS 111	General Physics Laboratory I	1	-

An introduction to classical mechanics covering vectors, applications of Newton's laws, conservation laws and forces, motion in a plane, circular motion, equilibrium and elasticity, rotational motion, simple harmonic motion, energy and power; mechanical and sound waves, temperature, heat and the first law of thermodynamics.

Concurrent Course: General Physics Laboratory I (PHYS 111)

Code	Course Name	Credit Hours	Prerequisite
PHYS 102	Electricity and Magnetism	3	PHYS 101
PHYS 112	General Physics Laboratory II	1	

Covers electricity (electric fields, including Gauss's law; electric potential; capacitors and resistors; DC circuits), magnetism (sources of the magnetic field, including Ampere's law; induction, including Faraday's law and Lenz's law), and alternating current circuits, as well as introductory material on electromagnetic waves. The laboratory includes experiments illustrating the principles, laws and concepts discussed in the course.

Concurrent Course: General Physics Laboratory I (PHYS 112)



Chemistry Course Description

Code	Course Name	Credit Hours	Prerequisite
CHEM 101	General Chemistry I for Engineers (1)	3	
CHEM 111	General Chemistry Lab(1)	1	Concurrent with CHEM 101

Chemical stoichiometry; atomic structure and periodicity; an overview of chemical bonding with a discussion of models and theories of covalent bonding; introduction to structure and chemistry of organic compounds; elementary nuclear chemistry.

Concurrent Course: General Chemistry Lab (CHEM 111)

Engineering Course Description

Code	Course Name	Credit Hours	Prerequisite
ENGR 101	Introduction to Engineering	1	-

History of engineering. Engineering fields of specialization and curricula. The engineering profession: team work, professionalism, ethics, licensing, communication and societal obligations. Engineering support personnel and activities. Engineering approach to problem solving. Examples of major engineering projects. Course project.

Code	Course Name	Credit Hours	Prerequisite
ENGR 102	Engineering Drawing & projection	2	

Introductory descriptive geometry. Orthographic and pictorial drawing. Sectional views, auxiliary views, and conventions. Dimensioning. Free hand sketching and both manual and computer-aided drafting.

Code	Course Name	Credit Hours	Prerequisite
ENGR 105	Engineering Production	1	

This module is designed to provide freshmen students with an understanding of the traditional machine tools used in forming and machining processes: Turning, milling, grinding, drilling, boring, shaping, planning, shearing, bending, and rolling machines, as well as welding and casting equipment, wood working, and polymeric machines. An extensive coverage of health and safety into workshop practice, focusing on hazards control, safety precautions, and industrial hygiene, to develop a responsible awareness of hazards.

Code	Course Name	Credit Hours	Prerequisite
ENGR 103	Engineering Mechanics I (Static)	3	--

Fundamentals of mechanics. Equilibrium of practices, forces in space, equivalent systems, equilibrium of rigid bodies, distributed forces, center of gravity, internal actions, analysis of simple structures and machine parts. Friction. Moment of inertia.

Code	Course Name	Credit Hours	Prerequisite
ENGR 104	Engineering Mechanics II (Dynamic)	3	ENGR 103, MATH 101

Kinematics and kinetics of a particle, system of particles, and rigid bodies. Energy and momentum methods. Engineering applications.

Code	Course Name	Credit Hours	Prerequisite
ENGR 203	Strength and Testing of Materials	3	ENGR 201

General view on the different properties of materials; physical properties, chemical properties and mechanical properties.



- Building materials.
- Binder materials; lime, gypsum and cement.
- Properties and testing of concrete materials: cement, Aggregates, water.
- Static tension test and Types of reinforcing steel and tensile test.
- Specifications of building materials.
- Scientific visits to a cement factory, steel factory and aggregate quarry.

Architecture and Design Engineering Course Description

Code	Course Name	Credit Hours	Prerequisite
ARCH 201 *	Architecture Drawing	2	-
	Design course	2 hours lecture 4 hours studio	

An introduction to the technical and observational skills of drawing in a variety of media. Studying the different design elements: Concepts of Point, line, value, Direction and composition will be explored in objective, non-objective, still-life, and landscape drawing exercises.

Code	Course Name	Credit Hours	Prerequisite
ARCH 202*	Computer Applications in Architecture	1	-
	3-hour Lab work		

This course is concerned with an introduction to the general use of computers and file management. It covers 2D drawing using several graphics software programs to enable students to execute various 2D architectural drawings in the forms of plans, elevations and sections. This course will prepare students to be computer-literate, familiar with commercial software and provide a basic working vocabulary and knowledge of computing and information concepts.

Code	Course Name	Credit Hours	Prerequisite
ARCH 205*	Building Construction 1	2	-
	2 hours lecture 4 hours studio		

The course aims to clarify the main elements of the building, building materials, and different building construction systems (traditional and new systems) and to train the student to draw the construction details through the study: Loads affecting the building, building methods (bearing walls, skeleton structures) and structural elements of the building, wall thickness and bonds, openings, lintels and arches, vaults and domes.

Code	Course Name	Credit Hours	Prerequisite
ARCH 206	Environmental Control Systems & Design	2	ARCH 205

Develops a greater focus on holistic and sustainable approaches to design. Covers issues such as demand and supply of energy and water, and the generation of waste. Reiterates principles of reduce, reuse and recycle. Predominant emphasis is on practical strategies directly applicable in design.

Code	Course Name	Credit Hours	Prerequisite
ARCH 208	Three-Dimensional Studio	2	ARCH 202
	2 hours studio & 2 hours workshop		

Basic concepts and fundamentals of visualization, thinking, and design of simple forms in three dimensions. Presentation and communication skills using simple three-dimensional modeling exercises in manual and digital format. Workshop skills are introduced and applied. Sessions in design studio, computer lab and workshop.

Code	Course Name	Credit Hours	Prerequisite
ARCH 210*	Fundamentals of Design & Color & Painting	2	-
	2 hours Lectures 2 hours studio		

An introduction to fundamental principles of two-dimensional design, including composition, visual language, and color theory. Theory of Colors: Light – nature of colors – Colors stimuli and color selection – The human eye – Color mixture –



Color characteristics and relationships – color schemes and applications – Elements and basis of visual design – Visual studies and applications. Students will explore visual communication tools, creative processes, and visual theory. Introducing the principles of Lighting. Explores light and color as important elements especially in interior space. The course investigates and explores processes involved in perception, nature of light, movement, color, and depth and distance cues. The course involves lectures, discussions, and class exercises.

Code	Course Name	Credit Hours	Prerequisite
ARCH 211 *	Visual Training	2	-
2 hours Lectures 2 Hours Studio			

This course aims at developing aesthetic expression and judgment in design and architecture through the creative use of art elements and design principles.

Code	Course Name	Credit Hours	Prerequisite
ARCH 220 *	Shade, Shadow & Perspective I	2	ENGR 102
2 hours lecture 4 hours studio			

This course aims at developing student's skills in architectural drawing and presentation, methods of constructing one- and two-point perspectives, shades and shadows projection on two-dimensional drawings. To draw the perspective: One vanishing point perspective, two vanishing points perspective. Level of the picture. Study the perspective using the computer.

Code	Course Name	Credit Hours	Prerequisite
ARCH 301 *	Architectural Design I	3	ARCH 201
design course		2 hours lecture 6 hours studio	

Studio on designing in behavioral and socio-cultural contexts. Students are required to think of architecture from the "inside-out" approach. Designs will be generated through the study of behavioral use of space. Issues of age, sex, culture and individuality as well as complex functional relationships will be examined in their influence on architectural design. Study of the nature of human behavior and how it can be incorporated, facilitated, modified and influenced through architectural design. (Four Hour Studio)

Code	Course Name	Credit Hours	Prerequisite
ARCH 302 *	Architectural Design II	3	ARCH 301, ARCH 220
design course		2 hours lecture, 6 hours studio	

Studio on form, space and composition. Students are required to think of architecture from the "outside-in" approach, with focus being placed on the form of architecture and its composition. An emphasis will be placed on the compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc. and their use as tools of functional accommodation. Three-dimensional models play an important role in design development and students will be encouraged to think spatially rather than in the conventional Cartesian format. Issues of meaning, message and symbolism will be discussed and applied. Various works of architects adopting this formalistic approach will be reviewed and analyzed. 6-hour studio.

Code	Course Name	Credit Hours	Prerequisite
ARCH 305 *	Shade, Shadow & Perspective II	2	ARCH 220
2 hours lecture 4 hours studio			

Study the theory of Shade. Study the theory of shadows. Study the impact of shade and shadows on perspective/ on facades, and on masses.

Code	Course Name	Credit Hours	Prerequisite
ARCH 317 *	Building Construction 2	2	ARCH 205
2 hours lecture 4 hours studio			

Shallow and deep foundations, different kinds of slabs, damp proofing, heat and insulation, expansion and settlement joints.



Code	Course Name	Credit Hours	Prerequisite
ARCH 320 *	Building Construction III	2	ARCH 317
2 hours lecture, 4 hours studio			

Different structure systems and materials to cover large span spaces (frames- folded slabs- shell structures), truss and steel structures, stairs and ramps.

Code	Course Name	Credit Hours	Prerequisite
ARCH 330*	Building Construction IV	2	ARCH 320
2 hours lecture, 4 hours studio			

Study various types of details for internal and external finishes (walls- floors- doors- windows- ceiling), and special structures.

Code	Course Name	Credit Hours	Prerequisite
ARCH 344	Acoustics & Illumination	2	ARCH 210

Introduction to illumination and lighting, both day- and artificial lighting: light quality, types of lamps and lumen input method for calculation. Sound propagation in buildings: reverberation time, acoustic requirements for auditoriums and noise control, providing students with full calculation methods aided by practical examples. Familiarizing students with three basic architectural sciences; Day lighting, artificial lighting and Acoustics-Behavior of sound waves, sound absorption, sound reflections, sound isolation. Computer Simulation programs that aid artificial lighting design.

Code	Course Name	Credit Hours	Prerequisite
ARCH 345 *	Working Drawings 1	3	ARCH 320
2 hours Lecture 4 hours Studio			

The course aims to introduce the basics of detailed execution drawings. Exercises on the preparation of detailed location and assembly drawings including detailed sections, detailed space drawings and assembly drawings for the coordination between different professions, in addition to signs, symbols and information systems. It entails the preparation of small-scale orthographic projections (plans, elevations, sections) generally referred to as the general drawings of the construction documents set. In addition, the site plan with its landscaping, are also dealt with. It also introduces students to the proper methods of the preparation and production of architectural working drawings.

Code	Course Name	Credit Hours	Prerequisite
ARCH 401 *	Interior Design	3	ARCH 302
Design course		2 hours lecture, 6 hours studio	

Historical background. Concepts and principles of interior design. Space planning and design. Human perception. Color and lighting. Materials selection. Function, material and construction of furniture and textiles. Design for the disabled. Ergonomics and design. Design drawing and detailing.

Code	Course Name	Credit Hours	Prerequisite
ARCH 402 *	Architectural Design III	3	ARCH 206, ARCH 302
Design course		2 hours lecture, 6 hours studio	

Studio on Environment and Sustainability. This studio will allow students to investigate various aspects of the environment and 'sustainability' as a force within the architectural profession. Recent increases in global climatic and social pressures have necessitated environmental awareness as well as new architectural design solutions. Using current sustainable design strategies as a foundation, students will analyze and implement their own environmentally responsible analyses and designs. 6-hour studio.



Code	Course Name	Credit Hours	Prerequisite
ARCH 403 *	Architectural Design IV	3	ARCH 402
	Design course	2 hours lecture, 6 hours studio	

Studio on the Art of Structure and Technology. This studio's primary objective is to link the two basic components of architecture- art and engineering. Based on a firm understanding of structural systems and their appropriate application to architectural design, projects will be designed to incorporate both aesthetic beauty and structural thinking. The influence of technology in the form of new materials and methods will be examined through their design potential. Three-Dimensional manual and digital models will play an essential role in the design development processes of this studio. 6-hour studio period.

Code	Course Name	Credit Hours	Prerequisite
ARCH 404 *	Architectural Design V	3	ARCH 403, ARCH 316
	Design course	2 hours lecture, 6 hours studio	

Studio on smart buildings and high-tech architecture. Expanding on the 1970's theme of High-Tech architecture, this studio aims at redefining the role of cutting-edge technology in design- both process and product. Digital technology has revolutionized the way we conceptualized, visualize, present and are eventually able to construct our buildings, making impossible designs of the past a reality. Rapid developments in materials, building systems and construction methods have broadened our design horizons. Issues such as virtual architecture and smart buildings will be explored with regards to their viability and role in the future of architecture. 6-hour studio period

Code	Course Name	Credit Hours	Prerequisite
ARCH 405 *	Architectural Design VI	3	ARCH 407, ARCH 404
	Design course	2 hours lecture, 6 hours studio	

Studio on design in critical Settings- Designing in Historical Contexts. A critical review of works, theories, and polemics in modern architecture. Case studies of buildings within urban settings will be the focus, with an emphasis on adaptive re-use, historic preservation, and urban design practices. Within the context of a historical survey, students will develop a framework to assess and design for contemporary issues in architecture. 6-hour studio period.

Code	Course Name	Credit Hours	Prerequisite
ARCH 406 *	Working Drawings II	3	ARCH 345, ARCH 320
	2 hours Lecture 4 hours Studio		

The studio work aims at preparing the student to complete a drawing document sets of a preliminary design project and to apply previous courses knowledge gained from with an emphasis on methods of constructions and high technology working details and materials to produce a whole set of drawings including electrical and plumbing drawings. Partial detailed wall sections which elaborate on the structural and constructional connections of the building are discussed. Door and window types are introduced along with door and window schedules. Room finish and interior finish schedules are also addressed.

Code	Course Name	Credit Hours	Prerequisite
ARCH 407 *	Urban Design & Landscape	3	ARCH 318
	Design course	2 hours lecture, 6 hours studio	

Study & Analysis of Visual Elements. Urban Form, Grain, Texture, and Fabric. The Phenomenon of Perception. Space, Time, and Function. Space and Path Visual Analysis. Study & Analysis of Historic Urban Squares, Piazzas and similar spaces. Form and space generation in landscape architecture. Elements of Landscape Architecture.



Code	Course Name	Credit Hours	Prerequisite
ARCH 414 *	Housing	3	ARCH 407
2 hours lecture 6 hours studio			

The course aims to demonstrate adequate knowledge about theories of planning for residential areas and to train the student to solve planning problems based on theoretical approach.

It represents introductory material for understanding housing types (economically- functionally), understanding social dimensions for residential areas, theories for residential and land-use planning, services and roads hierarchy in residential areas.

Code	Course Name	Credit Hours	Prerequisite
ARCH 420 *	Urban & Regional Planning	3	ARCH 407
2 hours lecture 6 hours studio			

Complete coverage of housing theory, socio-economic aspects related to housing, alternative approaches to housing policy, and housing problems in developing countries. It explores the current issues affecting the formulation and implementation of housing programs. It covers an analysis of housing design, classification of housing types, data gathering on housing projects, and design procedures of housing communities.

Code	Course Name	Credit Hours	Prerequisite
ARCH 422 *	Working Drawings III	3	ARCH 406
2 hours Lecture 4 hours Studio			

This module focuses on architectural details. It deals with the proper methods of producing details: their purpose and importance as an important part of the construction document. It emphasizes construction, assemblies, joints and connections between the various construction materials, and the joining of materials especially wood in door and window assemblies. Door Details: Head and Jamb Details. Miscellaneous Details (Fireplace, Closets, etc.). Wood Joints. Window Details (Wood). Window Details (Metal). Stair Details (Wood). Stair Details (R.C. and Steel). Bathroom and Kitchen Elevations. Kitchen Cabinets Details.

Code	Course Name	Credit Hours	Prerequisite
ARCH 425	Technical Installations	2	ARCH 406, ARCH 320

The course aims at gaining familiarity with new techniques used in advanced technological systems in buildings (alarm systems, firefighting systems, communication systems, air conditioning systems, and electronic control systems), Basic concepts of illustrated material and technical installations are addressed with its influence on contemporary architecture and applications.

Code	Course Name	Credit Hours	Prerequisite
ARCH 429 *	Working Drawings IV	2	ARCH 422
2 hours Lecture 4 hours Studio			

Hands on course where the student should apply all the concepts of working drawings to a whole semester project where it could be of assistance to their senior project or other.

Code	Course Name	Credit Hours	Prerequisite
ARCH 490 *	Senior Project I	3	ARCH 404
2 hours lecture 8 hours studio			

A capstone projects. Topics are selected by students from a set defined by advisors and according to their area of interest. Project brief analysis and research. Preparation of space and functional programs.



Code	Course Name	Credit Hours	Prerequisite
ARCH 491 *	Senior Project II	3	ARCH 490, ARCH 405
	2 hours lecture 8 hours studio		

A continuation of senior project I. Comprehensive architectural design demonstrating an understanding of the different conceptual and technical aspects of architecture

Code	Course Name	Credit Hours	Prerequisite
ARCH 390	Internship in Architecture	2	60 Credit Hours

Requires a minimum of six to eight weeks of approved professional experience. Requires students to document the work undertaken in a formal report submitted to the department by the beginning of the following term.

History and Theory of Architecture Requirements

Code	Course Name	Credit Hours	Prerequisite
ARCH 213	History of Architecture I	2	-

An introduction to history, society, religion, art and architecture of Ancient Egypt, Mesopotamia, Greek and Roman traditional civilizations. Including a description of the nature and character of the field of Egyptology. The continuing impact of Ancient Egypt on subsequent societies and cultures including that of modern Egypt will be examined. It discusses the various systems employed to order architectural compositions. This module is designed to give students a broad survey of major monuments and architectural development in the Eastern and Western Christian traditions. It includes the Early Christian, Byzantine, Romanesque and Gothic periods. Furthermore, it outlines the shift from the buildings of the Middle Ages to those of the Renaissance and Baroque. These lectures are essential for understanding the architectural revivals of the 18th and 19th centuries.

Code	Course Name	Credit Hours	Prerequisite
ARCH 215	History of Architecture II	2	Arch 213

Important works in architecture and decorative arts from the seventh century AD to the Ottoman period; artistic achievements of Muslim Spain, North Africa, Syria, Mesopotamia, Iran, and Turkey. Includes a coverage of the various phases of Islamic architecture: Caliphate, Tulunid, Mamluk, Ottoman and Turkish periods. It aims to outline the development of cultural social traditions in the Islamic Art and Architecture of the World.

Code	Course Name	Credit Hours	Prerequisite
ARCH 219	Theory of Architecture I	2	-

This course is a study of the major philosophies and trends that have determined different directions and movements in the field of architecture.

Code	Course Name	Credit Hours	Prerequisite
ARCH 304	Theory of Architecture II	2	ARCH 219

This course presents the interaction between the theory and practice of architecture by addressing issues related to the development of architectural theory. Traces the history of architectural thought through built projects, theoretical designs, and original writings of architects and others. Relates architectural theory to associated philosophical and intellectual movements.



Code	Course Name	Credit Hours	Prerequisite
ARCH 315	Modern & Contemporary Foundations & theories of Art & Architects	2	-

An introduction to the development of twentieth-century architecture in the western tradition, including its social, technological, and conceptual aspects. Including a chronological survey of the history of architectural thoughts and theories from the 19th century to the mid-20th century. Roots of the Modern Movement in architecture from the Chicago School in America to Art Nouveau, Futurism, De Stijl, Expressionism, etc. in Europe. The module will discuss the social, economic, political and cultural influences which helped shape architecture of the 20th century. Special emphasis is placed upon studying individual architects, buildings, and theoretical writings.

Code	Course Name	Credit Hours	Prerequisite
ARCH 318	Concepts of Urban Planning	2	ARCH 213

This course covers some theories and criteria which can be used as a guide for land use planning. It represents introductory material for understanding the elements of urban environment and their interaction. Also, this course is concerned with the main studies and methodologies which are carried out in the process of preparing the strategic plan based on the theoretical approaches above.

Architecture and Design Engineering Elective Course Description

Code	Course Name	Credit Hours	Prerequisite
ARCH 207 *	Interior Construction	2-3	ARCH 301

Covers basic interior detailing, millwork and cabinetry elements, which must be developed and coordinated to construct interior space. Detailing, technical drawings, specifications and scheduling are therefore integral to design development.

Code	Course Name	Credit Hours	Prerequisite
ARCH 209 **	Photography	2	-

Practical introduction to photography as well as to digital image processing techniques. Practical application of photography in architectural work. Developing skills in using archive photography as an iconographic element.

Code	Course Name	Credit Hours	Prerequisite
ARCH 210 *	Interior Materials	2	ARCH 301

Introduces the fundamentals, principles and art of lighting and color, and their visual and physical effects in interior design. Explores light and color as important elements in interior space through the study of related perceptual and physical factors. Introduces relevant terminology to define light and color as attributes of architectural and interior space: illumination levels and temperatures, light sources, fixtures, materials, etc.

Code	Course Name	Credit Hours	Prerequisite
ARCH 212	Virtual Reality in Architecture	2	ARCH 208

Architectural drawing, presentation and communication. The concepts and applications in virtual reality for architecture. Form and space generation in architecture. Geometry of 3D masses and spaces. Computer-based modeling techniques. Rendering & animation.

Code	Course Name	Credit Hours	Prerequisite
ARCH 230 *	Freehand Drawing and Modeling	2	-
	Design course	3 hours lecture 3 hours studio	

The task of the course is forming observational skills (including a sense of proportion, forms, the effects of light in space, sensitivity to beauty), improving artistic expression, rapid formal synthesis and recording spatial images through sketching. Emphasis is placed upon the skills of imagination using pen and pencil. This course includes developing students' free hand skill as well as mastering other drawing techniques using different other tools and equipment. With emphasis of using light



and shadow in architectural representation by studying the principal casting shades and shadows in architectural plans and elevation.

Code	Course Name	Credit Hours	Prerequisite
ARCH 231	Sculpture	2	-

The course goal is to acquaint students with the principles of creating spatial compositions and the development of imagination and manual abilities. Sculpture in architecture: Location, spatial composition, information about materials and artistic techniques in architecture.

Code	Course Name	الساعات المعتدة	Prerequisite
ARCH 303	Geographical Information System (GIS)	2	ARCH 301
	2 hours class and 2 hours lab		

Context and framework of regional, city and urban planning. Concepts and system components of GIS. The digital map and GIS. GIS applications. Surveying principles and methods of measurement. Concepts, features and characteristics of human settlements, housing areas and housing units. Interrelationship between socio-cultural contexts and housing processes.

Code	Course Name	Credit Hours	Prerequisite
ARCH 316	Advanced Computer-Aided Architectural Design	2	ARCH 212
	3 hours lab		

Introduction and application of advanced CAD concepts. Real time computer graphics. Computer applications for performance animation, virtual reality and interactivity. Alternative inputs and displays. Modeling, texture mapping, environments, navigation, lighting, animation and sound. Generative design and Avatars.

Code	Course Name	Credit Hours	Prerequisite
ARCH 319	Islamic Architecture in Egypt & Syria	2	ARCH 318

Development of architecture and decorative styles in Egypt and Syria from the Arab to the Ottoman conquests, including the Mamluk period; field trips to Cairo monuments.

Code	Course Name	Credit Hours	Prerequisite
ARCH 321	Islamic Architecture in Spain & North Africa	2	-

Religious and secular architecture and decoration of Islamic Spain and North Africa; discussion of formative impulses from Byzantium and Umayyad Syria.

Code	Course Name	Credit Hours	Prerequisite
ARCH 322	World Art Survey I	2	-

An introduction to the historical development of the visual arts in the western and selected non-western traditions from prehistoric beginnings until the late medieval periods. Concepts such as formal analysis and cultural context will be explored through written exercises.

Code	Course Name	Credit Hours	Prerequisite
ARCH 323 **	Illustration & Rendering	2	ARCH 201

Covers illustration and rendering techniques that enable students to express their ideas faster with more precise results. Covers freehand color drawing techniques using markers, color pencils and watercolors.

Code	Course Name	Credit Hours	Prerequisite
ARCH 324 **	Advanced Representation	2	ARCH 201

Expands on representational techniques. Focuses on the application and use of these techniques in the presentation and representation of design concepts and drawing compositions. Introduces color drawing techniques using mixed media of hand drawing and computer-generated drawings and illustrations, photomontage and collage.



Code	Course Name	Credit Hours	Prerequisite
ARCH 325 **	Modeling & Rendering	2	ARCH 402

Presents a rationalized, geometrical approach to the conception and description of form. Selected examples of architectural form are first rigorously analyzed to re-derive their constructional logic and then are “built” as detailed electronic models. Students explore the potential of digital design technologies as instruments to achieve vivid, authentic, holistic simulations of architectural reality, appropriate to the testing of architectural ideas. Taught in a modified studio format.

Code	Course Name	Credit Hours	Prerequisite
ARCH 326	Global Issues in Architecture	2	ARCH 315

Examines our emerging understanding of global issues confronting humankind, including population growth, declining reserves of non-renewable resources, etc. Gives an overview of the environmental impact of human communities through history.

Code	Course Name	Credit Hours	Prerequisite
ARCH 328	Architectural Criticism	2	ARCH 327

Addresses a coherent understanding of contemporary architecture by focusing on readings, discussions and presentations in order to mature the student’s cognition to today’s architectural strategies.

Code	Course Name	Credit Hours	Prerequisite
ARCH 332 #	Design for Conservation	2	-

The course task is mastering the skills of: gathering, preparing and using historical materials; designing within the historical fabric of the city; defining the limits of interference in the monument historical structure; adapting and modernizing objects; practical application of preservation theories, techniques and technologies.

Code	Course Name	Credit Hours	Prerequisite
ARCH 333	Architectural & Urban Design for Residential Building	2=3	ARCH 302

Course in architectural and urban design in the field of single-family dwelling and small residential complex in a theoretical setting: the choice and basic of a design concept, relation between residential spaces, composition of architectural forms; small architecture, greenery, design of private and public spaces; techniques of presentation of a project; work with architectural models and visualizations; positive and negative space; Ideal City; Urban Scale.

Code	Course Name	Credit Hours	Prerequisite
ARCH 334	Architectural & Urban Design of Public Building	2-3	ARCH 302

The task of the course is mastering the skills of designing complex public use building. The detailed design of the object in architectural scale is preceded by the analysis of a spatial-functional connection with further urban context.

Code	Course Name	Credit Hours	Prerequisite
ARCH 335	Architectural & Urban Design of Service Complexes	2	ARCH 302

The task of this course is to design a chosen public service facility (e.g., Bank, hotel, town hall, gallery, sport hall). Diagrams concerning spatial functional relation to the designed object with the existing cultural and natural environment.

Code	Course Name	Credit Hours	Prerequisite
ARCH 336	Architectural Design For Industry	2	ARCH 302

The task of the course is to design a chosen work place (manufacturing facility; research complex; transportation facility, health care facility). The course includes selected elements of research in psychology of architecture.



Code	Course Name	Credit Hours	Prerequisite
ARCH 337	Urban Design of City Centers	2=3	ARCH 302

This course is focused on mastering the design skills- the problem of shaping, renewal and development of the contemporary city; methods of preparing land-use plan for the city as a legal basis for the development of municipal terrains- methods of forming public spaces from plans to small scale urban and architectural details; methods of preparing zone plans for the renovation of the city central areas; methods of carrying out complex urban inventories.

Code	Course Name	Credit Hours	Prerequisite
ARCH 338	Urban Transport	2=3	-

The course involves issues related to planning and design of networks and spaces for traffic and circulation in the cities. It deals with basic technical problems of urban transport, composition of relevant urban spaces, and generally interrelations of transport and urban design. Transport issues and their role in planning and urban design. General characteristics of various transportation modes. Impact of transport technology on urban development. Transport development strategies; street networks and street hierarchy; street space composition.

Code	Course Name	Credit Hours	Prerequisite
ARCH 339	Architecture & Planning in the countryside	2	ARCH 302

A growing interest in the countryside environment as a place to live as well as a place to escape from urban life challenges. This is a hands-on course where students are encouraged to seek new architectural and planning ideas for future development of the village.

Code	Course Name	Credit Hours	Prerequisite
ARCH 341 *	Furniture Design Basics	2	ARCH 207

Explores the basic function and design of furniture as it relates to human factors, such as anthropometrics and ergonomics. Provides a link between historical, theoretical and practical experience. Defines the elements of form, function and aesthetic by exploring experimental concepts and adopting alternative ways of thinking about the objects that surround us. Applies furniture models built to scale, or other presentation techniques, to effectively support the evolution of new concepts.

Code	Course Name	Credit Hours	Prerequisite
ARCH 342 **	Film Production I	2	ARCH 209

Introduces the process, development and production of film projects. Provides “hands-on” experience including production planning, pre-visualization, story boarding and location production. Screenings of significant films provide a historical context for the production process.

Code	Course Name	Credit Hours	Prerequisite
ARCH 343	Critical Discourse in Design	2	ARCH 301

Examines the relationship between intention and interpretation. Reviews the application of graphic language in visual media. Requires research on topics related to design communication. Complements studio-based design courses by exploring design considerations and practice from a theoretical perspective.

Code	Course Name	Credit Hours	Prerequisite
ARCH 345 **	Web Design I	2	ARCH 342

Explores web design through examination of developments in digital media and Internet enabling technologies. Introduces communication design practices for the World Wide Web. Considers information design, navigation plans and elements of interactivity in designing web pages. Requires students to design, author and edit web pages to create a coherent website.

Code	Course Name	Credit Hours	Prerequisite
ARCH 346	World Arts Survey II	2	ARCH 322

A continuation of the study of the historical development of the visual arts in the western tradition from the early Renaissance until the present. Concepts such as formal analysis and cultural context will be explored through written exercises



Code	Course Name	Credit Hours	Prerequisite
ARCH 347	Vernacular Architecture	2	ARCH 318

Historical development of all forms of vernacular and popular architecture. Study of the patterns and characteristics of human settlements and individual structures built according to local traditions. Analysis of both the social and physical factors shaping these characteristics.

Code	Course Name	Credit Hours	Prerequisite
ARCH 348 #	Urban Conservation	2	ARCH 332

Analysis of the scope and theory of urban conservation. Planning and programming for urban conservation with emphasis on strategies for conservation and implementation at various levels: neighborhood, district and city. Contradictions between conservation policies and policies for urban transformation. A practical introduction to the management of historical buildings and sites. Egyptian conservation problems and policies will be analyzed.

Code	Course Name	Credit Hours	Prerequisite
ARCH 408 *	Structural Design in Wood	2	CVEE 301

Engineering properties of wood; design of glued-laminated and lumber structural members, connections, and simple systems; introduction to shear walls and diaphragms.

Code	Course Name	Credit Hours	Prerequisite
ARCH 409 **	Film Production II	2	ARCH 342

Include project-based studies in film development, production and non-linear computer-based post production. Screenings of significant films provide a technical and critical context for production process

Code	Course Name	Credit Hours	Prerequisite
ARCH 410	Selected Topics in Architectural Engineering	1=3	--

Specialized topics in Architectural engineering will be selected and presented.

Code	Course Name	Credit Hours	Prerequisite
ARCH 411 **	Animation	2	-

Builds on the techniques learned in Animation I. Addresses strategies in animation and modeling: texture mapping, physics, dynamics, lighting and rendering for contemporary professional output.

Code	Course Name	Credit Hours	Prerequisite
ARCH 412 **	Web Design II	2	ARCH 345

Explores the process of web design from proposal to production through the fusion of content and interactivity. Studies dynamic web environments through the exploration of interactive authoring tools. Focuses on the tools and techniques of website development and management.

Code	Course Name	Credit Hours	Prerequisite
ARCH 413	Site Planning	2	--

Focuses on the site as a fundamental component of building design. Examines the interrelationship of intended site use with the environment. Examines topography, vegetation and landscape, climate, geography as well as theoretical aspects of site development. Emphasizes the synthesis of programmatic and environmental requirements into a coherent concept for building placement and site improvements.



Code	Course Name	Credit Hours	Prerequisite
ARCH 415 #	Comparative Studies in Architectural Conservation	2	ARCH 332

Discussion and comparison of the theoretical approaches towards architectural restoration and conservation in different countries with emphasis on contemporary scopes. Analysis and discussion of general trends and recent international developments in conservation.

Code	Course Name	Credit Hours	Prerequisite
ARCH 416 #	Methods of Architectural Conservation	2=3	ARCH 332

Analysis of the methods and techniques of survey in historic areas, of project making and implementation. Discussion of newly developed techniques related specific problems of material deterioration and remedies for them.

Code	Course Name	Credit Hours	Prerequisite
ARCH 417	Design of buildings resistant to earthquakes	2=3	ARCH 302

An introduction to seismology. A study of the impact of earthquakes on buildings. Regulations and architectural and building codes related to seismically behavior of buildings. Calculation and distribution of seismic forces on the buildings and their construction elements. Formation and design of reinforced concrete for frame and walls. The nature and impact of location and foundation soil on extending the seismically forces. Applications and observations of buildings and structures faced earthquakes.

Code	Course Name	Credit Hours	Prerequisite
ARCH 418	Sustainable Architecture	2=3	ARCH 320

The intent of this course is to integrate sustainable building and planning principles into the form of making process of architectural design. A survey of the principles of environmentally sensitive design and planning. An analysis of bioclimatic comfort and building metabolism; design with climate; integration of passive heating and cooling systems; water conservation planning; waste systems; and the basis for specifying sustainable building materials.

Code	Course Name	Credit Hours	Prerequisite
ARCH 419	Urban Planning in Developing Countries	2=3	ARCH 302

Historical evolution of city system in the developing countries; cultural and environmental factors effecting similarities and variations; comparative analysis of urbanization and social change and changing physical morphology of the major cities.

Code	Course Name	Credit Hours	Prerequisite
ARCH 421	Urban Sociology	2	ARCH 302

A comparative study of urban societies and institutions. The origins and evolution of towns and cities. The relationship between industrialization and urbanization in the Third World; rural-urban migration, unemployment, the informal sector and squatter housing. Changing social structures in urban populations.

Code	Course Name	Credit Hours	Prerequisite
ARCH 423	Green Architecture	2=3	-

Through coordinated lectures and demonstrations, the impacts of environmental energies on architectural form are introduced and explored. Emphasis is given to the processes by which the architect orders light, climate, gravity, and sound responses to achieve building geometry. The course also addresses concepts and strategies for responding to environmental hazards, and designing healthy buildings and green architecture. The continuing objective of this class is to examine contemporary building techniques in the context of the environmental challenges in our future. The selected focus for this term will be retrofit strategies for existing buildings to reach low to no net energy consumption.




Code	Course Name	Credit Hours	Prerequisite
ARCH 424 #	Selected topics in Restoration	1=3	-

Selected topics in Restoration & Conservation will be selected and presented.

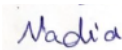
Code	Course Name	Credit Hours	Prerequisite
ARCH 480	Public Park Integrated Studio	2=3	ARCH 302

The topic of design in an urban public park. Analysis and public participation planning workshop. Designing of park composition and plants management, axonometric drawings; garden architecture and its elements.

The head of the program: Dr. Fahima EL Shahed

Signature: 

The Program Coordinator: Dr. Nadia Ahmed

Signature: 



Ministry of higher education
High valley institute for engineering and technology
Architecture and design department



Appendices



Appendix (1)

Report of external evaluation

تقرير المراجعة الخارجية لبرنامج الهندسة المعمارية – معهد الوادي العالي للهندسة والتكنولوجيا

تقرير مراجع خارجي للمرحلة الجامعية الاولى

برنامج الهندسة المعمارية معهد الوادي العالي للهندسة والتكنولوجيا

يعبر التقرير التالي على الراي العلمي الموضوعي للسيد / ا. د. جيهان السيد

الوظيفة الحالية: أستاذ ووكيل كلية الهندسة لشئون المجتمع وخدمه البيئة كلية الهندسة – جامعه دمنهور

تمت مراجعة وتقييم توصيف البرنامج المرفق بناء على طلب :

قسم: الهندسة المعمارية

معهد الوادي العالي للهندسة والتكنولوجيا

اسم البرنامج: الهندسة المعمارية

تاريخ المراجعة: سبتمبر ٢٠٢٢

برجاء مراجعة المكونات التالية التي تساعد على التقييم الشامل لتوصيف البرنامج المعني، وذلك باستخدام المقياس التالي :

أ. البيانات الاساسية للبرنامج

العناصر	مستوفي	*مستوفي جزئي	غير مستوفي
البيانات الاساسية	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

اسم المنسق	■	□	□
------------	---	---	---

تعليقات المراجع:

- البيانات الأساسية للبرنامج واضحة من حيث كتابة تاريخ بدء الدراسة بالبرنامج وهو ٢٠٠٩ وهو تاريخ الموافقة على إصدار -
اللائحة الدراسية الحالية للبرنامج، ولكن رقم وتاريخ القرار الوزاري غير موضح- كما انه لا يوجد مراجع داخلي للبرنامج
-تم استيفاء بيانات منسق البرنامج، -

لا يوجد داخل تصميم البرنامج ما يدل علي وجود مراجعات داخلية او خارجيه

ب. اهداف البرنامج ومواصفات الخريج :

١- اهداف البرنامج :			
العناصر	مستوفي	*مستوفي جزئي	غير مستوفي
صياغة الاهداف واضح	■	□	□
الاهداف قابلة للقياس كما/نوعا	■	□	□

تعليقات المراجع :

١٠ تم صياغة احدي عشر هدف للبرنامج باستخدام صيغ محددة وواضحة وقابلة للقياس، وتتوافق أهداف البرنامج مع رسالته المعلنة بالتوصيف، وتم استخدام اللغة الإنجليزية بصورة جيدة، وتحقق الأهداف الثلاثة للبرنامج مجمل مواصفات الخريج المطلوبة بالمعايير الأكاديمية للهيئة القومية لضمان جودة التعليم والاعتماد، ولكن ينقصها تسلسل الاهداف لتكون من اول مراحل اتقان مبادئ الهندسة المعمارية من وفهم العلوم الأساسية والرياضيات، حتي اكتساب المعارف الجديدة وتطبيقها.

2. تم إعداد مصفوفة توضح ارتباط أهداف البرنامج مع بأهداف المعهد، وكذلك مصفوفه لارتباط اهداف البرنامج بمواصفات الخريج
3. مطلوب وثائق اعتماد الرسالة والاهداف ومواصفات الخريج للبرنامج .

2-مواصفات الخريج :			
العناصر	مستوفي	*مستوفي جزئي	غير مستوفي
صياغة المواصفات واضحة	■	□	□
قابلية للقياس كما/نوعا	■	□	□

تعليقات المراجع :

1. مواصفات الخريج واضحة وقابلة للقياس ومتطابقة تماما مع المواصفات العامة لخريج الهندسة الواردة بالمعايير القياسية الأكاديمية القومية الهيئة لضمان جودة التعليم والاعتماد. NARS 2018 ولكن يمكن اضافته عدد من المواصفات للتأكيد علي تميز البرنامج مثل (. Create designs that belong to and put sustainability's guiding principles into practice .(while minimizing energy usage and respecting the physical environment and natural resources).

ج. جدارات خريج البرنامج :

رأي المراجع				التقييم
لا ينطبق	غير مستوفي	*مستوفي جزئي	مستوفي	

			■	ارتباط مخرجات التعلم بأهداف البرنامج
		■		تحقق مخرجات التعلم بالمقررات
			■	مخرجات التعلم المستهدفة تتوافق مع مواصفات الخريج للبرنامج
		■		مخرجات التعلم للبرنامج تواكب التطور العلمي في مجال التخصص
			■	مخرجات التعلم للبرنامج تواكب احتياجات سوق العمل

تعليقات المراجع :

- ١- مخرجات التعلم للبرنامج مقسمة إلى 3 مجالات معرفي وعلمي وسلوكي، وهو ما يكون عادة في مخرجات التعلم الخاصة بكل مقرر من المقررات وليس مخرجات التعلم الخاصة بالبرنامج ككل.
- ٢- تنطبق الجدارات العامة (A) والتخصصية (B) مع (NARS 2018) ولكن تم تغيير المسمى (C) بدلا من (A) و (CR) بدلا من (B) وتتوافق مع اهداف البرنامج
- ٣- مصفوفه توافق جدارات المقررات مع جدارات البرنامج تحتاج الي مراجعه

د. جدارات خريج البرنامج :

رأي المراجع			معيان التقييم
اختلف تماما	* إلى حد ما	اتفق تماما	

		■	المعايير الأكاديمية المتبناة محددة بوضوح
	■		المعايير الأكاديمية المتبناة تلائم تماما مواصفات الخريج
		■	المعايير الأكاديمية المتبناة تتحقق بالفعل من خلال توصيف البرنامج

تعليقات المراجع :

- لم يتبين تاريخ موافقة كل من مجلس الكلية وقسم الهندسة المعمارية على اعتماد تبني المعايير الأكاديمية القومية القياسية (NARS 2018) في توصيف برنامج الهندسة المعمارية.
- مصفوفة التوافق بين مقررات البرنامج وجدارات الخريج، تحتاج لتدقيق حيث أن الأوزان المحققة للجدارات من خلال المقررات يختلف الوزن النسبي لها ، لذا يجب تحقيق التوازن
- لا يوجد توازن بين معدل تكرار الجدارات داخل المقررات في مصفوفه جدارات البرنامج
- يجب التميز بين مواصفات الخريج ومخرجات التعلم للبرنامج (PLO'S)

هـ- هيكل البرنامج ومحتوياته:

هيكل البرنامج ومحتوياته:
توازن هيكل البرنامج مع مواصفات الخريج من حيث:
- مقررات العلوم الإنسانية والاجتماعية (12%) متنسقة مع مدى المعايير القومية (9-12%).
- مقررات الرياضيات والعلوم الأساسية (20%) متنسقة مع مدى المعايير القومية (20-26%).

- مقررات العلوم الهندسية الأساسية (20%) متنسقة مع مدى المعايير القومية (20-23%).
- مقررات الهندسة التطبيقية والتصميم (20%) متنسقة مع مدى المعايير القومية (20-22%).
- مقررات تطبيقات الحاسب ونظم المعلومات (9%) متنسقة مع مدى المعايير القومية (9-11%).
- مقررات المشروعات والتدريب الميداني (10%) متنسقة مع مدى المعايير القومية (8-10%).
- مقررات مميزة للمؤسسة (8%) متنسقة مع مدى المعايير القومية (6-8%).

تعليقات المراجع:

يوجد توازن في هيكل البرنامج المذكور مع كافة متطلبات المعايير القومية المتبناة، ويوجد جدول تفصيلي يوضح توزيع كل مقرر من مقررات البرنامج على نوعيات المقررات المختلفة المذكورة إجمالاً في توصيف البرنامج.

- شكل مصفوفه (Table no. (6): The subject area of the program) داخل توصيف البرنامج غير المتعارف عليها من نموذج الهيئة لتوضيح النسب المقررة لكل (subject) للبرنامج

- مطلوب عمل خطه دراسية (study plan) للبرنامج للطالب المنتظم

ملحوظة: يجب الرجوع عند تقييم هذا الجزء إلى الهياكل المطبقة في البرامج المناظرة

و- تقويم اعمال الطلاب:

معيار التقييم	رأي المراجع
---------------	-------------

لا ينطبق	غير مستوفي	مستوفي جزئي*	مستوفي	
		■		التوزيع العام لدرجات كل مقرر واضح ومحدد وفقا للاحة
			■	طرق التقويم للبرنامج متنوعة
			■	الطرق المستخدمة في التقويم ملائمة لطبيعة جدارات البرنامج
			■	طرق التدريس والتعلم بالبرنامج متنوعة وتتضمن التعلم الذاتي
		■		طرق التقويم ملائمة لطرق التدريس والتعلم بالبرنامج

تعليقات المراجع:

- الطرق المستخدمة في التقويم ملائمة بصفة عامة لطبيعة مخرجات التعلم المستهدفة.

ز- مقررات البرنامج:

يعتمد التقويم في هذا الجزء على المراجعة الدقيقة لتوصيف المقررات الخاصة بالبرنامج :

تعليقات عامة	المراجع المذكورة حديثة	طرق تقييم الطلاب المستخدمة ملائمة	الوسائل المستخدمة للتعليم والتعلم مناسبة للطرق المذكورة	اتسام محتويات المقرر بالحدثة	ملائمة طرق التعليم والتعلم المستخدمة لتحقيق مخرجات التعلم المقرر	توافق مخرجات التعلم المقرر مع مصفوفة جدارات للبرنامج	ملائمة مخرجات التعلم المقرر لأهدافه	قابلية مخرجات التعلم بالمقرر للقياس	ارتباط اهداف المقرر بأهداف البرنامج	وضوح اهداف المقرر	اسم المقرر	كود المقرر
	المستوي الاولي											
- مجموع تقييمات اعمال السنة ٤٠ وليس ٣٠ (مراجعته مصفوفة الدرجات) - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،،،،)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Classical mechanical, sound, heat	PHYS101
- أخطاء إملائية في اكواد الجدارات تحديث المراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	General physics laboratory (1)	PHYS111

- تحديث المراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	General chemistry 1 for engineers	CHEM 101
- مجموع تقييمات اعمال السنة ٦٠ وليس ٥٠ (مراجعته مصفوفة الدرجات) - تحديث المراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	General chemistry lab	CHEM 111
- يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات - تحديث المراجع مراجعته مصفوفه Course Topics مع Course LO's Covered	✓	✓	✓	✓	✓	✓	✓	✓	✓	Calculus 1	MATH 101
- أخطاء إملائية في اكواد الجدارات - تحديث المراجع مراجعته مصفوفه Course Topics مع Course LO's Covered	✓	✓	✓	✓	✓	✓	✓	✓	✓	Introduction to engineering	ENGR 101
- مراجعته مصفوفه توافق الجدارات مع طرق التقييم - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) - إضافة مراجع حديثة	✓	✓	✓	✓	✓	✓	✓	✓	✓	Engineering Drawing and projection	ENGR 102
- مراجعته مصفوفه توافق الجدارات مع طرق التقييم - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) - إضافة مراجع حديثة	✓	✓	✓	✓	✓	✓	✓	✓	✓	Engineering mechanics 1 (statics)	ENGR 103
- مراجعته مصفوفه توافق الجدارات مع طرق التقييم - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج	✓	✓	✓	✓	✓	✓	✓	✓	✓	Electricity and magnetism	PHYS102
- مراجعته مصفوفه توافق الجدارات مع طرق التقييم - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج	✓	✓	✓	✓	✓	✓	✓	✓	✓	General physics laboratory(٢)	PHYS112

<ul style="list-style-type: none"> - يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات - مراجعه مصفوفه Course Topics مع Course LO's Covered - تحديث المراجع 	✓	✓	✓	✓	✓	✓	✓	✓	Calculus II	MATH 102
<ul style="list-style-type: none"> - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج --خطأ إملائية في اكواد الجدارات 	✓	✓	✓	✓	✓	✓	✓	✓	Fundamental to computer programming	CECE 101
<ul style="list-style-type: none"> - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج -أخطاء إملائية في اكواد الجدارات - مراجعه مصفوفه Course Topics مع Course LO's Covered 	✓	✓	✓	✓	✓	✓	✓	✓	Production engineering	ENGR 105
<ul style="list-style-type: none"> - مراجعه مصفوفه Course Topics مع Course LO's Covered - تحديث المراجع - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) 	✓	✓	✓	✓	✓	✓	✓	✓	engineering mechanics 2 (Dynamics)	ENGR 104
<ul style="list-style-type: none"> - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات - مراجعه مصفوفات توافق الجدارات للبرنامج مع جدارات المقرر، موضوعات المقرر مع جدارات المقرر - - مجموع تقييمات اعمال السنة ٥٠ وليس ٢٠ (مراجعته مصفوفه الدرجات) - اضافته مراجع مؤرخه - وسائل اخري للطلبة المتعثرين (ساعات أكاديمية اضافيه -،،،،،) 	✓	✓	✓	✓	✓	✓	✓	✓	Elementary English	ENGL 101
المستوي الثاني										

- أخطاء إملائية في اكواد الجدارات - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture drawing	ARCH 201*
- تحديث المراجع - مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات - مراجعه مصفوفه Course Topics مع Course LO's Covered	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Building construction 1	ARCH 205*
-إضافة مراجع حديثة -مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج -مراجعته مصفوفه توافق جدارات المقرر مع طرق تقييم الطلاب - - مجموع تقييمات اعمال السنة ٣٠ وليس ٤٠ (مراجعته مصفوفه الدرجات) -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Visual training	ARCH 211*
أخطاء في التكويد (C) هذا هو جدارات البرنامج كما هو مذكور في توصيف البرنامج وليس جدارات المقررات - إضافة مراجع حديثة	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Structural analysis 1	CVVE350
-مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - جدارات البرنامج تم تسميتها في توصيف البرنامج ب (C) وليس (A) لابد من الاتفاق علي اكواد موحد -مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مراجعه مصفوفه Course Topics مع Course LO's Covered - إضافة مراجع حديثة	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Strength and testing of materials	ENGR 203
-مراجعته عدد اهداف المقرر داخل مصفوفه توافق اهداف المقرر مع اهداف البرنامج	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Probability and statistics	MATH 301

<p>جدارات المقرر غير مطابقة لمصفوفة جدارات توصيف البرنامج</p> <p>- يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات</p> <p>-أخطاء إملائية في اكواد الجدارات</p> <p>- مراجعه مصفوفه Course Topics مع Course LO's</p> <p>-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -- إضافة مراجع حديثة</p> <p>لا توجد مراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Lower intermediate English	ENGL 102
<p>لا توجد مراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Human Rights	BASE309
<p>- يفضل ان يكون عدد جدارات المقرر من ٣ الي ٦ جدارات</p> <p>-مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- إضافة مراجع حديثة</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	History of architecture 1	ARCH 213
<p>-مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Theory of architecture 1	ARCH 219
<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>-- مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Shade, shadow and perspective 1	ARCH 220*
<p>-- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Fundamentals of design and color and painting	ARCH 210*

<p>--مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>--مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم وتحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture design 1	ARCH 301*
<p>- مخرجات التعلم كثيره ٦-٣ فقط</p> <p>- تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Building construction 2	ARCH 317*
<p>- جدارات المقرر غير مطابقة لمصفوفة</p> <p>-جدارات توصيف البرنامج</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Structural analysis 2	CVEE351
<p>- مخرجات التعلم كثيره ٦-٣ فقط</p> <p>-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم</p> <p>-تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Research Methods	Base 306
المستوي الثالث												
<p>-مخرجات التعلم كثيره ٦-٣ فقط</p> <p>-تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture design 2	ARCH 302*
<p>-مراجعته مصفوفه Course Topics مع</p> <p>Course LO's Covered</p> <p>-مخرجات التعلم كثيره ٦-٣ فقط(مراجعته)</p> <p>-مراجعته جميع المصفوفات داخل المقرر</p> <p>- اضافته مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Building construction 3	ARCH 320*
<p>-مخرجات التعلم كثيره ٦-٣ فقط(مراجعته)</p> <p>اضافته مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Computer application in architecture	ARCH 202
<p>-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم</p> <p>-اضافته مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	History of architecture 2	ARCH 215
<p>-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم</p> <p>-اضافته مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Theory of architecture 2	ARCH 304

مراجعته مصفوفه (Teaching and Learning Methods) مع ال CLOS	✓	✓	✓	✓	✓	✓	✓	✓	✓	Field plan and topographic surveying	CVEE 250
-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم وتحديث المراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	Reinforced concrete design 1	CVEE354
-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم -اضافه المراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	Engineering economics	BASE303
-مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - اذاله الجداره (C 7) مراجعته مصفوفه Course Topics مع Course LO's مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture design 3	ARCH 402*
-مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	Building construction 4	ARCH 330*
-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	Concepts of urban planning	ARCH 318
- اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	Environmental control systems and design	ARCH 206
- أخطاء إملائية في اكواد الجدارات - مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعلم - اضافته مراجع	✓	✓	✓	✓	✓	✓	✓	✓	✓	Three dimensional designs	ARCH 208

<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>-اضافه مراجع حديثه</p> <p>تحديث المراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Shade, shadow and perspective 2	ARCH 305*
<p>- أخطاء إملائية في اكواد الجدارات</p> <p>اضافه مراجع حديثه</p> <p>- مراجعته مصفوفه توافق اهداف المقرر مع اهداف البرنامج</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Reinforced concrete design 2	CVEE355
<p>- أخطاء إملائية في اكواد الجدارات</p> <p>-مراجعته مصفوفه Course Topics مع Course LO'</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Soil mechanics and foundation	CVEE352
المستوي الرابع												
<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته)</p> <p>- مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture design 4	ARCH 403*
<p>- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته)</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Working drawing 1	ARCH 345*

<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مراجعته مصفوفه Course Topics مع Course LO's</p> <p>-اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Urban design and landscape	ARCH 407*
<p>- مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>-اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Acoustics and illumination	ARCH 344
<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- اضافه مراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Geographical information system	ARCH 303
<p>أخطاء إملائية في اكواد الجدارات</p> <p>-مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- لا يوجد مراجع</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Advanced computer – aid architectural design	ARCH 316
<p>- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته)</p> <p>مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Structural steel design	CVVE353
<p>مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج</p> <p>- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته)</p> <p>مراجعته مصفوفه Course Topics مع Course LO's</p> <p>- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم</p> <p>- اضافه مراجع حديثه</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓	Architecture design 5	ARCH 404*

مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) -مراجعته مصفوفه Course Topics مع Course LO's - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Working drawing 2	ARCH 406*
- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مراجعه مصفوفه Course Topics مع Course LO's - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Urban and regional planning	ARCH 420*
- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Technical installation	ARCH 425
- مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Modern and contemporary foundations of art and architecture	ARCH 315
- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافته مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Advanced Representation	ARCH 324

BASE401	Communication skills	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -مراجعته مصفوفه التقديرات والدرجات -اضافه مراجع
BASE404	Negotiation skills	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مراجعته مصفوفه توافق اهداف المقرر مع اهداف البرنامج - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -مراجعته مصفوفه التقديرات والدرجات اضافه مراجع حديثه
المستوي الخامس												
ARCH 490*	Senior project 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه
ARCH 405*	Architecture design 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه
ARCH 422*	Working drawing 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	مخرجات التعلم كثيره ٣-٦ فقط(مراجعته) - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه
ARCH 414*	Housing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج - مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه
ARCH 212	Virtual reality studio in architecture	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	- مراجعته مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه

مخرجات التعلم كثيره ٣-٦ فقط(مراجعه) - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Design for conservation	ARCH 332 #
- مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Contracts, Bids& Liabilities	BASE 307
- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج -مخرجات التعلم كثيره ٣-٦ فقط(مراجعه) - مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم - اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Senior project 2	ARCH 491*
-مخرجات التعلم كثيره ٣-٦ فقط(مراجعه) مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Working drawing 4	ARCH 429*
- مراجعة عدد ساعات المقرر، وكذلك وملاءمتها للجدول رقم ٧ في توصيف البرنامج -مخرجات التعلم كثيره ٣-٦ فقط(مراجعه) -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Interior design	ARCH 401*
-اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Internship in architecture	ARCH 390
-مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	World Art Survey I	ARCH 322
-اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sustainable architecture	ARCH 418
الجدارات من ٣ الي ٦	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Seminar	BASE308
مراجعه مصفوفه توافق جدارات البرنامج مع طرق التقييم وكذلك مع أساليب التعليم والتعلم -اضافه مراجع حديثه	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feasibility Studies	BASE 402

تعليقات أخرى:

- لم يتوافر ما يفيد قيام البرنامج بعمل دراسة لسد الفجوة بين (NARS 2009) و(NARS2018).
- لم يتوفر ما يفيد مدى المشاركة في تطوير البرنامج من مختلف الأطراف ذات الصلة.
- مقررات اللائحة حققت جدارات البرنامج بنسب متفاوتة
- تم تقسيم جدارات البرنامج الي معرفي وسلوكي وجداني ولكن كان من المفروض تسلسل التقييم في كل من المجالات الثلاثة بحيث ينتهي التقييم في السلوك المعرفي عند رق (١٢) وبيداء في السلوكي برقم (١٣) وليس برقم (١) من جديد وذلك لأنه في توصيف المقرر يتم وضع مخرجات التعلم للمقرر مثلا (PLO1) ولم يشير الي انه معرفي ام ادراكي ام سلوكي وذلك في اغلب المقررات للمستوي الأول
- رغم تقسيم جدارات المقررات الي معرفي وسلوكي ووجداني الا انه لم يظهر هذا التقسيم داخل توصيف المقررات
- ٩٠٪ من المقررات لا تتوافق عدد الساعات المعتمدة وتوزيعها داخل توصيف المقرر مع عدد الساعات في الجدول رقم (7) في توصيف البرنامج.
- - يجب الايزيد عدد مخرجات التعلم للمقرر عن (٣ الي ٦) جدارات ومن الملاحظ ان ٦٠٪ من مقررات البرنامج تتعدي فيها مخرجات التعلم للمقرر عن ٦ مخرجات
- من الملاحظ ان بعض المقررات مثل ENGL 102 ، CECE 101 ، ENGL 102 ، CECE 101 ، ENGL 102 ،
،.....يستخدم كود لمخرجات التعلم للمقرر تختلف عن باقي اكواد المقررات (يجب التنسيق والاتفاق علي كود موحد)
- بعض المقررات لا تتوافق مع الإطار المرجعي 2020، من حيث العدد وعدد الساعات واوزانها النسبية كما تم ذكره سابقا، ونوصي بمراجعته عدد الساعات المقرره في تصميم البرنامج داخل توصيف المقررات
- تضمن توصيف كل مقرر البيانات الأساسية، الوصف المحتوى للمقرر، أهداف المقرر، وجدارات الخريج التي يشارك المقرر في تحقيقها، والموضوعات التي يتم تدريسها، وطرق التدريس والتقييم وتوزيع الدرجات، وقوائم بالمراجع، والتسهيلات المطلوبة للمقرر .
- مراجعة الأخطاء الواردة بساعات المقررات وأسماءها وفقا لللائحة البرنامج .
- بعض المقررات لا يوجد بها تنوع في مراجعها، حيث معظم المراجع قديمه ولا يوجد روابط لمواقع تعليمية الكترونية أو مراجع بحثية أو مقالات حديثة .

- بعض المراجع المذكورة بتوصيف المقررات غير كاملة، حيث تفتقد لذكر دار النشر، ورقم الإيداع أو الترقيم الدولي، وغيرها.
- اقتصار المراجع في توصيف أغلب المقررات على الكتب، ومحدودية ذكر أي مراجع أخرى كالدوريات والمواقع الإلكترونية وغيرها.

رأي المقيم النهائي:

- هذا البرنامج بوضعه الحالي ملائم نسبياً، مع وجود بعض الملاحظات عليه مذكورة تفصيلاً أعلاه فيما يخص كل جزئية من جزئيات التقويم.
- ضرورة العرض على اللجان المسؤولة والمجالس الحاكمة لاتخاذ ما تراه مناسباً تجاه عمل الإجراءات التصحيحية المناسبة في هذا البرنامج لتلافي كافة الملاحظات السابقة في البرنامج من أجل تحسين جودة البرنامج.

التوقيع: 

اسم المراجع الخارجي: ا . د / جيهان السيد

يعتمد التقويم في هذا الجزء على المراجعة الدقيقة لتقرير المقررات الخاصة بالبرنامج :

تعليقات عامة	استيفاء المعلومات المتخصصة						استيفاء المعلومات الأساسية بالاتساق مع توصيف المقرر					اسم المقرر	كود المقرر	
	الإحصائيات	تدريس المقرر (بالاتساق مع توصيف	الإمكانات المتاحة للتدريس	نتيجة تقويم الطلاب للمقرر (الاستبيانات)	تحديد ما تم تنفيذه من مقترحات التطوير في العام السابق	تحديد ما لم يتم تنفيذه من مقترحات خطة تطوير المقرر للعام القادم	اسم المقرر	رقمه الكودي	الفرقة/المستوى	إجمالي أعداد الساعات النظرية والساعات العملية	القائمين بالتدريس			
المستوي الاول														
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Classical mechanical, sound, heat	PHYS101
	✓	✓	✓				✓	✓	✓	✓	✓	✓	General physics laboratory (1)	PHYS111
	✓	✓	✓				✓	✓	✓	✓	✓	✓	General chemistry 1 for engineers	CHEM 101
	✓	✓	✓				✓	✓	✓	✓	✓	✓	General chemistry lab	CHEM 111
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Calculus 1	MATH 101

	✓	✓	✓				✓	✓	✓	✓	✓	✓	Introduction to engineering	ENGR 101
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Engineering Drawing and projection	ENGR 102
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Engineering mechanics 1 (statics)	ENGR 103
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Electricity and magnetism	PHYS102
	✓	✓	✓				✓	✓	✓	✓	✓	✓	General physics laboratory(٢)	PHYS112
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Calculus II	MATH 102
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Fundamental to computer programming	CECE 101
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Production engineering	ENGR 105
	✓	✓	✓				✓	✓	✓	✓	✓	✓	engineering mechanics 2 (Dynamics)	ENGR 104
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Elementary English	ENGL 101
المستوي الثاني														
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture drawing	ARCH 201*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Building construction 1	ARCH 205*

	✓	✓	✓				✓	✓	✓	✓	✓	✓	Visual training	ARCH 211*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Structural analysis 1	CVVE350
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Strength and testing of materials	ENGR 203
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Probability and statistics	MATH 301
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Lower intermediate English	ENGL 102
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Human Rights	BASE309
	✓	✓	✓				✓	✓	✓	✓	✓	✓	History of architecture 1	ARCH 213
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Theory of architecture 1	ARCH 219
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Shade, shadow and perspective 1	ARCH 220*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Fundamentals of design and color and painting	ARCH 210*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 1	ARCH 301*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Building construction 2	ARCH 317*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Structural analysis 2	CVVE351
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Research Methods	Base 306

المستوي الثالث

	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 2	ARCH 302*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Building construction 3	ARCH 320*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Computer application in architecture	ARCH 202
	✓	✓	✓				✓	✓	✓	✓	✓	✓	History of architecture 2	ARCH 215
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Theory of architecture 2	ARCH 304
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Field plan and topographic surveying	CVEE 250
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Reinforced concrete design 1	CVEE354
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Engineering economics	BASE303
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 3	ARCH 402*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Building construction 4	ARCH 330*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Concepts of urban planning	ARCH 318
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Environmental control systems and design	ARCH 206

	✓	✓	✓				✓	✓	✓	✓	✓	✓	Three dimensional designs	ARCH 208
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Shade, shadow and perspective 2	ARCH 305*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Reinforced concrete design 2	CVVE355
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Soil mechanics and foundation	CVVE352
المستوي الرابع														
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 4	ARCH 403*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Working drawing 1	ARCH 345*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Urban design and landscape	ARCH 407*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Acoustics and illumination	ARCH 344
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Geographical information system	ARCH 303
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Advanced computer – aid architectural design	ARCH 316
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Structural steel design	CVVE353
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 5	ARCH 404*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Working drawing 2	ARCH 406*

	✓	✓	✓				✓	✓	✓	✓	✓	✓	Urban and regional planning	ARCH 420*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Technical installation	ARCH 425
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Modern and contemporary foundations of art and architecture	ARCH 315
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Advanced Representation	ARCH 324
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Communication skills	BASE401
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Negotiation skills	BASE404
المستوي الخامس														
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Senior project 1	ARCH 490*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Architecture design 6	ARCH 405*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Working drawing 3	ARCH 422*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Housing	ARCH 414*
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Virtual reality studio in architecture	ARCH 212
	✓	✓	✓				✓	✓	✓	✓	✓	✓	Design for conservation	ARCH 332 #

✓	✓	✓				✓	✓	✓	✓	✓	✓	Contracts, Bids & Liabilities	BASE 307
✓	✓	✓				✓	✓	✓	✓	✓	✓	Senior project 2	ARCH 491*
✓	✓	✓				✓	✓	✓	✓	✓	✓	Working drawing 4	ARCH 429*
✓	✓	✓				✓	✓	✓	✓	✓	✓	Interior design	ARCH 401*
✓	✓	✓				✓	✓	✓	✓	✓	✓	Internship in architecture	ARCH 390
✓	✓	✓				✓	✓	✓	✓	✓	✓	World Art Survey I	ARCH 322
✓	✓	✓				✓	✓	✓	✓	✓	✓	Sustainable architecture	ARCH 418
✓	✓	✓				✓	✓	✓	✓	✓	✓	Seminar	BASE308
✓	✓	✓				✓	✓	✓	✓	✓	✓	Feasibility Studies	BASE 402

تعليقات أخرى:

- لم يتم الاستدلال علي ال Blue Print في تقرير المقررات
- المراجع المستعان بها كلها قديمه و غير كاملة، حيث تفتقد لذكر دار النشر، ورقم الإيداع أو الترقيم الدولي، وغيرها واقتصرت المراجع في أغلب المقررات على الكتب، ومحدودية ذكر أي مراجع أخرى كالدوريات والمواقع الإلكترونية وغيرها.
- لم يتم تحديد نقاط الرضا وعدم الرضا من خلال الاستبيانات التي توزع علي الطلاب ورافقها بتقرير المقررات
- لم يتم تقديم مقترحات التطوير للبرنامج واذا ماكان هناك أي اقتراحات للتطوير وتحديد ماتم تنفيذه ومالم يتم تنفيذه

- لم يذكر داخل التقرير خطة التطوير والهدف من التطوير وماهي الأنشطة المقترحة لتطوير البرنامج والمسؤول عن التنفيذ والوقت المحدد لتنفيذ خطة التطوير والميزانية المقترحة لتنفيذ خطة التطوير.
- لم يذكر داخل تقرير المقرر تحليل نتائج الاحصائيات وكذلك نتائج تحليل تقويم الطلاب للمقررات والمعوقات الإدارية لتحقيق خطة التطوير.
- لم يتم الاستدلال علي تقرير البرنامج

رأى المقيم النهائي:

- هذا البرنامج بوضعه الحالي ملائم نسبياً، مع وجود بعض الملاحظات عليه مذكورة تفصيلاً أعلاه فيما يخص كل جزئية من جزئيات التقويم.
- ضرورة العرض على اللجان المسؤولة والمجالس الحاكمة لاتخاذ ما تراه مناسباً تجاه عمل الإجراءات التصحيحية المناسبة في هذا البرنامج لتلافي كافة الملاحظات السابقة في البرنامج من أجل تحسين جودة البرنامج.



التوقيع:

اسم المراجع الخارجي: ا. د/ جيهان السيد



Appendix (2)

Report of Internal evaluation



تقرير مراجعة لتوصيف برنامج بكالوريوس (الهندسة المعمارية والتصميم) العام الدراسي 2022-2023

يعبر التقرير التالي عن الرأي العلمي الموضوعي للجنة المراجعة الداخلية لمعهد الوادي العالي للهندسة والتكنولوجيا بالقلبيوبية تمت مراجعة وتقييم توصيف البرنامج المرفق بناء على طلب: عميد المعهد / رئيس القسم العلمي
اسم البرنامج: بكالوريوس (الهندسة المعمارية والتصميم)

تاريخ المراجعة: (يوليو - 2023)

التقييم الشامل لتوصيف البرنامج المعنى يشمل المكونات التالية:

(أ) البيانات الأساسية للبرنامج

العناصر	مستوف	غير مستوف
البيانات الأساسية	√	
اسم المنسق	√	

مبررات التقييم:

- كافة البيانات مستوفاة.

(ب) التقييم الأكاديمي

أهداف البرنامج	واضحة	غير واضحة
صياغة الأهداف	<input checked="" type="checkbox"/>	<input type="checkbox"/>
قابلية للقياس	<input checked="" type="checkbox"/>	<input type="checkbox"/>

مبررات التقييم:

- اهداف البرنامج عبارة عن اربعة اهداف عامة منبسط منها اهداف تنفيذية يمكن قياسها من خلال وسائل تقويم الطالب بالبرنامج.
- اهداف البرنامج متوافقة مع رسالة البرنامج وتتوفر مصفوفة التوافق بين رسالة البرنامج واهداف البرنامج.

(ج) المعايير الأكاديمية

تحديد المعايير الأكاديمية	محددة	غير محددة
تبنى البرنامج معايير الهيئة القومية لضمان جودة التعليم والإعتماد	<input checked="" type="checkbox"/>	<input type="checkbox"/>
تم اعتماد تبنى المعايير الأكاديمية من مجلس الكلية ومجلس الجامعة	<input checked="" type="checkbox"/>	<input type="checkbox"/>
تم مراجعة المعايير الأكاديمية من مراجع خارجي	<input checked="" type="checkbox"/>	<input type="checkbox"/>
تم اتخاذ الإجراءات التصحيحية بناء على مراجعة المعايير	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ملائمة المعايير الأكاديمية لمواصفات الخريج	<input checked="" type="checkbox"/>	<input type="checkbox"/>
تحقيق المعايير الأكاديمية المتنباه من خلال توصيف البرنامج	<input checked="" type="checkbox"/>	<input type="checkbox"/>
مصدر العلامات المرجعية (المعايير) التي تبنها البرنامج ARS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
تقييم المراجع لمدى استيفاء العلامات المرجعية ARS لمعايير الهيئة القومية NARS	<input type="checkbox"/>	<input checked="" type="checkbox"/>



ميررات التقييم:

- يتبنى البرنامج المعايير الاكاديمية NARS 2018 وتم تبني مواصفات الخريج وجدارات الخريج لهذه المعايير ولكن مواصفات الخريج يجب ان يتم تعديلها حيث يتم تمييز خريج البرنامج عن خريجي البرامج المناظرة في كونه قادر على التعامل مع المشروعات الخاصة بذوي الهمم بشكل فعال.
- تتوفر مصفوفة العلاقة بين جدارات الخريج والمقررات وفي نفس الوقت يظهر للبرنامج مخرجات، فيجب عمل مصفوفة توافق مخرجات البرنامج مع جدارات الخريج، ومصفوفة لتوافق مقررات البرنامج مع مخرجات البرنامج مباشرة.

د) جدارات البرنامج

<input type="checkbox"/>	غير واضحة	<input checked="" type="checkbox"/>	واضحة	- جدارات البرنامج
<input type="checkbox"/>	غير مرتبطة	<input checked="" type="checkbox"/>	مرتبطة	- ارتباطات جدارات البرنامج بأهداف البرنامج
<input type="checkbox"/>	لا تتحقق	<input checked="" type="checkbox"/>	تتحقق	- تتحقق الجدارات بالمقررات
<input checked="" type="checkbox"/>	لا يتوافق	<input type="checkbox"/>	يتوافق	- جدارات البرنامج تتوافق مع مواصفات الخريج للبرنامج
<input type="checkbox"/>	لا توأكب	<input checked="" type="checkbox"/>	توأكب	- جدارات البرنامج توأكب التطور العلمي في مجال التخصص
<input type="checkbox"/>	لا توأكب	<input checked="" type="checkbox"/>	توأكب	- جدارات البرنامج توأكب احتياجات سوق العمل

ميررات التقييم:

- يتوفر للبرنامج كافة الدراسات التي تربط جدارات البرنامج باهداف البرنامج ومصفوفة توافق جدارات البرنامج بالمقررات
- لا تتوفر مصفوفة توافق مواصفات الخريج للبرنامج مع جدارات الخريج وذلك بالرغم من توفر دراسة توافق اهداف البرنامج مع مواصفات الخريج.

ه) مصفوفات البرنامج

<input type="checkbox"/>	لا تتحقق	<input checked="" type="checkbox"/>	تتحقق	مصفوفة جدارات البرنامج ومقارنتها بجدارات المعايير القومية القياسية
<input checked="" type="checkbox"/>	لا تتحقق	<input type="checkbox"/>	تتحقق	مصفوفة جدارات البرنامج ومقارنتها بنواتج تعلم المقررات
<input type="checkbox"/>	لا تتحقق	<input checked="" type="checkbox"/>	تتحقق	مصفوفة جدارات البرنامج وأهداف البرنامج
<input type="checkbox"/>	لا تتحقق	<input checked="" type="checkbox"/>	تتحقق	مصفوفة مواصفات الخريج واهداف البرنامج
<input type="checkbox"/>	لا تتحقق	<input checked="" type="checkbox"/>	تتحقق	مصفوفة اهداف البرنامج ورسالة المؤسسة

ميررات التقييم:

- توفر كافة الداسات والمصفوفات الخاصة بهذا البند فيما عدا انه يتوفر مصفوفة جدارات البرنامج ومقارنتها بنواتج تعلم المقررات



و) هيكل البرنامج ومحتوياته

توازن هيكل البرنامج مع مواصفات الخريج من حيث:		
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات العلوم الاجتماعية والإنسانية
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات العلوم الأساسية والرياضية
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات العلوم الهندسية الأساسية
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات متخصصة تصميماً هندسية
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات الحاسب وتكنولوجيا الاتصال
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مشروعات وتدريب علمي وميداني
<input checked="" type="checkbox"/> غير متوازنة	<input type="checkbox"/> متوازنة	- مقررات استثنائية (تحقق هوية المؤسسة)

مبررات التقييم:

- نسب توزيع العلوم في البرنامج تظهر بجدول رقم (6) بتوصيف البرنامج

courses	Total hour	percentage
Basic science courses	24	13.4 %
Humanitarian – social science- general culture courses	17	9.5 %
Specialization courses	130	72.6 %
English courses	6	3.4 %
Field training courses	2	1.1 %

- لم يتم اضافة المقررات اللغة الانجليزية للمقررات الانسانية، حيث تصبح النسبة 12.9% ولم تضاف مقررات المشروع الى مقرر التدريب.
- ولم تظهر نسبة مقررات الحاسب.

ن) تقويم أعمال الطلاب

تقويم أعمال الطلاب	
<input type="checkbox"/> ملائمة <input checked="" type="checkbox"/> غير ملائمة	ملائمة الطرق المستخدمة في التقويم لطبيعة جدارات البرنامج ومخرجات التعلم
<input type="checkbox"/> قادرة <input checked="" type="checkbox"/> غير قادرة	قدرة طرق التقويم على قياس جدارات البرنامج ومخرجات التعلم (جميع المجالات)
طرق التقويم المستخدمة:	
Written exam - Oral Exams – Discussions - Class works – Projects – Researches - <input type="checkbox"/> Reports – Presentations – Discussions -	

مبررات التقييم:

- تم ذكر كافة اساليب التقويم وهي متوافقة مع الجدارات حيث تم عمل مصفوفة توافق بينها وبين الجدارات.



ملاحظات عامة:

توصيف البرنامج يحتاج الى تطوير فيما يلي:

- تعديل مواصفات الخريج حيث تسع ان تلبي رسالة البرنامج واعتمادها في مجلس برنامج
- اعداد مصفوفة توافق مخرجات البرنامج مع جدارات البرنامج
- مراجعة اساليب التعليم والتعلم ودراسة توافقها مع مخرجات البرنامج.
- مراجعة اساليب التقييم ودراسة توافقها مع مخرجات البرنامج.

لجنة المراجعة الداخلية للبرنامج:

- أ.د/ راندا حسن محمد
- ا.م.د/ أحمد حنفي محمود
- ا.م.د/ تامر الجوهري
- د./ رانية عبد القوي خليفة
- د./ دعاء فتحي أحمد

اعتماد

مستشار التطوير

ا.د/ راندا حسن محمد عبد الخالق

المدير التنفيذي لوحدة ضمان الجودة

د/ فهيمة محمد سعد الدين الشاهد

تاريخ المراجعة: يوليو 2023



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقبليونية
وحدة ضمان الجودة



تقرير مراجعة داخلية لمقررات برنامج الهندسة المعمارية والتصميم للعام الدراسي 2022-2023

مقررات المستوى الاول														بنود التقييم		
Engineering mechanics 2	Engineering mechanics 1	Engineering Drawing and	Production engineering	Introduction to engineering	Elementary English	Fundamental to computer programming	General chemistry lab	General chemistry 1 for engineers	General physics laboratory 2	Electricity and magnetism	General physics laboratory 1	Classical mechanical, sound, heat	Calculus 2			Calculus 1
ENGR 104	ENGR 103	ENGR 102	ENGR 105	ENGR 101	ENGL 101	CECE 101	CHEM 111	CHEM 101	PHYS11 2	PHYS 102	PHYS11 1	PHYS10 1	MATH 102	MATH 101		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتباع نموذج التوصيف الخاص بوحدة ضمان الجودة	1
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق المعلومات الاساسية مع ما ورد بلائحة المعهد وتوصيف البرنامج	2
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	وضوح اهداف المقرر	3
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اهداف المقرر بأهداف البرنامج	4
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	حدائة محتويات المقرر	5
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع اهداف المقرر	6
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع اهداف المقرر	7
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع مخرجات المقرر	8
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع جدارات الخريج	9
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التعليم والتعلم مع مخرجات المقرر	10
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التقويم مع اساليب التعليم والتعلم	11
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر توقيتات التقويم	12
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر درجات تفصيلية للتقييم تتوافق مع اسلوب التقويم	13
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر اساليب التعامل مع المتعثرين	14
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر المراجع الخاصة بالمقرر	15
x	x	x	√	x	x	x	x	x	x	x	x	x	x	x	حدائة المراجع بالتوصيف	16
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر الامكانيات المادية الخاصة بتدريس المقرر	17
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اعتماد التوصيف	18



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية
وحدة ضمان الجودة



ملاحظات عامة:

- اللغة الانجليزية تحتاج الي التدقيق.
- كافة المقررات تحتاج الي تحديث المراجع.
- مقررات المعامل للكيمياء والفيزياء تحتاج الي اضافة امتحان معمل وتظهر له درجات بالمقرر.

ملاحظات تفصيلية:			
1	مقرر	MATH 101	المراجع تحتاج الي تحديث.
2	مقرر	MATH 102	المراجع تحتاج الي تحديث.
3	مقرر	PHYS101	المراجع ليست مكتوبة بشكل علمي.
4	مقرر	PHYS111	يجب وضع امتحان عملي لمقرر ويتوفر له درجات تظهر بالمقرر، يجب تحديث المراجع.
5	مقرر	PHYS 102	لا تتوفر مراجع حديثة.
6	مقرر	PHYS112	يجب وضع امتحان عملي لمقرر ويتوفر له درجات تظهر بالمقرر، يجب تحديث المراجع.
7	مقرر	CHEM 101	المراجع تحتاج اعادة الصياغة والتحديث.
8	مقرر	CHEM 111	يجب وضع امتحان عملي لمقرر ويتوفر له درجات، المراجع تحتاج اعادة الصياغة والتحديث.
9	مقرر	CECE 101	لا تتوفر مراجع لمقرر.
10	مقرر	ENGL 101	محتوى المقرر يحتاج الي التقنين، واساليب التعليم والتعلم تحتاج الي معمل لغة، المراجع تحتاج الي الصياغة بالطريق العلمية، والتحديث.
11	مقرر	ENGR 102	المراجع غير حديثة.
12	مقرر	ENGR 101	المراجع تحتاج الي ان يتم كتابتها بطريقة علمية.
13	مقرر	ENGR 105	يجب اعادة توزيع الدرجات ليظهر بها درجات تخص التفاعل بالورش.
14	مقرر	ENGR 103	اسلوب كتابة المراجع غير علمي، المراجع غير حديثة.
15	مقرر	ENGR 104	لا تتوفر مراجع حديثة.



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقبليونية
وحدة ضمان الجودة



مقررات المستوى الثاني															بنود التقييم	
Lower intermediate English	Research methods	Probability and statistics	Architecture design 1	Shade, shadow and perspective 1	Visual training	Fundamentals of design and color and	Structural analysis 2	Building construction 2	Building construction 1	Architecture drawing	theory of architecture 1	Structural analysis 1	History of architecture	Strength and testing of materials		
ENGL 102	BASE 306	MATH 301	ARCH 301	ARCH 220	ARCH 211	ARCH 210	CVEE 351	ARCH 317	ARCH 205	ARCH 201	ARCH 219	CVEE350	ARCH 213	ENGR 203		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتباع نموذج التوصيف الخاص بوحدة ضمان الجودة	1
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق المعلومات الأساسية مع ما ورد بلائحة المعهد وتوصيف البرنامج	2
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	وضوح اهداف المقرر	3
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اهداف المقرر بأهداف البرنامج	4
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	حدائة محتوى المقرر	5
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع اهداف المقرر	6
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع اهداف المقرر	7
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع مخرجات المقرر	8
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع جدارات الخريج	9
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التعليم والتعلم مع مخرجات المقرر	10
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التقويم مع اساليب التعليم والتعلم	11
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر توقيتات التقويم	12
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر درجات تفصيلية للتقييم تتوافق مع اسلوب التقويم	13
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر اساليب التعامل مع المتعثرين	14
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر المراجع الخاصة بالمقرر	15
√	x	x	x	x	x	x	x	x	x	x	x	x	x	x	حدائة المراجع بالتوصيف	16
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر الامكانيات المادية الخاصة بتدريس المقرر	17
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اعتماد التوصيف	18



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية
وحدة ضمان الجودة



ملاحظات عامة:

- كل المقررات استوفت ملاحظات تقرير المراجعة الداخلية للعام الدراسي 2022/2021 فيما عدا انها كافة تحتاج الى تحديث المراجع.

ملاحظات تفصيلية:			
1	مقرر	ENGR 203	.المراجع تحتاج الى تحديث
2	مقرر	ARCH 213	.المراجع تحتاج الى تحديث.
3	مقرر	CVEE350	-
4	مقرر	ARCH 219	.المراجع تحتاج الى التحديث.
5	مقرر	ARCH 201	مخرجات التعلم تحتاج المراجعة لكي تتوافق مع المقرر ومع اساليب التعليم والتعلم والتقويم
6	مقرر	ARCH 205	.المراجع تحتاج الى تحديث
7	مقرر	ARCH 317	.المراجع تحتاج الى التحديث.
8	مقرر	CVEE351	.المراجع تحتاج الى التحديث.
9	مقرر	ARCH 210	.يحتاج الى تحديث المراجع
10	مقرر	ARCH 211	لا تتوفر مراجع للمقرر
11	مقرر	ARCH 220	.المراجع تحتاج الى التحديث.
12	مقرر	ARCH 301	.المراجع تحتاج الى تحديث.
13	مقرر	MATH 301	يجب تحديث المراجع
14	مقرر	Base 306	-
15	مقرر	ENGL102	-



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقبليونية
وحدة ضمان الجودة



مقررات المستوى الثالث																	بنود التقييم	
Engineering economics	the principles of modern and contemporary	Reinforced concrete design2	Reinforced concrete design1	Soil mechanics and foundation	Field plan and topographic surveying	Architecture design 3	Building construction 4	Building construction 3	Shade, shadow and perspective 2	Architecture design 2	Concepts of urban planning	Environmental control systems and design	Computer application in architecture	History of architecture 2	Three dimensional designs	theory of architecture 2		
BASE 303	ARCH 315	CVEE 355	CVEE 354	CVEE 352	CVEE 250	ARCH 402	ARCH 330*	ARCH 320*	ARCH 305	ARCH 302	ARCH 318	ARCH 206	ARCH 202	ARCH 215	ARCH 208	ARCH 304		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتباع نموذج التوصيف الخاص بوحدة ضمان الجودة	1
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق المعلومات الاساسية مع ما ورد بلائحة المعهد وتوصيف البرنامج	2
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	وضوح اهداف المقرر	3
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اهداف المقرر بأهداف البرنامج	4
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	حدائة محتوى المقرر	5
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع اهداف المقرر	6
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع اهداف المقرر	7
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع مخرجات المقرر	8
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع جدارات الخريج	9
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التعليم والتعلم مع مخرجات المقرر	10
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التقويم مع اساليب التعليم والتعلم	11
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر توفينات التقويم	12
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر درجات تفصيلية للتقييم تتوافق مع اسلوب التقويم	13
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر اساليب التعامل مع المتعثرين	14
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر المراجع الخاصة بالمقرر	15
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	حدائة المراجع بالتوصيف	16
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر الامكانيات المادية الخاصة بتدريس المقرر	17
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اعتماد التوصيف	18



ملاحظات عامة:

- مقرر (The principles of modern and contemporary architecture) بنفس كود مقرر (contemporary foundations of art and)
- كافة المقررات في حاجة الى توفير مراجع حديثة.

ملاحظات تفصيلية:			
1	مقرر	ARCH 304	Theory of architecture 2 - المراجع تحتاج الى التحديث.
2	مقرر	ARCH 208	Three dimensional designs - لا تتوفر مراجع للمقرر.
3	مقرر	ARCH 215	History of architecture 2 - المراجع تحتاج الى التحديث.
4	مقرر	ARCH 202	Computer application in architecture .-
5	مقرر	ARCH 206	Environmental control systems and design - المراجع تحتاج الى التحديث.
6	مقرر	ARCH 318	Concepts of urban planning
7	مقرر	ARCH 302	تصميم معماري 2 المقرر يحتاج الى تحديث المراجع
8	مقرر	ARCH 305	Shade, shadow and perspective 2 - المراجع تحتاج الى التحديث.
9	مقرر	ARCH 320	انشاء معماري 3 المراجع تحتاج الى التحديث والكتابة بشكل علمي.
10	مقرر	ARCH 330	Building construction 4 - المراجع تحتاج الى التحديث. وكتابتها بالطريقة العلمية.
11	مقرر	ARCH 402	Architecture design 3 - المراجع تحتاج الى التحديث.
12	مقرر	CVEE 250	Field plan and topographic surveying المراجع تحتاج الى التحديث
13	مقرر	CVEE352	Soil mechanics and foundation
14	مقرر	CVEE354	Reinforced concrete design1
15	مقرر	CVEE355	Reinforced concrete design2
16	مقرر	ARCH 315	The principles of modern and contemporary architecture المراجع تحتاج الى التحديث.
17	مقرر	BASE303	Engineering economics .-



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقبليونية
وحدة ضمان الجودة



مقررات المستوى الرابع															بنود التقييم		
Advanced representation	Advanced computer aid architectural design	Geographical information system	Structural steel	Technical installation	Urban and regional planning	Urban design and landscape	Working drawing 2	Architecture design 5	Architecture design 4	Working drawing 1	Acoustics and illumination	Feasibility studies	Research methods	Human Rights			Engineering economics
ARCH 324**	ARCH 316	ARCH 303	CVEE353	ARCH 425	ARCH 420*	ARCH 407	ARCH 406*	ARCH 404	ARCH 403	ARCH 345*	ARCH 344	BASE402	BASE305	BASE309	BASE303		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتباع نموذج التوصيف الخاص بوحدة ضمان الجودة	1
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق المعلومات الأساسية مع ما ورد بلانحة المعهد وتوصيف البرنامج	2
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	وضوح اهداف المقرر	3
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اهداف المقرر بأهداف البرنامج	4
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	حدائة محتوى المقرر	5
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع اهداف المقرر	6
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع اهداف المقرر	7
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع مخرجات المقرر	8
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع جدارات الخريج	9
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التعليم والتعلم مع مخرجات المقرر	10
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التقويم مع اساليب التعليم والتعلم	11
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر توقيتات التقويم	12
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر درجات تفصيلية للتقييم تتوافق مع اسلوب التقويم	13
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر اساليب التعامل مع المتعثرين	14
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر المراجع الخاصة بالمقرر	15
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	حدائة المراجع بالتوصيف	16
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر الامكانيات المادية الخاصة بتدريس المقرر	17
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اعتماد التوصيف	18



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية
وحدة ضمان الجودة



ملاحظات عامة:

- تم التزام اساتذة المقررات بالتعديلات التي وردت بتقرير المراجعة الداخلية للعام الدراسي 2021/2022
- ولكنه لم يتم الاشارة الى المقررات الاختيارية بداخل التوصيف.
- ومقرر Technical installation في حاجة الى تطوير اساليب التعليم والتعلم حيث اضافة ساعات استوديو لتفعيل مشاريع.
- والمراجع تحتاج الى التحديث بكافة المقررات.

ملاحظات تفصيلية:			
1	مقرر	BASE401	المراجع تحتاج الى التحديث.
2	مقرر	BASE404	المراجع تحتاج الى التحديث.
3	مقرر	ARCH 315	يحتاج الى تحديث المراجع.
4	مقرر	ARCH 344	المراجع تحتاج الى التحديث
5	مقرر	*ARCH 345	- المراجع تحتاج الى التحديث. وكتابتها بالطريقة العلمية.
6	مقرر	ARCH 403	المراجع تحتاج الى التحديث.
7	مقرر	ARCH 404	لا تعليق
8	مقرر	*ARCH 406	- المراجع تحتاج الى التحديث. وكتابتها بالطريقة العلمية.
9	مقرر	ARCH 407	- المراجع تحتاج الى التحديث.
10	مقرر	*ARCH 420	، المراجع تحتاج الى التحديث.
11	مقرر	ARCH 425	محتوى المقرر واهدافه غير مرتبطة باللائحة.
12	مقرر	CVEE353	المراجع تحتاج الى التحديث.
13	مقرر	ARCH 303	المراجع تحتاج الى التحديث.
14	مقرر	ARCH 316	- لا تتوفر مراجع.
15	مقرر	**ARCH 324	يحتاج الى اضافة مراجع.



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية
وحدة ضمان الجودة



مقررات المستوى الخامس																بنود التقييم	
Sustainable architecture	Design for conservation Virtual reality studio in	Internship in architecture	Senior project 2	Senior project 1	Working drawing 4	Working drawing 3	Housing	Architecture design 6	Interior design	World Art Survey	Interior design	Seminar	Feasibility Studies	Contracts, Bids& Liabilities			
ARCH 418	ARCH 332 #	ARCH 212	ARCH 390	ARCH 491*	ARCH 490*	ARCH 429*	ARCH 422*	ARCH 414*	ARCH 405*	ARCH 401	ARCH 322	ARCH 401*	BASE308	BASE 402	BASE307		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتباع نموذج التوصيف الخاص بوحدة ضمان الجودة	1
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق المعلومات الاساسية مع ما ورد بلانحة المعهد وتوصيف البرنامج	2
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	وضوح اهداف المقرر	3
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اهداف المقرر بأهداف البرنامج	4
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	حدائة محتويات المقرر	5
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع اهداف المقرر	6
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع اهداف المقرر	7
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق محتوى المقرر مع مخرجات المقرر	8
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق مخرجات المقرر مع جدارات الخريج	9
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التعليم والتعلم مع مخرجات المقرر	10
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اتساق اساليب التقييم مع اساليب التعليم والتعلم	11
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر توقيتات التقييم	12
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر درجات تفصيلية للتقييم تتوافق مع اسلوب التقييم	13
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر اساليب التعامل مع المتعثرين	14
√	√	√	×	√	√	√	√	√	√	√	√	√	√	√	×	توفر المراجع الخاصة بالمقرر	15
×	×	×	×	×	×	×	×	×	×	×	√	√	×	×	×	حدائة المراجع بالتوصيف	16
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	توفر الامكانيات المادية الخاصة بتدريس المقرر	17
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	اعتماد التوصيف	18



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية
وحدة ضمان الجودة



ملاحظات عامة:

- تم تعديل كافة المقررات فيما يخص التوصيات التي صدرت عن المراجعة الداخلية للعام الدراسي 2021/2022 الا انه لم يتم تحديث المراجع في كافة المقررات.
- بعض المقررات في حاجة الي تطوير اساليب التعليم والتعلم مثل مقرر Feasibility Studies يحتاج الى اضافة معمل كمبيوتر وبرنامج BIM ومقرر Virtual reality studio in architecture يحتاج الى معمل كمبيوتر به برامج Virtual reality.

ملاحظات تفصيلية:			
1	مقرر	BASE307	يجب توفير مراجع حديثة.
2	مقرر	BASE 402	المراجع ليست مكتوبة بطريقة علمية.
3	مقرر	BASE308	المراجع تحتاج الي التحديث.
4	مقرر	*ARCH 490	لا تتوفر مراجع.
5	مقرر	*ARCH 405	المراجع تحتاج الي تحديث.
6	مقرر	*ARCH 422	- المراجع تحتاج الي التحديث. وكتابتها بالطريقة العلمية.
7	مقرر	*ARCH 414	المراجع تحتاج الي التحديث.
8	مقرر	ARCH 212	محتوى المقرر يحتاج الي المراجعة ليتوافق مع اهداف المقرر، اساليب التعليم والتعلم تحتاج الي توفير معمل وبرامج Virtual reality لا تتوفر مراجع دون الدوريات والمواقع الالكترونية.
9	مقرر	# ARCH 332	المرجع تحتاج الي التحديث.
10	مقرر	*ARCH 491	لا تتوفر مراجع،
11	مقرر	*ARCH 429	- المراجع تحتاج الي التحديث. وكتابتها بالطريقة العلمية.
12	مقرر	*ARCH 401	المراجع تحتاج الي التحديث.
13	مقرر	ARCH 390	لا تعليق
14	مقرر	World Art Survey I	المراجع تحتاج الي التحديث.
15	مقرر	ARCH 418	المراجع تحتاج الي اعادة صياغة لتبدو بشكل علمي ويظهر بها سنة النشر.



التوصيات كإجراءات تصحيحية:


1. التزام اعضاء هيئة التدريس بتحديث مراجع المقررات وتعديل التوصيات الخاصة بمقررات سيادتهم.
2. التزام اعضاء هيئة التدريس بتوصيف المقررات للعام الدراسي 2024/2023 طبقا للتعديلات المحدثة للتوصيف ليظهر توافق مخرجات المقرر لمخرجات البرنامج بدلا من تنسيبها لجدارات الخريج مباشرة.
3. تسليم اعضاء هيئة التدريس نماذج التوصيف فارغة من خلال وحدة ضمان الجودة على ان يكون التسليم الالكتروني من خلال البريد الالكتروني وذلك في موعد اقصاه 2023 /9 /1 - 2024/2/1 حتي يتسنى لسيادتهم تطبيق النماذج الموحدة بصفة دورية.
4. استلام توصيفات المقررات ومراجعتها شكليا من قبل الموظف الاداري لوحدة ضمان الجودة وذلك في موعد اقصاه 2023/9/15 - 2024/2/15 وهذا على ان يكون الاستلام ورقي من خلال دفتر الاستلام، كما يتم الاستلام من خلال البريد الالكتروني للأعضاء.
5. عقد ورش عمل لتوعية اعضاء هيئة التدريس بفنيات التوصيف المحدث للمقررات وبالأخص اعضاء هيئة التدريس المسؤولين عن تدريس المستوى الاول.
6. مراجعة موقف المقررات العملية (التي تدرس بالمعامل) حيث يجب ان يظهر لها امتحان عملي وتتوفر له درجات لتقييمه.

لجنة المراجعة الداخلية للبرنامج:

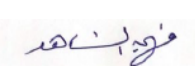
- أ.د/ راندا حسن محمد
- ا.م.د/ أحمد حنفي محمود
- ا.م.د/ تامر الجوهري
- د./ رانية عبد القوي خليفة
- د./ دعاء فتحي أحمد

اعتماد

مستشار التطوير


ا.د/ راندا حسن محمد عبد الخالق

المدير التنفيذي لوحدة ضمان الجودة


د/ فهيمة محمد سعد الدين الشاهد

تاريخ المراجعة: يوليو 2023



Appendix (3)

Staff Members



The Staff Members as Instructors for The Courses of The Program according to the exact disciplines 2022/2023

No.	Member	Academic Degree	Exact Specialization	Title of PhD Thesis	Title of Master's Thesis
First: The Major Staff members responsible for the program					
1	Ass. Prof. Ahmed Hanafi	Assistant Professor	Architecture	Towards a system to document the relationship between the foundations of architectural design (an analytical study of the elements of architecture)	The relationship between function and aesthetic values to shape architecture in Egypt
2	Ass. Prof. Hanaa Mosa	Assistant Professor	Architecture Heritage & Conservation	Heritage Buildings Reuse from Conservation to Community Development	The monumental educational buildings as a device to boost awareness through upcoming generations
3	Dr. Fahima M. S. El-Shahed	Lecture	Urban development	Urban management as an effective tool in urban development projects	Replacement and rehousing between theory and practice
4	Dr. Ahmed Refaat	Lecture	Physical Planning	Urban Knowledge in Contemporary Society - Towards a Theoretical Framework for a New Planning Thought	Development and planning of the Egyptian desert
5	Dr. Nadia Ahmed Hasabo	Lecture	Architecture	Quality of Architectural Education: Building an Internal Quality Assurance System for Architecture Programs in Egyptian Universities	Architecture and folklore, with special mention of Nubia
6	Dr. Sherehan Adel Hegazi	Lecture		"Management of urban sites and landscapes as an approach to the development of historic areas".	"Management of urban sites and landscapes as an approach to the development of historic areas".
Second: The staff members for teaching Civil Engineering courses in the program					
7	Dr. Ashraf Abd El-Khalik	Lecture	Analysis of installations / design of metal structures / fortified facilities	Retrofit of Fortified Structures to Resist Blast Effect	Effect of Rigid Frames or Bracing Systems on The Elastic Stability of Steel Structure
Third: The staff members for teaching Basic Sciences courses in the Program					
8	Dr. Amara Marei	Lecture	Analytical Chemistry & humanize Skills	preparation and characterization of composite reverse osmosis membranes and its application for saline water desalination	chemical study on some reverse osmosis membranes for possible use in desalination of saline water



The Seconded (part-time) Members as Instructors for The Courses of The Program according to the exact disciplines 2022/2023

No.	Member	Academic Degree	Exact Specialization	Title of PhD Thesis	Title of Master's Thesis
First: The members seconded for the Major Courses of the Program					
2	Prof. Hany Serag El-Deen	Professor	Housing policies and programs, architectural design and architectural education	Design development and implementation of housing programs	A comparative analytical study of contemporary architectural trends
2	Prof. Osama Abdo	Professor	Architecture	The effect of negative solar energy and the utilization of multi-store houses in hot and dry climates	The housing problem in Egypt and the applicability of industrial building systems in Egypt
4	Prof. Reham Hafez	Professor	Urban Management & Real estate development	A model for directing urban residential products in new urban mobility	Evaluation of urban management in new urban communities with application to new luxury housing complexes
5	Ass. Prof. Hossam Bahgat	Assistant Professor	Architecture	"The Metaphysics of Architecture in the Twentieth Century" (Theoretical Vision)	Cross-Influences between The Role of the State and Contemporary Architecture Trends in Egypt during the Last Two Decades in the 20th Century
6	Dr. Helmy El-Tayar	Lecture	Interior architecture	Interior architecture of micro industries facilities	
7	Dr. Rania Khalefa	Lecture	Architecture	Smart Architecture, HSBC Egypt Global Service Center, Case Study	The environmental impact of youth housing in Obour City
Second: The members seconded for teaching civil engineering courses in the program					
8	Ass. Prof. Hani Ibrahim	Assistant Professor	Material	Predicating The Chloride Ingress Process Inside Blended Concrete Using Artificial Neural Network	Performance of Egyptian Activated Slag in Severe Condition
9	Dr. Mohamed Hamdy El-Faky	Assistant Professor	Structure	Structural Behavior of Frames Using Pre-Stressing Methods.	Enhancing Seismic Performance of Bridge joint Using Energy Dissipation Devices.
10	Dr. Waleed Abd-Allah	Assistant Professor	Reenforced Concrete	Behavior of reinforced and reinforced concrete slabs under the influence of fire	Study of the behavior of deep beams without and with openings
11	Dr. Nasr Mohamed Abd Allah	Lecture	Roads, transportation and traffic	Developing models to predict the characteristics of accidents and their impact on the Egyptian economy in Egypt	The relationship between traffic characteristics and road pavement condition in Egypt
12	Dr. Tarek Walid Saad Eldeen Hassan	Lecture	Surveying	Improving Navigation Performance Using Integrated Positioning System.	Applications of International Reference Frame in Geometric and Dynamic Geodesy.



No.	Member	Academic Degree	Exact Specialization	Title of PhD Thesis	Title of Master's Thesis
13	Dr. Asmaa Ahmed Mohamed Soliman	Lecture	Management of Construction Engineering	Optimization of Project Cost and Schedule under Resource Constraints	Effective Claims Management to Reduce Construction Disputes
Third: The members seconded for teaching Basic Sciences in the program					
7	Dr. Gamal El-Anani	Lecture	Functional analysis	Harmonic Analysis on Semigroups Without Neutral Element.	Pure Math
9	Dr. Abd El-Aziz Ramadan	Lecture	Engineering economy	The Development of A Structured Approach to The Design for Economic Manufacture of Engineering	

Teaching Assistants Responsible for Work according to Their Specializations 2022/2023

No.	Member	Academic Degree	Exact Specialization	Field or Title of Master's Thesis	Field of PHD
First: Teaching assistant responsible for work in the program					
1	Eng. Mohammed Hisham	Lecturer Assistant	Planning	Title: Local urban indicators "Local urban observatories and their role in determining the specificity of the place"	Field: The resilience of cities exposed to risks
2	Eng. Rania El-Sayed	Bachelor's	Architecture	Field: The Impact of ITC on services planning Standards	-
3	Eng. Abd El-Rahman Ibrahim	Bachelor's	Architecture	Field: Sustainable Architecture	-
4	Eng. Mohab Naser	Bachelor's	Architecture	Title: The cognitive reality in urban spaces	-
5	Eng. Marwa Ashraf	Bachelor's	Architecture	Title: Modern informatics trends in city planning (smart cities and smart mobility) and their applications in Egypt	-
Second: Teaching Assistants seconded (part timer) in the Program					
6	Eng. Amera Abdallah	Assistant Teacher	Planning & specialist GIS	1. MBA 2. The role of GIS in land management	-
7	Eng. Basant Orabi	Assistant Teacher	Architecture	Rehabilitation and reuse of heritage buildings and achieving sustainability Standards. " Zamalek case study"	-
8	Eng. Heba	Bachelor's	Architecture	Field: construction technology	-
9	Eng. Abd El-Rahman El-Hosany	Bachelor's	Architecture Specialist in software	-	-
10	Eng. Ahmed Amer	Bachelor's	Architecture Specialist in Acoustics and illumination	-	-



Appendix (4)

The mission of the program contributes the mission of the institute



The mission of the program (3/2023) contributes the mission of the institute (2022)

institute Mission	Program Mission	Compatibility terms
<p>The High Valley Institute of Engineering and Technology is committed to achieving academic excellence and graduating engineers capable of <u>creativity</u>, <u>innovation</u>, <u>scientific research</u>, <u>continuous self-education</u>, <u>competition in the local and regional labour market</u>, and <u>active participation in the development of society</u> to meet the challenges of the era and keep pace with rapid development to achieve the goals of sustainable development and Egypt's Vision 2030 in light of professional ethics. And quality of performance.</p>	<p>Preparing a generation of creative architects capable of dealing with the needs, technologies and systems of the labor market in accordance with the needs of the times and the requirements of all segments of society, especially those with special needs. They have the competitive ability in the fields of scientific research and architectural applications at the local and regional levels.</p>	
	<p>Preparing a generation of creative architects.</p>	<p>Graduating creative engineers competing in the labour market</p>
	<p>Preparing a generation capable of dealing with the needs, techniques and systems of the labour market in a way that suits the needs of the times and the requirements of all segments of society.</p>	<p>Community participation</p>
	<p>Preparing a generation that has the competitive ability in the fields of scientific research and architectural applications at the local and regional levels</p>	<p>Competition in the fields of scientific research research and architectural applications</p>



Ministry of higher education

High valley institute for engineering and technology
Architecture and design department



Appendix (5)

The teaching and learning strategies of the program



إستراتيجية التعليم والتعلم وآليات التنفيذ



قرار إداري

عميد المعهد،،،

- بعد الاطلاع على القانون رقم (٥٢) لسنة (١٩٧٠) بشأن تنظيم المعاهد العليا الخاصة ولانحته التنفيذية رقم ٤٤٦ لسنة ٢٠١٧.
- وبعد الاطلاع على القانون رقم (٤٩) لسنة (١٩٧٢) الخاص بتنظيم الجامعات ولانحته التنفيذية رقم ٨٠٩ لسنة ١٩٧٥.
- وبناء على قرار المجلس الاكاديمي الطارئ بتاريخ (٢٠٢١/١٠/٢).
- وسعيًا من إدارة المعهد لتطوير استراتيجيات التعليم والتعلم.

تقرر الاتي

أولاً: تشكل لجنة لمراجعة وتطوير استراتيجية التعليم والتعلم.

ثانياً: يتم تشكيل اللجنة من الآتي:

- | | |
|--------|---|
| رئيساً | ▪ أ.د/وكيل المعهد لشئون التعليم والطلاب |
| نائباً | ▪ المدير التنفيذي لوحدة ضمان الجودة |
| أعضاء | ▪ مسؤولي معيار التدريس والتعلم بالبرامج |
| عضواً | ▪ رئيس لجنة المراجعة الداخلية بالوحدة |
| عضواً | ▪ ممثل عن الاطراف المجتمعية المعنية ويدعي عند الضرورة |
| عضواً | ▪ ممثل عن خريجي المعهد ويدعي عند الضرورة |
| عضواً | ▪ ممثل عن طلاب المعهد ويدعي عند الضرورة |

ثالثاً: تكون مهام اللجنة كالتالي:

- (١) يتولى السادة أعضاء اللجنة مراجعة استراتيجية التعليم والتعلم الخاصة بالمعهد مع رفع المقترحات الى السيد الاستاذ الدكتور/عميد المعهد لسرعة اتخاذ القرار.
- (٢) يتولى السادة أعضاء اللجنة الاشراف على إعداد وتنظيم الندوات الخاصة بإعلان استراتيجية التعليم والتعلم على جميع الأطراف المعنية والتنسيق مع السيد الأستاذ الدكتور/عميد المعهد على محاور وموضوعات هذه الندوات والجدول الزمني المخصص لها.
- (٣) يتولى السادة أعضاء اللجنة مراجعة الاستبيانات المعدة لأعضاء هيئة التدريس والطلاب ونتائج الامتحانات وتلقي المقترحات الخاصة بتطوير استراتيجية التعليم والتعلم من الأطراف ذات الصلة مع رفع تقرير نصف سنوي



وزارة التعليم العالي
معهد الوادي العالي للهندسة والتكنولوجيا بالقليوبية

(فصلي) إلى السيد الأستاذ الدكتور/ عميد المعهد للعلم مع إتخاذ اللازم من الإجراءات التصحيحية على وجه السرعة.

٤) يتولى السادة أعضاء اللجنة الإنتهاء من إعداد واعتماد وتنفيذ الخطة السنوية لتطوير استراتيجية التعليم والتعلم مع إصدار تقرير سنوي في نهاية كل عام دراسي محددأ به نسبة انجاز جميع او معظم عناصر الخطة الاستراتيجية مع مقترح التعديل المناسب والتحسين اللائق للخطة على وجه السرعة.

رابعاً: إلغاء أي قرار سابق منظم لهذا الشأن.

خامساً: على جميع الأقسام العلمية والوحدات والإدارات تنفيذ هذا القرار كل فيما يخصه.

عميد المعهد
أ.د/ عابد محمود احمد جاد



إستراتيجية التعليم والتعلم وآليات التنفيذ في ظل جائحة كورونا

المعتمدة في المجلس الأكاديمي

بتاريخ نوفمبر 2021



المحتويات:

المقدمة:

- 1- سياسات التعليم والتعلم بالبرامج التعليمية المختلفة 1
- 2- استراتيجيات التعليم والتعلم بالبرامج التعليمية المختلفة 2
- 1-2 التعلم التعاوني 4
- 2-2 العصف الذهني 7
- 3-2 حل المشكلات 8
- 4-2 الحوار والمناقشة 10
- 5-2 التعلم الذاتي 11
- 6-2 التعلم بالالاكتشاف 12
- 7-2 استراتيجيات المشروعات 14
- 8-2 التعليم عن بعد 15
- 9-2 التعليم المدمج 17
- 3- آلية مراجعة وتحديث سياسات واستراتيجيات التعليم والتعلم 18



المقدمة

تحدد إستراتيجيات التعليم والتعلم الأهداف الإستراتيجية والسياسات الخاصة بالتعليم والتعلم والتي تسعى لتحقيقها اليها البرامج العلمية المختلفة بمعهد الوادي العالي للهندسة والتكنولوجيا. وإيماناً من المعهد بأهمية مواكبة توجهات العصر وإعداد خريجين مؤهلين لمواكبة متطلبات سوق العمل المعاصر بشكل متميز، فقد أقر المعهد العديد من السياسات الخاصة بالتعليم والتعلم بكافة البرامج التعليمية لتحقيق استراتيجيات المعهد للتعليم والتعلم.

وتتضمن الخطة التنفيذية للإستراتيجية ومختلف الأنشطة والمهام المطلوب القيام بها مع تحديد آليات متابعة تلك الاستراتيجية وكذلك مؤشرات قياسها. تبنت البرامج العلمية المختلفة بمعهد الوادي العالي للهندسة والتكنولوجيا بالقلوبية مجموعه من الاستراتيجيات التعليمية الحديثة والتي تضمن تحقيق التفوق ومن ثم الاستمرارية والتقدم.

في ظل جائحة كورونا ومتطلبات التحول الرقمي للمسيرة التعليمية فقد تم تطوير الاستراتيجية التعليمية للبرامج العلمية المختلفة بمعهد الوادي العالي للهندسة والتكنولوجيا وفقاً لمتطلبات الإطار المرجعي 2020 والمعايير الأكاديمية المرجعية القياسية (NARS 2018). لذا يستعرض هذا التقرير سياسات التعليم والتعلم وتطور استراتيجيات المتبعة.

1- سياسات التعليم والتعلم بالبرامج التعليمية المختلفة

تم إقرار العديد من السياسات الخاصة بالبرامج التعليمية المختلفة، وهي كالتالي:

- تطبيق المعايير الأكاديمية المرجعية.
- التزام البرنامج بالقواعد العامة للقبول والتحويل التي تقرها الجامعة.
- تعريف الطلاب بالرؤية والرسالة والأهداف العامة للبرنامج.
- تعريف الطلاب باستراتيجية التعليم والتعلم والمناهج الدراسية وطرق وأساليب التقويم.
- تنمية المهارات الذهنية واتباع منهجية حل المشكلات وأساليب التفكير العلمي لدى الطلاب.
- التزام البرنامج بالإعلام عن الجداول الدراسية لكافة الفرق الدراسية، وكذلك الإعلان عن مواعيد الامتحانات.
- المحافظة على تحقيق التوازن بين نسب أعضاء هيئة التدريس ومعاونيهم والطلاب.
- المراجعة والتقويم الداخلي والخارجي للبرامج والمقررات الدراسية.
- رعاية الطلاب المتميزين والمبدعين.
- رعاية الطلاب المتعثرين وتوفير سبل الدعم العلمي لهم.
- توفير كافة تسهيلات التعليم والتعلم وصيانتها.



- التمحوور حول الطلاب باعتبارهم أهم مخرجات البرنامج.
- تقوية أواصر الصلة بين الطلاب وأعضاء هيئة التدريس والهيئة المعاونة.
- زيادة الرضا العام لأطراف العملية التعليمية.
- التقويم المستمر لأداء أعضاء هيئة التدريس والهيئة المعاونة.
- التقويم المستمر للفاعلية التعليمية.
- دفع الطلاب إلى مصادر التعلم الذاتي المستمر والتشجيع على استخدامها.

2- استراتيجيات التعليم والتعلم للبرنامج العلمية

▪ الأطراف المشاركة في إعداد استراتيجية التعليم والتعلم

- أعضاء هيئة التدريس بالبرنامج لاختيار استراتيجيات التدريس الملائمة.
- الأطراف المجتمعية مثل شركات المقاولات والمكاتب الهندسية وأجهزة المدن.
- الطلاب.

▪ الهدف العام:

- تحقيق التفوق العلمي والحفاظ عليه من خلال برامج تعليمية ذات كفاءة عالية.

▪ الأهداف الفرعية:

- تطوير البرامج التعليمية لإعداد للطلاب.
- آليات متابعة وتقييم للتدريب الميداني للطلاب لإمداد المجتمع وسوق العمل بخريجين ذوي مهارات علميه وعملية متميزة.
- إتباع سياسة التعليم الفعال أو التفاعلي وإكساب الطلاب القدرة على التفكير وحل المشكلات ومهارات الاتصال واستخدام تكنولوجيا المعلومات والتفكير العلمي.
- تعزيز وتنمية المهارات القيادية والشخصية للطلاب من خلال أنشطة الجزء العملي في المقررات الدراسية والأنشطة الطلابية.
- آليات التعامل مع للطلاب المتعثرين دراسيا.
- توفير الرعاية للطلاب ذوي الاحتياجات الخاصة.
- التغلب على مشكلات التعليم.
- تطوير طرق التقويم ونظم الامتحانات.
- تحديث البنية التحتية لتشمل تحسين بيئة العمل والتعليم وتوفير المواد المساعدة للتعليم والتعلم بالمعهد.



■ إعلان الاستراتيجية

- توزيع نسخة على كل عضو هيئة تدريس بالبرنامج.
- الموقع الإلكتروني.

■ آليات متابعة تنفيذ إستراتيجية التعليم والتعلم:

- إعداد تقارير عن معدل الإنجاز والتقدم في تنفيذ الإستراتيجية.
- مراجعة الإستراتيجية سنويا في ضوء نتائج الطلاب، واستقصاء الطلاب وأعضاء هيئته التدريس والهيئة المعاونة.

■ مؤشرات قياس تحقيق استراتيجية التعليم والتعلم وتشمل:

- نسب نجاح الطلاب مقارنة بالأعوام الثلاثة السابقة.
- نتائج استبيانات المستفيدين عن مستوى خريجي المعهد.
- نتائج استبيانات المستفيدين عن ملائمة البرامج التعليمية ومحتوي المقررات لمتطلبات سوق العمل.
- نتائج استبيانات الطلاب وأعضاء هيئة التدريس عن سياسة المعهد في التغلب علي مشكلات التعليم.
- نتائج استبيانات الطلاب عن أداء أعضاء هيئة التدريس.
- عدد الطلاب المشاركين بالأنشطة الطلابية مقارنة بالأعوام الثلاثة السابقة.

■ الاستراتيجيات تشمل:

- التعلم التعاوني
- العصف الذهني
- حل المشكلات
- الحوار والمناقشة
- التعلم الذاتي
- التعلم بالاكشاف
- استراتيجية المشروعات
- التعليم عن بعد
- التعليم المدمج



1-2 استراتيجيات التعلم التعاوني

- التعلم التعاوني: هو موقف تعليمي يستخدم المجموعات الصغيرة لكي يعمل المتعلمون معا ليصلوا بتعلمهم وتعلم الآخرين إلى أقصى حد ممكن.
 - كما يعرف التعلم التعاوني بأنه: بيئة التعلم التي تتضمن مجموعات صغيرة من المتعلمين تتراوح ما بين اثنتين إلى ستة متعلمين يعملون سويا على إنجاز هدف مشترك وقد يختار أعضاء المجموعة تحمل مسؤولية المهام الفرعية لكل فرد على حدي، أو قد تعمل بشكل تعاوني للقيام بالعمل سويا.
 - التعلم التعاوني استراتيجيات تعليمية ناجحة تستخدم فيها المجموعات الصغيرة المتعاونة وتضم كل مجموعة طلاب من مستويات مختلفة القدرات، بحيث يمارسون أنشطة تعليمية متنوعة، لتحسين فهمهم للموضوع المراد تعلمه، وكل عضو في المجموعة ليس مسؤولا عما يتعلمه أو ما يجب أن يتعلمه فقط وإنما عليه أن يساعد زملاؤه في المجموعة، وبالتالي طلاب كل مجموعة يعملون في جو من الإنجاز والتحصيل والمتعة أثناء التعلم.
- يتم التعلم التعاوني بصورة عامة وفقاً لأربعة مراحل:
- المرحلة الأولى: مرحلة التعرف
فيها يتم تفهم المشكلة أو المهمة المطروحة وتحديد معطياتها، والمطلوب عمله إزاءها، والوقت المخصص للعمل المشترك لحلها.
 - المرحلة الثانية: مرحلة بلورة معايير العمل الجماعي
يتم في هذه المرحلة الاتفاق على توزيع الأدوار وكيفية التعاون وتحديد المسؤوليات الجماعية، وكيفية اتخاذ القرار المشترك، وكيفية الاستجابة لآراء أفراد المجموعة، والمهارات اللازمة لحل المشكلة المطروحة.
 - المرحلة الثالثة: الإنتاجية Productivity
يتم في هذه المرحلة الانخراط في العمل من قبل أفراد المجموعة، والتعاون معا في إنجاز المطلوب بحسب الأسس والمعايير المتفق عليها.



- المرحلة الرابعة: الإنهاء Termination

يتم في هذه المرحلة كتابة التقرير أن كانت تتطلب ذلك، أو استكمال حل المشكلة، والتوقف عن العمل المشترك تمهيدا لعرض ما توصلت إليه المجموعة.

■ عناصر التعلم التعاوني

- المساندة البيئية الإيجابية Positive interdependence: وهي نظام إداري يشجع المتعلمون على أن يعملوا معا، وتعلمهم أن الحياة العملية لكل واحد منهم تزداد بنجاحهم جميعا.
- التفاعل المباشر Face-to-Face Interaction: تسمح حالة المجموعة الصغيرة للمتعلمين للعمل معا مباشرة وتتيح لهم تبادل الآراء والأفكار، ويعملون كفريق ليضمنوا نجاح كل عضو في المجموعة.
- المحاسبة الفردية Individual Accountability: يتحمل كل متعلم المسؤولية عن تقدمه العلمي، وإكمال العمل، وهو مسئول عن إنجازات المجموعة ككل، ويعى جيدا كل عضو بأنه سوف يحاسب بعد ذلك بصورة فردية.
- تنمية المهارات الاجتماعية Development of Social skills: ينمى التعلم التعاوني المهارات الاجتماعية التي يحتاجها كل متعلم للنجاح في المدرسة والعمل والمجتمع ومن هذه المهارات: الاتصال الفعال وفهم وتقدير الآخر وإتخاذ القرار وحل المشكلات وتسوية الصراعات، وعلى المعلم وبشكل يومي توجيه المتعلمين ليمارسوا هذه المهارات في مجموعاتهم التعاونية، ويقدموا تغذية راجحة عن تفاعلات المجموعة والعمليات الاجتماعية.
- تقييم المجموعة Group Evaluation: على المجموعات القيام بتقييم أدائها ومناقشة مدى تحقيق أهدافها العامة. وبإمكان المتعلمين أن يبينوا هذه التقييمات خلال نقاش صغير أو بتزويد المعلم بتقارير مكتوبة عن تقدمهم.

ويوضح الجدول التالي الاختلافات بين التعلم التعاوني والتعليم التقليدي.



مقارنة بين التعلم التعاوني والتعليم التقليدي

التعلم التقليدي	التعلم التعاوني
لا يوجد ترابط	ترابط إيجابي
لا توجد مسؤولية فردية	مسؤولية فردية
أعضاء متجانسين	أعضاء غير متجانسين
قائد واحد متمركز ورأيه هو القائم	القائد مشارك في كل الأعمال
استجابة لنفسه فقط	استجابة لكل أعضاء المجموعة
يتم التأكيد على المهمة فقط	التأكيد على المهام والأدوار وترتيبها
المهارات الاجتماعية تفرض أو يتم تجاهلها	تعلم مباشر للمهارات الاجتماعية
المعلم يتجاهل المجموعات	المعلم يلاحظ ويتخلل المجموعات
لا تحدث عمليات المجموعات	تحدث عمليات المجموعات

يتسم التعلم التعاوني بالعديد من المميزات منها:

- زيادة الثقة في قدرات وإمكانات المتعلم.
- تحسين المهارات الاجتماعية وتقدير الذات.
- تكوين اتجاهات إيجابية بين الطلاب وبعضهم البعض.
- زيادة الدافعية نحو العمل.
- تكوين علاقات أكثر تقبلا.
- تحسين مهارات الاتصال والتفاعل الاجتماعي.
- تنمية القدرة على حل المشكلات.
- تنمية الشعور بالمسؤولية نحو الذات ونحو أفراد المجموعة ونحو إنجاز المهام المطلوبة.
- جعل المتعلم هو محور العملية التعليمية.
- التعلم التعاوني هو طريق النجاح مما يجعل التعلم التعاوني استراتيجية تنظر إلى التعلم على أنه نشاط المتعلم.



2-2 إستراتيجية العصف الذهني:

تعد استراتيجية العصف الذهني من الاستراتيجيات التي تعتمد على طرح أكبر عدد ممكن من الأفكار لمعالجة موضوع من الموضوعات العلمية من أشخاص مختلفين في وقت قصير. من مميزات هذه الاستراتيجية إنها لا تحتاج الي تدريب طويل, اقتصادية لا تتطلب غير مكان مناسب ومجموعه من الأوراق والأقلام.

■ دور المتعلم في التعليم القائم على العصف الذهني

- يظهر اهتماماً فعالاً في التعلم وي طرح أكبر عدد ممكن من الأفكار.
- يشارك أكبر عدد من الطلاب في جلسات العصف الذهني.

■ دور المعلم في تطوير استراتيجيات العصف الذهني

- قبول الأفكار الغير مألوفة وتشجيعها.
- إضفاء جو من الإثارة والتحدى بين الطلاب.
- تجنب النقد وقبول الأفكار مهما كانت
- الفصل بين استنباط الأفكار وتقييمها
- يظهر الانفتاح ويتقبل أفكار الآخرين
- يتبع خطة ويستخدم مصادر مختلفة لجمع وتنظيم الأفكار وعرضها على جميع المشاركين في الجلسة.
- تشجيع الطلاب علي أستخدام المنطق والدليل العلمي لتطوير أفكاره الشخصية.
- يراقب تقدم الطلاب ويعطي تغذية راجعة لما يتطلبه الموقف.

■ الشروط الواجب اتباعها عند استخدام أسلوب العصف الذهني:

- ضرورة تجنب أي نقد أو تقويم إيجابي أو سلبي لأي فكرة من الأفكار التي يطرحها الطلاب.
- تقبل أي فكرة مهما كانت خيالية أو وهمية، بهدف مساعدة المتعلم على أن يكون أكثر استرخاء وأقل تحفظاً، وبالتالي أعلى كفاءة في توظيف قدراته على التخيل وتوليد الأفكار في ظل ظروف التحرر الكامل من ضغوط النقد والتقييم.
- الإدلاء بأكثر عدد ممكن من الأفكار (لأن الكم يولد الكيف) إذ أنه كلما زاد عدد الأفكار المقترحة زاد نصيب الجيد والأصيل منها.
- البناء على أفكار الآخرين وتطويرها، وأن تدور مشكلات المناقشة حول تحسين ظاهرة معينة أو متابعة أفكار.



■ معوقات العصف الذهني:

- العصف الذهني يعنى وضع الذهن في حالة من الإثارة والجاهزية للتفكير في كل الاتجاهات لتوليد أكبر عدد ممكن من الأفكار حول المشكلة المطروحة وهذا يتطلب إزالة جميع العوائق من أمام الفكر ليفصح عن كل حاجاته وخيالاته، ومن هذه العوائق ما يقود إلى أسباب شخصية واجتماعية منها:
- عوائق إدراكية وتتمثل بتبني الإنسان لطريقة واحدة للتفكير والنظر إلى الأشياء.
- عوائق تتعلق وتتمثل في الخوف وال فشل من الإدلاء بآرائه.
- عوائق تتعلق بشعور الفرد بضرورة التوافق مع الآخرين، وخاصة عندما يأتي بشيء غير مألوف.
- عوائق تتعلق بالخوف من اتهامات الآخرين لأفكاره بالسخافة والتهمك.
- عوائق تتعلق بالتسرع في الحكم على الأفكار الجديدة والغريبة.
- عوائق تتعلق بالتسليم الأعمى للافتراضيات.

3-2 إستراتيجية التعلم القائم على حلّ المشكلات:

○ تعد استراتيجية حل المشكلات من الاستراتيجيات الفعالة في التعليم والتعلم، لأنها تتيح للمتعلم الفرصة في مواجهة المشكلات والتصدي لها، ومحاولة حلها، وبالتالي تساعده على مواجهة تحديات المستقبل ومشكلاته، تتميز استراتيجية حل المشكلات بأنها تنمي مهارات التفكير العليا لدى المتعلمين وتزيد من قدرتهم على فهم المعلومة وتذكرها لفترة طويلة، وأيضا مساعدتهم على تطبيق المعلومات وتوظيفها في مواقف حياتية جديدة، فهي تثير الدافعية للتعلم والاستمتاع بالعمل من أجل حل المشكلة بدون ملل، فهي تسعى إلى مساعدته على الاستفادة من مصادر التعلم المختلفة، وبالتالي تنمي لديه الإحساس بالمسؤولية في تعليم نفسه.

هناك خطوات عديدة لحل المشكلة لابد من اتباعها بالترتيب والتسلسل المنطقي حتى نصل إلى الحل الأمثل للمشكلة وهي:

- تحديد المشكلة.
- جمع البيانات والمعلومات عن المشكلة.
- اقتراح حلول للمشكلة.



- مناقشة الحلول المقترحة للمشكلة.
- التوصل إلى الحل الأمثل للمشكلة.
- تطبيق الاستنتاجات والتعميمات في مواقف جديدة.
- يتبادل الطلاب خلال هذه الخطوات في عملية الاستقصاء الأفكار من خلال حلقات النقاش ومواقع التواصل الاجتماعي والوسائل الأخرى، ويربط الطلاب التعلم الجديد بمعرفتهم السابقة وينقلون عملية الاستقصاء إلى مشكلات مشابهة.
- يجب على الطلاب خلال هذه العملية أن يكونوا مشاركين فاعلين في تقويم العملية ونتائج الاستقصاء ومراجعتها.
- **دور المتعلم في التعلم القائم على حلّ المشكلات:**
 - يظهر اهتماماً فعالاً في التعلم ويمارس مهارات حل المشكلات.
 - يقترح مواضيع لتواجه مشاكل المجتمع.
 - يظهر حب الاستطلاع حول اكتساب معرفة جديدة عن القضايا والمشكلات.
 - يبدي المثابرة في حل المشكلات.
 - يكون راغباً في تجريب طرق مختلفة لحل المشكلة وتقويم نفع هذه الطرق.
 - يعمل مستقلاً أو في فريق لحل المشكلات.
- **دور المعلم في تطوير استراتيجيات حل المشكلات واستخدامها**
 - يحدد المعرفة والمهارات التي تحتاجها الطالبات لإجراء البحث والاستقصاء والاستطلاع.
 - يحدد النتائج الأولية أو المفاهيم التي يكتسبها الطلاب نتيجة لقيامهم بالبحث والاستقصاء.
 - يعلم الطلاب نماذج لطرق حل المشكلات والبحث تفيدهم مستقبلاً.
 - يساعد الطلاب في تحديد المراجع المطلوبة لإجراء البحث.
 - يقدم نموذجاً في كل من اتجاهات البحث (مثل المثابرة) وعملية إجراء البحث.
 - يراقب تقدم الطلاب ويتدخل لدعمهم كلما تطلب الأمر.

4-2 إستراتيجية الحوار والمناقشة:

- يعتبر أسلوب المناقشة أحد الأساليب الهامة في التعليم، بل إنه يعتبر أسلوباً أساسياً يشترك مع جميع الأساليب الأخرى في التربية، فالحوار والمناقشة طريقة من طرق التعليم الحديثة



التي تهتم بالتفاعل والاتصال اللغوي الذي يتم بين المتعلمين عن طريق الأسئلة والاستفسارات التي توجهها الطلاب إلى بعضهم البعض أو إلى المعلم.

○ من هنا نجد أن عملية التفاعل اللفظي وتبادل المواقف بين الطلاب والمعلم تؤدي إلى إشاعة جو من الحرية والمشاركة الفعالة والحوار الدائم، واحترام الرأي والرأي الآخر، مما يجعل عملية التعليم والتعلم أكثر متعة وأبعد أثرا في تحقيق الأهداف التربوية المنشودة منها.

■ مزايا استراتيجية الحوار والمناقشة

- تزيد من فاعلية واشتراك المتعلمين في الموقف التعليمي ومن ثم زيادة ثقتهم في أنفسهم.
- تتيح لهم ممارسة مهارات التفكير والاستماع والاتصال الشفوي.
- تنمي روح التعاون والتنافس بين المتعلمين ومن ثم تمنع الرتابة والملل.
- تتيح الفرصة لاستثارة الأفكار الجديدة والابتكارية.
- تساعد المتعلم على مراعاة الفروق الفردية بين المتعلمين.
- تكسب المتعلم العديد من المهارات مثل "بناء الأفكار - آداب الحوار - احترام الرأي الآخر".
- تخلق نوعا من التفاعل القوي بين المعلم والمتعلم.
- تتيح لهم فرصة للتعبير عن آرائهم ووجهات نظرهم وتبادل الأفكار بالشرح والتعليق
- يلعب الحوار والمناقشة دورا فعالا في تعليم الطلاب كيفية المشاركة في الموقف التعليمي بآرائهم ومقترحاتهم مما يساعد على تحسين مهاراتهم الذهنية على التحليل والتصنيف والتركيب، وزيادة الدافعية والحماس، وتزويدهم بالتغذية الراجعة.
- كما تكون المناقشة أكثر فاعلية إذا عرف المعلم وجهة نظر المتعلمين، وما هي معلوماتهم السابقة عن موضوع النقاش، كما يجب عليه التخطيط والإعداد المسبق للمناقشة، وألا يقتصر دوره على السيطرة والهيمنة بل يكون دوره البدء في مناقشة فعالة وتحديد الأهداف والإيضاح والقيام بالتلخيص الفعال للنائج، وأن يكون حريص على مشاركة جميع الطلاب في المناقشة.

5-2 إستراتيجية التعلم الذاتي:

تعتمد استراتيجية التعلم الذاتي على قدرات الطلاب الذاتية في تحصيل المعارف من مصادر مختلفة مثل مكتبة المعهد أو من خلال شبكه الأنترنت، تهدف هذه الاستراتيجية الي تنمية مهارة الطلاب على مواصلة التعليم بنفسها مما يساعدها على التقدم والتطور وتعلم كل ما هو جديد في مجال تخصصها، حيث يتم تطبيق هذا الأسلوب في الأنشطة التي تطرح لكل مقرر دراسي وكذلك في مشاريع التخرج.



■ الأسس التربويّة والنفسية لبرنامج التعلم الذاتي:

- اعتبار كل طالبة حالة خاصّة في طريقة تحصيلها للعلم.
- يجب مراعاة كافة الفروق الفردية في عملية التعلّم.
- تحديد السلوك المبدئي والنهائي للمتعلّم بشكلٍ دقيق.
- مراعاة سرعة الطالبة الذاتية خلال فترة التحصيل العلمي.
- تقسيم المواد التعليمية إلى خطواتٍ صغيرة.
- التسلسل المنطقي والمُتكامِل لكافة الخطوات التعليمية.
- إجراء التعزيز الفوري إبان كل خطوة.
- الدعم والإيجابية والمشاركة في كل خطوة من خطوات التعلّم.

■ أهمية التعلم الذاتي

- يحقق لكل متعلم تعلما يتناسب مع قدراته وطموحاته الشخصية.
- يمارس فيه المتعلم دورا إيجابيا لإتمام عملية التعلّم.
- يعتمد فيه المتعلم على نفسه مما يجعله يتحمل المسؤولية في المستقبل.
- يكسب المتعلم مهارة حل المشكلات واتخاذ القرارات بنفسه وينمي لديه شعور بقيمته الذاتية.
- يكسب المتعلم مهارات المشاركة والتعاون.
- يستمر مع المتعلم مدى الحياة.

■ دور المعلم في التعلم الذاتي

- يحدد بوضوح الخطوات العريضة والنهايات الزمنية في الوصول للقدر الكافي من المعلومات المطلوبة.
- عنده تفهم واضح لكيفية توجيه الطلاب للتعليم الذاتي حسب مراحل التطور المختلفة لهم.
- يشجع التفاعل بين الطلاب وخاصة في المشاريع.
- يساعد الطلاب على اكتساب السلوك الإيجابي للعمل الجماعي.
- يساعد الطلاب على الوصول لمصادر تعليمية مختلفة ومشاركتها مع زملائها مما يطور العملية التعليمية بنجاح
- يدعم الطلاب بمصادر التعليم الذاتي المختلفة ويشجعهم على تغيير تلك الطرق للوصول للمستوي المطلوب.



■ خطوات التعلم الذاتي:

لكي يتمكن الفرد من التعلم الذاتي لابد من خطوات يسير عليها:

- الخطوة الأولى: الوعي بالذات

تتطلب هذه الخطوة أن يكون للمتعلم صورة واضحة عن ذاته من حيث القدرات والميول والأهداف وذلك من خلال مواقف التعلم التي مر بها في التعليم المدرسي ومن خلال خبراته الاجتماعية وعلاقته مع الآخرين.

- الخطوة الثانية: عملية التعلم الذاتي

ذلك عن طريق استخدام المتعلم لإمكانياته الواقعية وذلك بالاستعانة بالتأمل الذاتي والتفكير الناقد والمحاولة والتدريب وغيرها من وسائل التعلم الذاتي.

- الخطوة الثالثة: تقييم الذات

حيث يقارن فيها المتعلم بين الصورة التي يرى فيها نفسه والصورة التي يبتغيها ويقوم بمدى قربه من هدفه، وبناء عليه يقرر ما إذا كان سيستمر في تعلمه أو يغيره أو يبحث عن شيء آخر.

لابد للمتعلم لنجاح هذه الخطوات أن يحدد هدفه أولاً ويضع خطة زمنية وينظم دراسته وأن يتحلى بالحماس والرغبة في تحقيق الذات والتركيز والصبر على التعلم والتخلص من المشتتات والعوائق.

6-2 إستراتيجية التعلم بالاكشاف:

الاكشاف: هو أسلوب في التعلم يمر فيه المتعلم ويكون فيه فاعلاً نشطاً ويتمكن من إجراء بعض العمليات التي تقوده للوصول إلى مفهوم أو تعميم أو علاقة أو حل مطلوب، التعلم الذي يحدث كنتيجة لمعالجة المتعلم للمعلومات وتركيبها وتحويلها حتى يصل إلى معلومة جديدة.

أن الاكتشاف من أكثر الأساليب التعليمية الحديثة فاعلية في تنمية التفكير الابتكاري لدى المتعلمين فهو يقوم على مواجهة الطالبة بمشكلة ما، ثم تحاول التصدي ذاتياً لهذه المشكلة وحلها، فهي التي تحدد المشكلة وتضع الفروض وتجمع البيانات وتحللها وبالتالي هي التي تصل إلى النتيجة، وفي أثناء ذلك تكتسب مفاهيم ومبادئ عن الموضوع بصورة ذاتية تساعد على تطوير قدراتها على حل المشكلات الحاضرة والمستقبلية، فهو يساهم في تدعيم مبدأ التعلم الذاتي من خلال الجهود الذاتية التي



يقوم بها الطفل في حين تكون المعلمة هي الموجهة التي تعينها على البحث والاكتشاف من خلال الأسئلة التي تطرحها عليها فقط.

■ شروط التعلم بالاكتشاف:

- عرض موقف يثير تفكير الطلاب أو طرح أسئلة تثير تفكيرهم.
- منحهم حرية التقصي والاكتشاف.
- توفير ثقافة علمية مناسبة عندهم بحيث تكون قاعدة علمية مناسبة ينطلق منها التفكير والبحث والاستقصاء.
- ممارسة التعلم بالاكتشاف من خلال العمليات الإجرائية التي تتمثل في عرض الموقف المشكل ثم وضع الفروض ثم التجريب والوصول إلى النتائج وتعميمها وتطبيقها في مواقف جديدة

■ ينقسم التعلم بالاكتشاف إلى ثلاثة أنواع:

- الاكتشاف الموجه Guided Discovery:

تقدم فيه المشكلة مصحوبة بكافة التوجيهات اللازمة لحلها بصورة تفصيلية، ويكون دور الطالبة فقط اتباع التعليمات دون إتاحة الفرصة لها كي تفكر بحرية، وتكون التوجيهات متسلسلة إلى الحد الذي قد يحرمها من التفكير والبحث.

- الاكتشاف شبه الموجه Semi Guided Discovery:

حيث يزود الطلاب بمشكلة محدودة وتزود ببعض التوجيهات العامة وتحدد له طرق النشاط العلمي والعقلي، غير أنها لا يكون له معرفة بالنتائج.

- الاكتشاف الحر Un guided Discovery:

حيث يعطى الطلاب المشكلة ويطلب منه إيجاد حل لها، وترشد إلى المكتبة أو المعمل أو أي مكان آخر دون أن تزود بتوجيهات.

7-2 إستراتيجية المشروع:

التعلم القائم على المشروع هو التعلم الذي يدمج ما بين المعرفة والفعل، حيث يتلقى الطلاب المعارف وعناصر المقررات الدراسية الأساسية، ولكنهم أيضا يطبقون ما يعرفونه من أجل حل مشاكل حقيقية والحصول على نتائج قابلة للتطبيق. التعليم القائم على المشروع يعيد تركيز التعليم على الطالب،



وليس المنهج - وهو تحول عالمي شامل يقدر لأصول غير الملموسة ويحرك العاطفة، والإبداع، والمرونة؛ وهذا لا يمكن أن يدرس من خلال الكتب، ولكنها عناصر يتم تشيبتها من خلال التجربة." ارتبط التعليم القائم على المشاريع بالنظريات البنائية وفي هذا الإطار، الطلاب يواصلون البحث عن حلول للمشاكل عن طريق طرح الأسئلة، مناقشة الأفكار، ويتبنون بالتوقعات، ويصممون الخطط أو التجارب، ويقومون بجمع وتحليل البيانات، واستخلاص النتائج، ويوصلون أفكارهم والنتائج إلى الآخرين، ويعاودون طرح أسئلة جديدة؛ لخلق منتجات جديدة من ابتكارهم. حيث تكمن قوة التعلم القائم على المشروع في الأصالة وتطبيق البحوث في واقع الحياة.

■ خصائص التعلم القائم على المشروع:

- يركز على الأسئلة المفتوحة والمهام التي تثير التحدي.
- يخلق حاجة إلى معرفة المحتوى والمهارات الأساسية.
- يتطلب التحقق من المعرفة أو خلق شيء جديد.
- يتطلب التفكير الناقد، والتمكن من حل المشكلات، والتعاون، ومختلف أشكال الاتصالات.
- يوفر مجالات لوصول أصوات الطلاب ويعزز حق الاختيار.
- يشتمل على التغذية الراجعة والتقييم الدائم.

■ السمات الأساسية لهذا المنهج التعليمي:

- الأصالة Authenticity

من أجل أن تكون الدراسة ذات مغزى وتستحق أن تكون موسعة، يجب أن تكون ذات علاقة بالواقع الحقيقي المعاش. فالمصادر الأولية توفر للطلاب فرصا فريدة لتفسير معنى لأنفسهم وربط ما يطلب منهم من مهام تعليمية بحياتهم والعالم الذي يعيشونه.

- التحقيق المتعمق In-depth inquiry

الاستفسار يلعب دورا حاسما في التعلم القائم على المشروع لأنه يشجع الطلاب على تحديد أي الجوانب من الموضوع التي تستحق مواصلة التحقيق فيها. الطلاب يعالجون المعلومات بفعالية من خلال أنشطة التحقيق التي تعزز التشكيك والتساؤل، يتبعها تحليل وتجميع للمعلومات وتقييمها. كل هذا يعزز عملية بناء ومشاركة نتائج التعلم الخاصة بهم



- مهارات التفكير متعدد التخصصات Interdisciplinary Thinking Skills

في التعلم القائم على المشاريع، ما يحتاج الطلاب إلى معرفته يمكن أن يمتد إلى أكثر من مجال واحد. كما أن إشتراك الطلاب في حل مشكلة أصيلة يقدم لهم فرصا للتطبيق والممارسة واكتساب مهارات التفكير وتعدد التخصصات.

- التعاون Collaboration

كثيرا ما يسهل تحقيق النجاح في ورشات العمل التي يتبناها أسلوب التعلم القائم على المشاريع الأنشطة التعاونية ما بين المعلم الطلاب والانخراط في الحوار الجاري حول المشاريع سواء كانت هذه الحوارات فردية أو جماعية.

- التقييم المستمر Ongoing Assessment

دور المعلم في التعلم القائم على المشروع هو تزويد الطلاب بالتغذية الراجعة المستمرة والإرشاد عبر جميع مراحل عملية التعلم. وبذات القدر من الأهمية، يكون التأمل الذاتي وتقييم الأقران.

يمكن التعلم القائم على المشاريع، الطلاب من الحصول على فهم شخصي لمحتوى جديد قائم على أساس مشاركتهم، والتحقيق والتحري من المصادر الأولية وغيرها من المواد التعليمية. فالطلاب يبنون المعرفة والمهارات الجديدة من خلال التعلم الذاتي والمشاركة في الأنشطة المتعلقة بالمحتوى.

8-2 استراتيجيات التعليم والتعلم عن بعد (التعلم الإلكتروني – E- Learning Strategies)

التعليم الإلكتروني؛ هو شكل من أشكال التعليم عن بعد حيث الغيث الفصول التقليدية واستبدلت بالفصول الافتراضية باستخدام الإنترنت وتتعدد استراتيجيات التعليم والتعلم خلال المنظومات الإلكترونية والتي يخططها القائم بالتدريس تبعاً لتنوع كلاً من المقررات الدراسية والأهداف والمتعلمين.

ويمكن ذكر بعض استراتيجيات التعليم والتعلم عن بعد والتي تتشارك مع استراتيجيات التعليم والتعلم التقليدي في معظم مع اختلاف الوسط المستخدم كما يلي:

- المحاضرة الإلكترونية.
- التعليم الإلكتروني المبرمج.
- التعليم الإلكتروني التعاوني.
- المناقشة الجماعية.



- العصف الذهني المبرمج.
- الاكتشاف الإلكتروني
- حل المشكلات الكترونياً
- دراسة الحالة
- المحاكاة
- التكاليفات
- دور الطالب في استراتيجية التعليم الإلكتروني
 - يحصل على المقررات والمراجع التي يحتاجها الكترونياً
 - الالتزام بالمواعيد المقررة
 - إنجاز المهمات المطلوبة منه في الوقت المحدد لها.
 - التواصل مع زملائه.
- دور المعلم في استراتيجية التعليم الإلكتروني
 - يقوم برفع المقررات الكترونياً لسهولة الحصول عليها
 - مساعدة الطالب في تحديد المراجع المطلوبة لتنمية مهاراته.
 - يعلم الطالب إدارة الوقت في التدريب والامتحانات بشكل جيد.
- مميزات التعليم والتعلم عن بعد:
 - تغيير المفهوم التقليدي للتعليم.
 - زيادة فاعلية كل من المعلم والمتعلم.
 - التغلب على مشاكل الأعداد الكثيرة في الفصول الدراسية.
 - تعويض النقص في بعض الكوادر العلمية المؤهلة.
 - الاستفادة من دوائر المعارف المتاحة على شبكة الإنترنت.
 - تدعيم مهارات التعليم الذاتي وتشجيع التعليم المستمر مدى الحياة.
 - إكساب المعلمين والطالب مهارات ضرورية والزامه للتعامل مع استخدام التكنولوجيا.
- سلبيات التعليم والتعلم عن بعد:
 - لا يساعد الطالب علي القيام بممارسة الأنشطة غير الأكاديمية مثل الأنشطة الاجتماعية والرياضية وغيرها.



- ارتفاع تكلفة التعليم الأولي وخاصة المراحل الابتدائية مثل تجهيز البنية التحتية والأجهزة وتصميم البرمجيات.
- تسبب التقنيات الحديثة للطالب بعض الملل فالحلوس أمام الكمبيوتر لفترات طويلة قد يكون مرهقا
- يسبب القلق عند المتعلم لوجود خلل في تصميم البرنامج
- فقدان العامل الإنساني في العملية التعليمية. غياب الحوار والنقاش الفعال كما أن العديد من الطلبة غير قادرين عن التعبير عن أفكارهم كتابيا. ويحتاجون الي التواصل المباشر للتعبير عما يعتقدونه
- صعوبة التقويم وتطوير معاييرها كما انه يخفض مستوى الأبداع والابتكار في الإجابات في الامتحانات حيث يكون علي الطالب أن يجيب بإجابة البرنامج نفسها.

9-2 استراتيجيات التعليم والتعلم المدمج Learning Blended

بالرغم من تعدد مميزات والإيجابيات التعليم والتعلم عن بعد (التعليم الإلكتروني) إلا أن يوجد بعض جوانب القصور التي أدت الي التوجه الي مدخل آخر من مداخل التعليم يجمع بين كل من مميزات كل من التعليم الصفي التقليدي والتعليم عن بعد وهو التعليم المدمج

■ تعريف التعليم المدمج

تتعد تعريفات مفهوم التعليم ما بين التالي:

- إن التعلم الذي يمزج بين خصائص كل من التعليم الصفي التقليدي والتعلم عبر الإنترنت في نموذج متكامل يستفيد من أقصى التقنيات المتاحة لكل منهما
- ويعرف أيضا بانه مقاربات مختارة بعناية وبشكل تكاملي بين التعليم وجها لوجه ومن خلال الإنترنت مع بعض العناصر التي تتيح للطالب التحكم بالوقت والمكان ومسار ووتيرة التعلم.
- الوقت: لم يعد التعليم يقتصر على اليوم الدراسي
- المكان: لم يعد يقتصر على حوائط الفصول الدراسية أو مبني المؤسسة التعليمية
- المسار: لم يعد التعلم يقتصر الطريقة التي يستخدمها المعلم لتوافر البرامج التفاعلية المختلفة.
- الوتيرة: لم تعد تقتصر على وتيرة واحدة في فصل فيه العديد من الطلاب.



- تتنوع مسميات التعليم المدمج كما يلي:
 - التعليم المزيج (Learning Blended)
 - التعليم الخليط (Learning Mixed)
 - التعليم الهجين (Learning Hybrid)
- استراتيجيات التعليم المدمج

تتعدد الاستراتيجيات المختلفة في التعليم المدمج ومنها

- **التناوب:** في هذا النوع من التعلم يتشارك التعليم الصفي والتعليم الإلكتروني بشكل تبادلي في تقييم الدرس أو المادة الواحدة
- **التناوب المتمركز:** يتم من خلال تناوب الطالب ضمن الدرس الواحد والمادة الواحدة وفق الجدول المحدد أو بناء علي توجيه المعلم بين التعليم الصفي والتعليم الإلكتروني مرة واحدة علي الأقل ويتم ذلك كله في الفصل الواحد دون تنقل من الطالب من مكان الي آخر وينفذ من خلال تقسيم الطالب الي مجموعات بعضها يتلقى من خلال توجيهات المعلم والعمل الجماعي : في حين تتلقي مجموعه أخري تعليمها عبر الإنترنت ومن ثم تتناوب المجموعات فيما بينها
- **التناوب المعلمي:** يتم من خلال تناوب الطالب ضمن الدرس الواحد أو المادة الواحدة وفق الجدول المحدد او بناء علي توجيه المعلم بين التعليم الصفي والتعليم الإلكتروني ولكن من خلال تنقل الطالب من الصف الي المعامل في المبني التعليمي

3- آلية مراجعة وتحديث سياسات واستراتيجيات التعليم والتعلم

الغرض: وضعت هذه الآلية بالتعاون مع وحدة ضمان الجودة بغرض ضمان دورية مراجعة وتحديث سياسات التعليم والتعلم المطبقة بالبرنامج، بما يضمن جودة العملية التعليمية ويتماشى مع معايير الهيئة القومية لضمان جودة التعليم والاعتماد.

▪ إجراءات التنفيذ

- تدعو لجنة مراجعة وتطوير البرامج العلمية جميع الأطراف المعنية للمشاركة في مراجعة وتحديث سياسات التعليم والتعلم فوراً بعد التأكد من إعلان هذه السياسات بصورة كافية على المعنيين وبوسائل مختلفة.



- يتم توزيع استقصاء رأي علي الأطراف المعنية عن سياسات التعليم والتعلم على عينة ممثلة من كل الفئات المعنية ذات الصلة وهي (أعضاء هيئة التدريس ومعاونيهم - الطلاب والخريجين - الأطراف المجتمعية).
- يتم تحليل الاستقصاءات ورصد التعليقات الواردة بالنماذج المطبقة وإعداد تقرير عن ما ورد من نتائج إلى المجلس الأكاديمي للمعهد مدعم بتوصيات اللجنة.
- يمكن للجنة أن تضيف أو تعدل من سياسات التعليم والتعلم وفقا لتقارير المراجعة الخارجية أو دراسة التقويم الذاتي للبرنامج.
- يتم عرض الإصدار الجديد من سياسات التعليم والتعلم على مدير وحدة الجودة قبل اعتماده من المجلس الأكاديمي ومخاطبة عميد المعهد بشأن الموافقة على اعتماد هذه السياسات.
- **توقيت التنفيذ:** يتم تنفيذ هذه الآلية في بداية كل عام جامعي أو في أحد الحالات التالية
 - تعديل المعايير الأكاديمية للبرامج العلمية.
 - تعديل اللائحة الدراسية للمعهد والبرامج العلمية.
 - تعديل الخطة الإستراتيجية للمعهد .
 - تعديل معايير الجودة والاعتماد المعمول بها بالهيئة القومية لضمان جودة التعليم والاعتماد.
 - انخفاض نسب الرضا للأطراف المجتمعية والطلاب عن أي من البرامج العلمية عن 70%.
- **المسؤولية:** تتولى لجنة مراجعة وتطوير البرنامج تطبيق هذه الآلية بصفة دورية، وترفع التقارير الخاصة بالتطبيق إلى مجلس إدارة البرنامج إقرار التعديلات المطلوبة
- **متابعة التنفيذ:** تتولى لجنة مراجعة وتطوير البرنامج التأكد من تطبيق الآلية قبل اعتماد الإصدار الجديد من سياسات التعليم والتعلم.



Appendix (6)

The contribution between the courses and the teaching and learning methods of the program



The contribution between the courses of the program and the teaching and learning methods

requirement Levels	NO	Code	Course	teaching and learning methods of the program												
				On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Institute requirements	1	BASE 303	Engineering economics	✓			✓	✓				✓		✓	✓	
	2	BASE 307	Contracts, Bids& Liabilities	✓			✓	✓				✓			✓	
	3	BASE308	Seminar		✓							✓	✓	✓	✓	
	4	BASE 309	Human Rights		✓							✓	✓	✓	✓	
Institute requirements (Optional 1 -6 hrs.)	5	BASE 102	Development of personal skills	✓				✓		✓		✓		✓	✓	
	6	BASE 302	Art of etiquette and protocol	✓				✓		✓		✓	✓	✓	✓	
	7	BASE 401	Communication skills	✓						✓		✓	✓	✓	✓	
	8	BASE 404	Negotiation skills	✓						✓		✓	✓	✓	✓	
Institute requirements (optional 2 -6 hrs.)	9	BASE 109	Project management organization development	✓								✓				
	10	BASE 201	Principles of business administration	✓			✓					✓				
	11	BASE 202	Principles of public relation	✓			✓					✓				
	12	BASE 203	Production management	✓			✓					✓				
	13	BASE 206	Society and individual science	✓			✓					✓				
	14	BASE 207	Fundamental of management	✓			✓					✓				



(Follow) The contribution between the courses of the program and the teaching and learning methods

requirement Levels	NO	Code	Course	teaching and learning methods of the program													
				On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling	
Institute requirements) optional 2 -6 hrs.)	15	BASE 301	Principles of financial and management accounting	✓			✓					✓					
	16	BASE 305	Principles of organizational behavior	✓			✓					✓					
	17	BASE 305	Research methods	✓	✓							✓	✓	✓	✓		
	18	BASE 402	Feasibility studies	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓
Basic science requirements (Math)	19	MATH 101	Calculus 1	✓	✓		✓					✓				✓	
	20	MATH 102	Calculus 2	✓	✓		✓					✓				✓	
	21	MATH 301	Probability and statistics	✓	✓		✓	✓								✓	
Basic science requirements (physics)	22	PHYS101	Classical mechanical, sound, heat	✓	✓		✓		✓			✓				✓	
	23	PHYS111	General physics laboratory 1	✓	✓		✓		✓			✓				✓	
	24	PHYS102	Electricity and magnetism	✓	✓		✓		✓			✓				✓	
	25	PHYS112	General physics laboratory 2	✓	✓		✓		✓			✓				✓	
Basic science req. (chemistry)	26	CHEM 101	General chemistry 1 for engineers	✓	✓		✓		✓			✓				✓	
	27	CHEM 111	General chemistry lab	✓	✓		✓		✓			✓				✓	



(Follow) The contribution between the courses of the program and the teaching and learning methods

requirement Levels	NO	Code	Course	teaching and learning methods of the program												
				On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Architecture core requirement	41	ARCH 213	History of architecture 1	✓						✓		✓	✓	✓	✓	
	42	ARCH 215	History of architecture 2	✓						✓	✓	✓	✓	✓	✓	
	43	ARCH 219	theory of architecture 1	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
	44	ARCH 304	theory of architecture 2	✓							✓	✓	✓	✓	✓	
	45	ARCH 315	Modern and contemporary foundations of art and architecture	✓							✓	✓	✓	✓	✓	
	46	ARCH 318	Concepts of urban planning	✓							✓	✓	✓	✓	✓	
	47	ARCH 201	Architecture drawing	✓	✓	✓		✓		✓		✓	✓	✓	✓	✓
	48	ARCH 202	Computer application in architecture	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
	49	ARCH 205	Building construction 1	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	50	ARCH 206	Environmental control systems and design	✓	✓	✓			✓			✓	✓	✓	✓	✓
	51	ARCH 208	Three dimensional designs	✓	✓	✓			✓	✓				✓		✓
	52	ARCH 210	Fundamentals of design and color and painting	✓	✓						✓	✓	✓	✓	✓	
	53	ARCH 211	Visual training	✓	✓					✓	✓			✓		
	54	ARCH 220	Shade, shadow and perspective 1	✓	✓		✓	✓		✓				✓		✓
	55	ARCH 301	Architecture design 1	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓



(Follow) The contribution between the courses of the program and the teaching and learning methods

requirement Levels	N0	Code	Course	teaching and learning methods of the program												
				On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Architecture core requirement	56	ARCH 302	Architecture design 2	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	57	ARCH 305	Shade, shadow and perspective 2	✓	✓					✓	✓			✓		✓
	58	ARCH 317	Building construction 2	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	59	ARCH 320	Building construction 3	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	60	ARCH 330	Building construction 4	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓
	61	ARCH 344	Acoustics and illumination	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓
	62	ARCH 345	Working drawing 1	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	63	ARCH 401	Interior design		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
	64	ARCH 402	Architecture design 3	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	65	ARCH 403	Architecture design 4	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	66	ARCH 404	Architecture design 5	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	67	ARCH 405	Architecture design 6	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	68	ARCH 406	Working drawing 2	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	69	ARCH 407	Urban design and landscape	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	70	ARCH 414	Housing	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
71	ARCH 420	Urban and regional planning	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	



(Follow) The contribution between the courses of the program and the teaching and learning methods

requirement Levels	N0	Code	Course	teaching and learning methods of the program												
				On line / face to face lectures	Tutorials: sheets/ sketches	Projects	Problem solving	Brain storming	Practical: lab	Discovering	Site visit	Reports/ researches	Cooperative work	Presentation	Discussion	Modelling
Architecture elective (10 hrs.)	85	ARCH 303	Geographical information system (GIS)	√	√	√			√			√	√	√	√	√
	86	ARCH 316	Advanced Computer-Aided Architectural Design	√	√	√	√	√	√					√		√
	87	ARCH 324	Advanced Representation	√	√	√	√	√	√					√		√
	88	ARCH 212	Virtual Reality in Architecture	√	√	√	√	√	√	√				√	√	√
	89	ARCH 332	Design for conservation	√								√	√	√	√	
	90	ARCH 322	World Art Survey I	√									√	√	√	√
	91	ARCH 418	Sustainable Architecture	√									√	√	√	√



Appendix (7)

**The contribution between the courses of the program and the
assessment methods**



The contribution between the courses of the program and the assessment methods

The courses of the program				The assessment methods of the program											
requirement Levels	N0	Code	Course name	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modelling
Institute requirements	1	BASE 303	Engineering economics	✓	✓	✓					✓				
	2	BASE 307	Contracts, Bids& Liabilities	✓	✓	✓	✓				✓		✓		
	3	BASE 308	Seminar							✓	✓		✓	✓	
	4	BASE 309	Human Rights		✓	✓					✓	✓	✓	✓	
Institute req. (optional 1 -6 hrs.)	5	BASE 102	Development of personal skills	✓	✓	✓					✓	✓	✓		
	6	BAS E 302	Art of etiquette and protocol	✓	✓	✓					✓	✓	✓		✓
	7	BASE 401	Communication skills	✓	✓	✓					✓	✓	✓	✓	
	8	BASE 404	Negotiation skills	✓	✓	✓					✓	✓		✓	
Institute requirements (optional 2 -6 hrs.)	9	BASE 109	Project management organization development	✓	✓	✓	✓								✓
	10	BASE 201	Principles of business administration	✓	✓	✓	✓								✓
	11	BASE 202	Principles of public relation	✓	✓	✓	✓								✓
	12	BASE 203	Production management	✓	✓	✓	✓								✓
	13	BASE 206	Society and individual science	✓	✓	✓	✓								✓
	14	BASE 207	Fundamental of management	✓	✓	✓	✓								✓
	15	BASE 301	Principles of financial and management accounting	✓	✓	✓	✓								✓
	16	BASE 305	Principles of organizational behavior	✓	✓	✓	✓								✓
	17	BASE 305	Research methods	✓	✓	✓					✓	✓	✓	✓	
	18	BASE 402	Feasibility studies	✓	✓	✓	✓				✓		✓	✓	✓



(Follow) The contribution between the courses of the program and the assessment methods

The courses of the program				The assessment methods of the program											
requirement Levels	N0	Code	Course name	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modelling
				Engineering core requirements	37	ENGR 102	Engineering Drawing and projection	✓	✓	✓	✓	✓			
38	ENGR 103	Engineering mechanics 1	✓		✓	✓	✓	✓							✓
39	ENGR 104	Engineering mechanics 2	✓		✓	✓	✓	✓							✓
40	ENGR 203	Strength and testing of materials	✓		✓	✓	✓		✓	✓					✓
Architecture core requirement	41	ARCH 213	History of architecture 1	✓	✓	✓					✓				
	42	ARCH 215	History of architecture 2	✓	✓	✓					✓	✓	✓	✓	
	43	ARCH 219	theory of architecture 1	✓	✓	✓	✓	✓				✓	✓	✓	✓
	44	ARCH 304	theory of architecture 2	✓	✓	✓					✓		✓	✓	
	45	ARCH 315	Modern and contemporary foundations of art and architecture	✓	✓	✓					✓		✓	✓	✓
	46	ARCH 318	Concepts of urban planning	✓	✓	✓					✓		✓	✓	
	47	ARCH 201	Architecture drawing	✓	✓	✓	✓	✓						✓	✓
	48	ARCH 202	Computer application in architecture	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
	49	ARCH 205	Building construction 1	✓	✓	✓	✓	✓			✓		✓	✓	✓
	50	ARCH 206	Environmental control systems and design	✓	✓	✓	✓				✓		✓	✓	
	51	ARCH 208	Three dimensional designs	✓	✓	✓	✓	✓	✓					✓	✓
	52	ARCH 210	Fundamentals of design and color and painting	✓	✓	✓	✓					✓	✓	✓	✓
	53	ARCH 211	Visual training	✓	✓	✓	✓	✓						✓	



(Follow) The contribution between the courses of the program and the assessment methods

The courses of the program				The assessment methods of the program											
requirement Levels	N0	Code	Course name	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modelling
Architecture core requirement	54	ARCH 220	Shade, shadow and perspective 1	✓	✓	✓	✓							✓	✓
	55	ARCH 301	Architecture design 1	✓	✓	✓	✓	✓			✓		✓	✓	✓
	56	ARCH 302	Architecture design 2	✓	✓	✓	✓	✓			✓		✓	✓	✓
	57	ARCH 305	Shade, shadow and perspective 2	✓	✓	✓	✓							✓	✓
	58	ARCH 317	Building construction 2	✓	✓	✓	✓	✓			✓		✓	✓	✓
	59	ARCH 320	Building construction 3	✓	✓	✓	✓	✓			✓		✓	✓	✓
	60	ARCH 330	Building construction 4	✓	✓	✓	✓				✓		✓	✓	✓
	61	ARCH 344	Acoustics and illumination	✓	✓	✓	✓	✓			✓		✓		
	62	ARCH 345	Working drawing 1	✓	✓	✓	✓	✓			✓		✓	✓	✓
	63	ARCH 401	Interior design		✓	✓	✓	✓			✓		✓	✓	✓
	64	ARCH 402	Architecture design 3	✓	✓	✓	✓	✓			✓		✓	✓	✓
	65	ARCH 403	Architecture design 4	✓	✓	✓	✓	✓			✓		✓	✓	✓
	66	ARCH 404	Architecture design 5	✓	✓	✓	✓	✓			✓		✓	✓	✓
	67	ARCH 405	Architecture design 6	✓	✓	✓	✓	✓			✓		✓	✓	✓
	68	ARCH 406	Working drawing 2	✓	✓	✓	✓	✓			✓		✓	✓	✓
	69	ARCH 407	Urban design and landscape	✓	✓	✓	✓	✓			✓		✓	✓	✓
	70	ARCH 414	Housing	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
	71	ARCH 420	Urban and regional planning	✓	✓	✓	✓	✓			✓		✓	✓	✓
72	ARCH 422	Working drawing 3	✓	✓	✓	✓	✓			✓		✓	✓	✓	



(Follow) The contribution between the courses of the program and the assessment methods

The courses of the program				The assessment methods of the program											
requirement Levels	No	Code	Course name	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modelling
	Architecture core	73	ARCH 425	Technical installation	√	√	√	√	√			√		√	√
74		ARCH 429	Working drawing 4	√	√	√	√	√			√		√	√	√
75		ARCH 490	Senior project 1								√		√	√	
76		ARCH 491	Senior project 2			√	√	√		√	√			√	√
77		ARCH 390	Internship in architecture			√				√	√		√	√	
Structure requirements	78	CVEE 250	Field plan and topographic surveying	√	√	√	√		√		√		√		
	79	CVEE 350	Structural analysis 1	√	√	√	√				√				
	80	CVEE 351	Structural analysis 2	√	√	√	√				√				√
	81	CVEE 352	Soil mechanics and foundation	√	√	√	√				√		√		
	82	CVEE 353	Structural steel design	√	√	√	√				√				
	83	CVEE 354	Reinforced concrete design1	√	√	√	√								
	84	CVEE 355	Reinforced concrete design2	√	√	√	√				√				√
Architecture elective (10 hrs.)	85	ARCH 303	Geographical information system (GIS)	√	√	√	√	√			√		√	√	√
	86	ARCH 316	Advanced Computer-Aided Architectural Design	√	√	√	√	√	√					√	√
	87	ARCH 324	Advanced Representation	√	√	√	√	√	√					√	√
	88	ARCH 212	Virtual Reality in Architecture	√	√	√	√	√	√		√			√	√
	89	ARCH 332	Design for conservation	√	√	√					√	√	√	√	
	90	ARCH 322	World Art Survey I	√	√	√					√		√	√	
	91	ARCH 418	Sustainable Architecture	√	√	√					√		√	√	



Appendix (8)

Course Specifications



First level courses (preparatory)

First semester (fall)

No.	Cod	Course Name	Instructor
1	PHYS101	Classical mechanical, sound, heat	Dr. Amal Gawadi
2	PHYS111	General physics laboratory (1)	Dr. Nevin
3	CHEM 101	General chemistry 1 for engineers	Dr. Amara Maray
4	CHEM 111	General chemistry lab	Dr Doaa Fathi
5	MATH 101	Calculus 1	Dr Gamal Al-Anani
6	ENGR 101	Introduction to engineering	Dr Mervat Kaeid
7	ENGR 102	Engineering Drawing and projection	Prof. Eldesouki Aid
8	ENGR 103	Engineering mechanics 1 (statics)	Prof. Eldesouki Aid



Course Specification

Course Code:	Course Name:
PHYS101	Classical mechanical, sound, heat
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of Education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Classical mechanical, sound, heat
Code	PHYS101
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	none
Instructor name/Email	Dr. Amal Elgawadi Dr. Amal Elgawadi/aelgaw01@hotmail.com

C- Professional Information

1- Course core:

An introduction to classical mechanics covering vectors, applications of Newton's laws, conservation laws and forces, motion in a plane, circular motion, equilibrium and elasticity, rotational motion, simple harmonic motion, energy and power; mechanical and sound waves, temperature, heat and the first law of thermodynamics.

Concurrent Course: General Physics Laboratory I (PHYS 111)

2- Course Learning Objectives: (Oc)

After studying the course the student would be able to:

- Oc1 Understand the basic principles of physics and measurements.
Be aware of the main diverse concerning physics, as; Density, motion and its shape, The
- Oc2 Laws of Motion, Energy, Force, work, Friction. Momentum, Rotation, Static equilibrium and elasticity, Oscillations and mechanical waves: Oscillatory motion. Wave motion and sound waves. Temperature, heat, and first law of thermodynamics
- Oc3 Solve problems concerning the physical diverse.



- Oc4 Develop an intuition, feeling, and knowledge of the physical world.
Oc5 Show that basic science (e.g. Physics) and technology (e.g. engineering) are two faces of the same coin.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 list, describe, classify, and/or explain the basic and principles of physics
Lo2 Identify the relation between physics and technology.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Solve physical problems with a wide range of complexity and variation.
Lo4 Conduct researches for topics related to the course topics.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
LO.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
LO.13 Solve complex engineering problems.
LO.18 Conduct techniques and methods of investigation as researches and reports.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1, LO6
2	Lo2	LO1, LO6
3	Lo3	LO13
4	Lo4	LO18



6-Contents				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1. Introduction to the course	2	2	0	Lo1
2. Motion in One Dimension (1D). Particle Model. Position, Velocity, and Speed. Position–time graph for the motion of the “particle.” Distance & Displacement. Average Velocity and Average Speed. General Problem-Solving Strategy. Instantaneous velocity and Instantaneous speed.	2	2	0	Lo1, Lo2, Lo3
3. Analysis model: particle under constant velocity. Acceleration: average and instantaneous. Analysis model: particle under constant acceleration. Kinematic equations.	2	2	0	Lo1, Lo2, Lo3
4. Freely falling objects. Acceleration of Freely Falling Object.	2	2	0	Lo1, Lo2, Lo3, Lo4
5. Vectors. Polar and Cartesian systems. Vectors and scalar quantities. Vector additions. Vector multiplication and deviation. Components of a vector and unit vectors. Component Method of Adding Vectors.	2	2	0	Lo1, Lo2, Lo3
6. Motion in two dimensions (2D). Position, velocity, and acceleration vectors. 2D motion of a particle with constant acceleration. Projectile motion. Analysis model: particle in a uniform circular motion.	2	2	0	Lo1, Lo2, Lo3
7. Pre-mid exam + revision.	2	2	0	Lo1, Lo2, Lo3
8. Midterm exam.				Lo1, Lo2, Lo3
9. The laws of motion. The difference between kinematics and kinetics equations. The concept of force. Newton's first law. Mass, the gravitational, and weight. Newton's second law. Equilibrium. Free-body diagrams. Analysis Model: Particle in Equilibrium (Zero Net Force). Analysis Model: Particle Under a Non-Zero Net Force and Application of Newton 2nd Law in Component form. Newton's third law. The free-body diagram of the normal force.	2	2	0	Lo1, Lo2, Lo3, Lo4
10. Introduction to friction. Static, sliding, and rolling friction. Forces of friction: static friction force and kinetic friction force. Circular motion and other applications of Newton's laws. Newton's Second Law Applied to Uniform Circular Motion. The energy of a system. Work done by a constant force. Kinetic energy.	2	2	0	Lo1, Lo2, Lo3



11. Linear momentum and collisions. Impulse. Rotation of a rigid body about a fixed axis. Angular position, velocity, and acceleration. Analysis model: rigid object under constant angular acceleration. Elastic properties of solids. Tensile and compressive stress. Stress and strain. Elastic modulus. Oscillations and mechanical waves. Motion of an object attached to a spring and Hooke's law. Simple harmonic motion (SHM). Sinusoidal nature of simple harmonic motion. Analysis model: particle in simple harmonic motion. Comparing SHM with uniform circular motion.	2	2	0	Lo1, Lo2, Lo3
12. The simple and the tensional pendulums. Damped and un-damped oscillations. Forced oscillations. Wave motion. Longitudinal and transverse wave motion. Analysis model: traveling wave. Sound waves. Pressure variations in sound waves. Speed of sound waves. Intensity of periodic sound waves. Thermodynamics. Temperature and the Zeroth law of thermodynamics. Thermal equilibrium. Thermometers. Calibration of liquid thermometers. Thermometers and the Celsius temperature scale. The constant-volume gas thermometer and the absolute temperature. The Celsius, Fahrenheit, and Kelvin temperature conversions.	2	2	0	Lo1, Lo2, Lo3
13. Thermal expansion of solids and liquids. The average coefficient of linear expansion. The unusual thermal-expansion behavior of water. Heat and internal energy. The Mechanical Equivalent of Heat. Specific heat and calorimetry.	2	2	0	Lo1, Lo2, Lo3
14. Sign Conventions for energy transfer. Latent heat. Introduction to work and heat in thermodynamics processes. The first law of thermodynamics. Some Applications of the first law of thermodynamics (e.g. adiabatic process).	2	2	0	Lo1, Lo2, Lo3, Lo4
15. Revision + pre-final exam.	2	2	0	Lo1, Lo2, Lo3
16. Final Exam.				Lo1, Lo2, Lo3
Total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√		√					√			√	
Lo2	√	√		√	√				√			√	
Lo3	√	√		√					√			√	
Lo4		√							√				

Notes:

- The brainstorming takes place during the lectures and the homework.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√	√		
Lo2	√	√	√	√				√	√		
Lo3	√	√	√	√				√	√		
Lo4									√		

b- Time schedule of assessment

Quizzes	Week (6,12)
Discussions	weekly
Sheets and sketches	Weekly
Researches and reports	Week (4, 14)
Attendance	weekly
Mid- term exam	Week (8)



final exam

Week (16)

c- Grading system		
Quizzes	Quiz (1)	(5) marks
	Quiz (2)	(5) marks
Sheets and Sketches	(15) marks	
Reports	(10) marks	
Discussion/	(5) marks	
Mid- term exam		20 marks
final exam		50 marks
Total		100

9- List of references:

- a- Course notes
- b- Required books

c- Recommended books

d- Periodicals, Web sites, etc.

- **Lecture notes and handouts**
- Halliday, David, Fundamentals of physics / David Halliday, Robert Resnick, Jearl Walker.—9th ed., John Wiley & Sons Inc., New York, 2011.
- Raymond A. Serway and John W. Jewett,, Physics for Scientists and Engineers with Modern Physics, Ninth Edition, Jr. USA 2014.
- R. Wolfson, and J.M. Pasachoff:" Physics with modern Physics", Second edition, HarperCollins College Publishers, 1995 (E 3861)
- M. Alonso, and E.J. Finn: "Physics" Addison-Weseley publishing company, Wokingham, England, 1992 (E 14409).
- Young, Hugh D. Sears and Zemansky's university physics : with modern physics. -- 13th ed./ Hugh D. Young, Roger A. Freedman ; contributing author, A. Lewis Ford. **Addison-Wesley 2012.**
- <http://www.saunderscollege.cpm/physics>
- [http://en.wikipedia.org/wiki/Bernoulli/principle](http://en.wikipedia.org/wiki/Bernoulli%27s_principle)

10- Facilities required for teaching and learning:

- Appropriate teaching class room including presentation board, data show
- Google classroom
- References in the library



11- Requirements for Disable facilities:

Extra assignments

Course Instructor:	Dr. Amal El-Gawadi	<i>Amal Elgawadi (Amal)</i>
(Head of the Department)	Dr. Amera Marye	<i>Amera</i>
Date:	2023-2024	



Course Specification

Course Code:	Course Name
PHY 111	General physics laboratory (1)
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Sciences
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Practical Classical Physics
Code	PHY 111
Credit Hours	1
Lab	3
Tutorial	0
Total	3
Prerequisite	concurrent course PHYS 101
Instructor name/Email	neven.kamal@sva.edu.eg

C- Professional Information

1- Course core:

It is concerns the experiments that make proofs of: Motion of particles, the effect of gravity, the relation between speed, velocity and acceleration of particles with a discussion of models and theories of motion; introduction to the classical physics.

2- Course Learning Objectives: (Oc)

- Oc1 Developing the knowledge of understanding of classical physics
- Oc2 Studying the applications of classical physics
- Oc3 Studying how to achieve theories practically.
- Oc4 Discuss the laws and case studies of motion of particles.
- Oc5 Analysis of the different problems of Hook's law, gravity, and Young's modulus.



3- Learning outcomes of the course (LOs):

d. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the basic fundamental in classical physics an overview of speed, velocity and acceleration of particles with a discussion of models and theories of motion.
- Lo2 Evaluate the motion of particles to predict the practical value of gravity.
- Lo3 Analyse application of laws of motion of particles.

e. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Solve the different problem of combustion to Identify various industrial purposes such as the automotive industry.
- Lo5 Use physical tools, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues, and risk management principles
- Lo6 conduct models to Employ, measuring instruments, and lab tools to determine the value of gravity

f. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo7 Express the opinion by oral presentation and flexible model recalling the final configuration of masses.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.3 Assess and evaluate findings.
- LO.4 Use statistical analyses and objective engineering judgment to draw conclusions.
- LO.13 Solve complex engineering problems.
- LO.15 Conduct and Develop appropriate experimentation.
- LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.
- LO.28 Communicate to convey ideas verbally, numerically, graphically, and using symbols, effectively with a range of audiences.



5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1
2	Lo2	LO3, Lo4
3	Lo3	LO3, Lo4
4	Lo4	LO13
5	Lo5	LO17
6	Lo6	LO15
7	Lo7	LO28

6- Contents

Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- Introduction to classical physics	0	0	3	Lo1
2- Speed, velocity and acceleration	0	0	3	Lo1, Lo2, Lo4, Lo5, Lo6, , Lo7
3- Free falling bodies	0	0	3	Lo1, Lo2, Lo4, Lo5, Lo6
4- Simple pendulum	0	0	3	Lo4, Lo5
5- Revision	0	0	3	Lo1, Lo2,, Lo4
6- Hooke's law	0	0	3	Lo1, Lo5, Lo6
7- Revision	0	0	3	Lo1, Lo2, Lo4, Lo5, Lo6, , Lo7
8- Midterm				
9- Young's modulus	0	0	3	Lo4, Lo5, Lo6, , Lo7
10- Stokes's method	0	0	3	Lo4, Lo5, Lo6. , Lo7
11- Speed of sound	0	0	3	Lo4, Lo5, Lo6. , Lo7
12- Revision	0	0	3	Lo1, Lo2, Lo4, Lo5, Lo6, , Lo7
13- Specific heat of liquid	0	0	3	Lo3, Lo5, Lo6
14- Boyle's law	0	0	3	Lo3, Lo5, Lo6
15- Revision	0	0	3	Lo3, Lo4, Lo5, Lo6, Lo7
16- Final Exam		2		Lo1, Lo2, Lo3, Lo4, Lo5, Lo6. , Lo7
total	0	0	42	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Inter active lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Inter active Lab sessions	Site visits	Researches	Modeling	Cooperative work
Lo1			✓				✓		✓		
Lo2			✓			✓	✓		✓		
Lo3			✓		✓	✓	✓		✓		
Lo4					✓	✓	✓				
Lo5							✓				
Lo6							✓				
Lo7							✓				

Notes:

•Online virtual labs is used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work
Lo1	✓		✓			✓		✓		
Lo2	✓		✓	✓		✓		✓		
Lo3	✓		✓	✓	✓	✓		✓		
Lo4	✓			✓		✓		✓		
Lo5	✓					✓				
Lo6	✓					✓				
Lo7	✓					✓				

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (8)
	Quiz (3)	Week (14)
Discussions		Every week
Sheets and Sketches		Every week
Researches and reports		Every week
lab		Every Week



Attendance	Weekly
Mid-term exam	Week (8)
final exam	Week (16)

c- Grading system		
Quizzes	Quiz (1)	5 marks
	Quiz (2)	5 marks
	Quiz (3)	10 marks
Discussions	5%	20 marks
Sheets and Sketches	45%	
Researches and reports	10%	
lab	10%	
Attendance	10 marks	50 marks
Mid-term exam	10 marks	
Practical Exam	20 marks	
Final exam	20 marks	
total	100 marks	

9- List of references:

c- Course notes

d- Required books

e- Recommended books

f- Periodicals, Web sites, etc

Lab session notes and handouts

- Halliday, David, **Fundamentals of physics** / David Halliday, Robert Resnick, Jearl Walker.—9th ed., John Wiley & Sons Inc., New York, 2011.
- Raymond A. Serway and John W. Jewett., **Physics for Scientists and Engineers with Modern Physics**, Ninth Edition, Jr. USA 2014.
- R. Wolfson, and J.M. Pasachoff:" **Physics with modern Physics**", Second edition, HarperCollins College Publishers, 1995 (E 3861)
- M. Alonso, and E.J. Finn: "**Physics**" Addison-Weseley publishing company, Wokingham, England, 1992 (E 14409).
- Young, Hugh D. Sears and Zemansky's **university physics : with modern physics.** -- 13th ed./ Hugh D. Young, Roger A. Freedman ; contributing author, A. Lewis Ford. **Addison-Wesley 2012.**
- <http://www.saunderscollege.cpm/physics>
- http://en.wikipedia.org/wiki/Bernoulli_principle

10- Facilities required for teaching and learning:



Lab session notes, Physics 1 Lab -Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Extra lab experiments
- Extra assignments.

Course coordinator: Dr. Neven Rostom

(Head of the Department) Dr. Amara Marye

Date: 2023/2024

Dr. Amara
Amara



Course Specification

Course Code:	Course Name
CHEM 101	General Chemistry
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Sciences
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation:	2008 -2009
Date:	2023-2024

B-Basic Information

Title	General Chemistry
Code	CHEM 101
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	none
Instructor name/Email	Amira.marei@sva.edu.eg

C- Professional Information

1- Course core:

Chemical stoichiometry; atomic structure and periodicity; an overview of chemical bonding with a discussion of models and theories of covalent bonding; introduction to structure and chemistry of organic compounds; elementary nuclear chemistry.

2- Course Learning Objectives:

- 1 Developing the student basic knowledge of chemistry
- 2 Studying applications of organic and inorganic chemistry.
- 3 Studying the chemical bonding with a discussion of models and theories.
- 4 Discuss the techniques of environmental engineering (elementary nuclear chemistry).
- 5 Introduce and discuss different problems of gas law, electrochemistry, and corrosion and its application.



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the basic fundamental in chemistry (Chemical stoichiometry; atomic structure and periodicity; an overview of chemical bonding with a discussion of models and theories of covalent bonding)
- Lo2 evaluate the ideal gas law and Vander Waal equation to predict P&V&T
- Lo3 Identify various industrial processes such as the cement industry.
- Lo4 Differentiate between organic components and inorganic components.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 solve complex chemical problems of combustion Analyse application of electrochemistry and corrosion

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

-None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO1. Identify, formulate basic science and mathematics.
- LO3 Assess and evaluate findings.
- LO4 Use statistical analyses and objective engineering judgment to draw conclusions.
- LO13. Solve complex engineering problems.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1
2	Lo2	LO2, LO4
3	Lo3	LO1
4	Lo4	LO1
5	Lo5	LO13



6- Contents				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- Introduction to Chemical stoichiometry	2	2	0	Lo1
2- atomic structure and periodicity, gases law	2	2	0	Lo1
3- The gaseous state	2	2	0	Lo1, Lo3
4- application of ideal gas law	2	2	0	Lo1, Lo3
5- application of ideal gas law	2	2	0	Lo1, Lo3
6- Corrosion	2	2	0	Lo1, Lo2
7- corrosion control	2	2	0	Lo1, Lo2
8- midterm				Lo1, Lo2, Lo3
9- electrochemistry	2	2	0	Lo1, Lo5
10- Organic chemistry	2	2	0	Lo1, Lo5
11- polymer	2	2	0	Lo1, Lo5
12- water desalination	2	2	0	Lo1, Lo5
13- water treatment	2	2	0	Lo1, Lo5
14- Cement	2	2	0	Lo4
15- Revision	2	2	0	Lo1, Lo2, Lo3, Lo4
16- Final Exam		3		Lo1, Lo2, Lo3, Lo4, Lo5
total	28	28	0	

7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√	√	√	√					√		√
Lo2	√		√	√	√	√					
Lo3	√	√	√	√					√		√
Lo4	√	√	√	√					√		√
Lo5	√	√	√	√	√	√					

Notes

- The research concerns the cooperative work, the discussion, and the presentations.
- lectures and exercises concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the



used teaching and learning methods will be on line.

8- Student assessment method

a-Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work
Lo1	✓	✓	✓	✓				✓		✓
Lo2	✓		✓	✓	✓					
Lo3	✓	✓	✓	✓				✓		✓
Lo4	✓	✓	✓	✓				✓		✓
Lo5	✓			✓	✓					

d- Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Presentations and Movies		Every week
Sheets and Sketches		Every week
Researches and reports		Every week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

e -Grading system

Quizzes	Quiz (1)	5 marks	30marks
	Quiz (2)	5 marks	
Discussions	5 marks	15 marks	
Sheets and Sketches	5 marks		
Researches and reports	5 marks		
Attendance	5 marks		
Mid-term exam	20 marks		
Final exam		50marks	
total		100 marks	



9- List of references:

- | | |
|---------------------------------------|---|
| 6- Course notes | Lecture notes and handouts |
| 7- Required books | • Brown, L. T, LeMay H. E. Jr; Bursten, B. E.; Murphy, C.J., and Woodward, P.; " Chemistry The Central Science ", Pearson International Edition (11th edn), Pearson Printice Hall, (2009). |
| 8- Recommended books | Concise inorganic chemistry , J.D.LEE, fourth edition, with Chapman &Hall Education low priced books scheme funded by the British Government |
| 9- Periodicals, Web sites, etc | No periodicals are needed.
Sites.google.com/site/chemengdepsha |

10- Facilities required for teaching and learning:

- Appropriate lecture room including presentation board, data show, lab for modelling
- Google class room
- E- learning Moodle
- Library- Internet

11- Requirements for Disable facilities:

- Extra assignments

Course Instructor:	Dr. Amara Marey Dr. Doaa Fathy
(Head of the Department)	Dr. Amara Marye
Date:	2023/2024

Amara
Doaa Fathy
Amara



Course Specification

Course Code:	Course Name
CHEM III	General Chemistry Lab

A- Affiliation

Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	General Chemistry Lab
Code	CHEM III
Credit Hours	1
Lab	3
Tutorial	0
Total	3
Prerequisite	concurrent course PHYS 101
Instructor name/Email	Dr. Doaa Fathy dr.doaa.fathy@sva.edu.eg

C- Professional Information

1. Course core:

It is concerns the experiments that make proofs of: Chemical stoichiometry; atomic structure and periodicity; an overview of chemical bonding with a discussion of models and theories of covalent bonding; introduction to structure and chemistry of organic compounds; elementary nuclear chemistry.

2. Course Learning Objectives:

- 1 Illustrate the principle and concepts chemical process in Chemistry Lab
- 2 Use the different analytical techniques in lab.
- 3 Study the Qualitative analysis
- 4 study the Acidic radical and the basic radical
- 5 Develop and appropriate experiment discussion on chemical bonding
- 6 Detection of acidic radical in salt
- 7 Search and analyze data, based on the analytical process for specific groups of needs
- 8 An overview of three groups of basic radicals (HCl, H₂SO₄, and BaCl₂)



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the basic fundamental in Chemistry lab

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Use Laboratory scientific equipment and instrumentation for the identification of the salt
Lo3 Conduct and develop appropriate experimentation and draw conclusions.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Express his opinion by oral presentation and flexible model recalling the final configuration of masses.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO1. Identify, formulate basic science and mathematics.
LO14 Apply engineering fundamentals, basic science and mathematics.
LO15 Conduct and Develop appropriate experimentation.
LO17. Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.
LO28 Communicate to convey ideas verbally, numerically, graphically, and using symbols effectively with a range of audiences.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1
2	Lo2	LO14, LO15, LO17
3	Lo3	LO14, LO15
4	Lo4	LO28



6- Contents				
Topic	Lecture hours	Tutorial hours	Practical (Lab) hours	LOS
1- Introduction to quantitative analysis	0	0	3	Lo1, Lo2, Lo3, Lo4
2- Quantitative analysis	0	0	3	Lo1, Lo2, Lo3, Lo4
3- Acidic radical	0	0	3	Lo1, Lo2, Lo3, Lo4
4- An overview of the chemical reaction of acid radical	0	0	3	Lo1, Lo2, Lo3, Lo4
5- An overview of three groups of acidic radicals (HCl, H ₂ SO ₄ , and BaCl ₂)	0	0	3	Lo1, Lo2, Lo3, Lo4
6- An overview of three groups of acidic radicals (HCl, H ₂ SO ₄ , and BaCl ₂)	0	0	3	Lo1, Lo2, Lo3, Lo4
7- Revision	0	0	3	Lo1, Lo2, Lo3, Lo4
8- Midterm Exam	1			
9- Basic radical	0	0	3	Lo1, Lo2, Lo3, Lo4
10- An overview of the chemical reaction of Basic radical	0	0	3	Lo1, Lo2, Lo3, Lo4
11- Detection of three groups of basic radicals (I, II, III)	0	0	3	Lo1, Lo2, Lo3, Lo4
12- Detection of three groups of basic radicals (IV, V, VI)	0	0	3	Lo1, Lo2, Lo3, Lo4
13- Study the quantitative analysis	0	0	3	Lo1, Lo2, Lo3, Lo4
14- Study the quantitative analysis	0	0	3	Lo1, Lo2, Lo3, Lo4
15- Revision	0	0	3	Lo1, Lo2, Lo3, Lo4
16- Final Exam	2			Lo1, Lo2, Lo3, Lo4
total	0	0	42	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	reports	Modelling	Cooperative work
Lo1			√		√		√		√		√
Lo2					√		√				√
Lo3					√		√		√		√
Lo4			√		√		√		√		√

Notes: • Online lectures as virtual lab used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a-Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work
Lo1	√		√			√		√		√
Lo2	√					√		√		√
Lo3	√					√		√		√
Lo4	√		√			√		√		√

b-Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Sheets and Sketches		Every week
Researches and reports		Every week
lab		Every Week
Attendance		weekly
Mid-term exam		Week (8)
		Week (16)
final exam		



c- Grading system		
Quizzes	Quiz (1)	5 marks
	Quiz (2)	5 marks
Discussions	20%	30 marks
Manual lab attitude	30%	
Researches and reports	50%	
Attendance	10 marks	50marks
Mid-term exam	10marks	
Final lab exam	40marks	
total		100 marks

9- List of references:

- **Course notes** Lecture notes and handouts
- **Required books** • Brown, L. T, LeMay H. E. Jr; Bursten, B. E.; Murphy, C.J.; and Woodward, P.; " Chemistry The Central Science", Pearson International Edition (11th edn), Pearson Printice Hall, (2009).
- **Recommended books** Concise inorganic chemistry, J.D.LEE, fourth edition, with Chapman &Hall Education low priced books scheme funded by the British Government
- **Periodicals, Web sites, etc** No periodicals are needed.
Sites.google.com/site/chemengdepsha

10- Facilities required for teaching and learning:

- Appropriate chemistry lab including presentation board, data show, lab for modelling
- Google class room
- E- learning Moodle Library- Internet

11- Requirements for Disable facilities:

- Extra assignments

Course Instructor:	Dr. Doaa Fathy	
(Head of the Department)	Dr. Amara Marye	
Date:	2023/2024	



Course Specification

Course Code:	Course Name
Math101	Calculus I
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Calculus I
Code	Math101
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	-
Instructor Name/Email	Dr. Gamal El -Anany gamalanani75@gmail.com

C- Professional Information

1- Course core:

The course concerns the Limits of one-variable functions, continuity and differentiability. Extreme and Curve sketching. Related rates. Linear approximation. Differentiation of Trigonometric functions. Applications of the derivative

2- Course Learning Objectives:

- 1 To introduce students to concepts of Functions, Limits, and Continuity.
- 2 To teach students differential calculus, higher derivatives, and Leibnitz theorem.
- 3 To provide students with derivatives applications.
- 4 To provide students with the basics of Theory of equations.



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain concepts and theories of mathematics and sciences, appropriate to mathematics (1)
- Lo2 Demonstrate methodologies of solving engineering problems, data collection and interpretation
- Lo3 Select appropriate solutions for engineering problems based on analytical thinking

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Apply knowledge of linear algebraic equations, iterative methods, and infinite series to solve engineering problems.
- Lo5 Prepare and present technical reports about application of matrices to solve engineering problems.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Communicate effectively in tutorial class room with the demonstrator: Effectively manages tasks, time, and resources, when solving mathematics problems, and in exams.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO1. Identify, formulate basic science and mathematics.
- LO2 Simulate, analyze and interpret data.
- LO14 Apply engineering fundamentals, basic science and mathematics.
- LO18 Conduct techniques and methods of investigation.
- LO27 Work efficiently as an individual and share in team works.
- LO28 Communicate effectively, graphically, verbally and in writing with a range of audiences

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1



2	Lo2	LO1
3	Lo3	LO1, LO2
4	Lo4	LO14
5	Lo5	LO18, LO28
6	Lo6	LO27

6- Contents				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- The concept of function	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo6
2- The domain and range of function	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
3- The trigonometric functions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
4- Limits of one-variable functions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
5- The continuity	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
6- The definition of differentiation	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
7- Rules of derivative	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
8- midterm				Lo1, Lo2, Lo3, Lo4,
9- Differentiation of Trigonometric functions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
10- higher derivatives	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
11- Extreme points	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
12- Curve sketching	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
13- Taylor and Maclaurin's expansion	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
14- Applications of the derivative	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo7
15- Revision	2	2	0	Lo1, Lo2, Lo3, Lo4,
16- Final Exam		3		Lo1, Lo2, Lo3, Lo4,
total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√		√	√	√	√			√		
Lo2	√		√	√	√	√			√		
Lo3	√		√	√	√	√			√		
Lo4	√		√	√	√	√			√		
Lo5	√		√	√	√	√			√		
Lo6			√	√					√		

Notes: • The exercises concerns the brain storming and the problem solving.
• Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modelling	Cooperative work	
Lo1	√		√	√	√			√			
Lo2	√		√	√	√			√			
Lo3	√		√	√	√			√			
Lo4	√		√	√	√			√			
Lo5	√		√	√	√			√			
Lo6			√		√			√			

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Presentations and Movies		
Sheets and Sketches		Every week
Researches and reports		Every week
lab		Every Week
Attendance		weekly



Mid-term exam
final exam

Week (8)
Week (16)

c- Grading system		
Quizzes	Quiz (1)	5 marks
	Quiz (2)	5 marks
Discussions	25%	10 marks
Sheets and Sketches	50%	
Researches and reports	25%	
lab	0%	
Attendance	10 marks	
Mid-term exam	20 marks	
Final exam	50marks	
total	100 marks	

9- List of references:

- **Course notes** **Lecture notes and handouts**
- **Required books**
 - Mary Attenborough, Engineering Mathematics, McGraw - HILL Book Company Europe, 1994.
 - Anthony croft, Robert Davison, Engineering Mathematics A modern Foundation for Electrical, Electronic & Control Engineering, Addison - Wesley - Publishing Company, 1992
- **Recommended books** - Swokowski, E, Olinick, M and Pence, D., Calculus, PWS Publishing Company - Boston, 1994
- **Periodicals, Web sites, etc** **No periodicals are needed.**
Web Sites related to Mathematics and Mathematical engineering as:
www.math.hmc.edu,
www.tutorial.math.jamar.edu,
www.web.mit.edu

10- Facilities required for teaching and learning:

Lecturer notes, Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Extra assignments:

Course Instructor:	Dr. Gamal El-Anany	
(Head of the Department)	Dr. Amara Marye	
Date:	2023/2024	



Course Specification

Course Code:	Course Name
ENGR101	Introduction of Engineering
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Engineering introduction
Code	ENGR101
Credit Hours	1 Cr. Hrs.
Lectures	1 Hrs.
Tutorial	0
Total	1 Hrs.
Prerequisite	-
Instructor name/Email	Mervat Abdelkader Kaid mervat.kaeed@sva.edu.eg

C- Professional Information

1- Course core:

History of engineering, engineering fields of socialization and curricula. The engineering profession: team work, professionalism, ethics, licensing, communication and societal obligations. Engineering support personnel and activities. Engineering approach to problem solving. Examples of major engineering projects. Course project.

2- Course Learning Objectives: oC

- oC1 Enable students to define science, engineering, and their relationship to technology.
- oC2 Enabling students to study the main objective of conducting scientific research.
- oC3 Introducing students to the relative distribution of the main groups of subjects at the bachelor's level.
- oC4 Enabling students to learn about the different engineering disciplines, the duties of the



- oC5 engineer, and the field of work of the engineer, each according to his specialization. Enabling students to understand technology, the main reasons for transferring and importing technology, and methods for transferring and importing technology.
- oC6 Building student capabilities in making the appropriate decision when facing any engineering problem.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain the fields of engineering.
- Lo2 Demonstrate the relation between technology and engineering fields.
- Lo3 Display the engineering ethics, and the engineer duties.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Conduct researches to introduce the latest fields of engineering, the history of engineering, the relation between technology and engineering fields.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

-None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic
- LO.5 Display 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.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1



3	Lo3	LO.5 / LO.8
4	Lo4	LO.8

6- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	Basic concepts of science, engineering and technology	1	0	0	Lo1.Lo2
2	History of engineering and its relationship to technology	1	0	0	Lo1.Lo2, Lo4
3	Scientific qualification program for the undergraduate level and the relative distribution of study materials at that stage	1	0	0	Lo1.Lo2, Lo3, Lo4
4	The concept of scientific research and the basic elements of scientific research	1	0	0	Lo1.Lo2, Lo3 Lo4
5	Scientific progress stages, scientific research map.	1	0	0	Lo1.Lo2, Lo3 Lo4
6	Engineering work activities and engineer responsibilities	1	0	0	Lo1.Lo2, Lo4
7	Engineering ethics	1	0	0	Lo1.Lo2, Lo3.Lo4
8	Midterm Exam (MT)		1		Lo1.Lo2, Lo3
9	The various engineering specializations, and the duties of the engineer according to the specialization	1	0	0	Lo1.Lo2, Lo4
10	Identify the fields of work of the engineer according to specializations. Technology transfer and import methods	1	0	0	Lo1.Lo2, Lo3 Lo4
11	Identify the fields of work of the engineer according to specializations. Technology transfer and import methods	1	0	0	Lo1.Lo2, Lo3 Lo4
12	Reasons for transferring and importing technology	1	0	0	Lo1.Lo Lo32, Lo4
13	Reasons for transferring and importing technology	1	0	0	Lo1.Lo2, Lo4



14	Knowledge of making the appropriate decision in solving engineering problems	1	0	0	Lo1.Lo2, Lo4
15	Revision	1	0	0	Lo1.Lo2, Lo3 Lo4
16	Final Written Exam (Final)				Lo1.Lo2, Lo4
Total hours		14	0	0	

7- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials: sheets/ sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modelling
Lo1	√								√			√	
Lo2	√			√	√				√			√	
Lo3				√	√				√			√	
Lo4	√			√	√				√			√	

Notes: Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.

8- Student Assessment Method

a- assessment method and its relation to the Los of the course										
Course LOs	Tools of assessment									
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation
Lo1		√	√				√	√	√	
Lo2	√	√	√				√	√	√	
Lo3	√	√	√				√		√	
Lo4	√		√				√	√	√	

b- Schedule of assessment



Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions	Week 5, 15	
Researches and reports	Weekly	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	

c- Grading system

Quizzes	Quiz (1)	(10) marks	(50) marks
	Quiz (2)	(10) marks	
Researches and reports	(5) marks		
Attendance	(5) marks		
Mid-term exam	(20) marks		
final exam	(50) marks		
Total	(100		marks

9- List of references:

- a- Course notes** Lecture notes and handouts
- b- Required books** An introduction to engineering ethics
Ronald Schenzinger, Mike Martin, technology philosophy, By:
Dr. Ayoub Abu Dayyeh
- c- Recommended books** New Perspectives in Economic Growth and Technological innovation,
2001, Frederick M Schrar. Indicators
- d- Periodicals, Web sites, etc.** No periodicals are needed.
books.google.com.eg. books

10- Facilities required for teaching and learning:

1. Whiteboard + colored pens/ Data show for presentation
2. Google Classroom
3. E-Learning
4. References in the library

11- Requirements for Disable facilities:

1. Extra assignments
2. Online extra teaching hours.

Course Instructor Dr. Mervat Abd-el-Kader Kaid *Dr. Mervat*
(Head of the Department) Dr. Amara Marye *Amara*
Date 2024/2024



Course Specification

Course Code:	Course Name
ENGR 102	Engineering Drawing & Projection
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Engineering Drawing & Projection
Code	ENGR 102
Credit Hours	2
Lectures	1
Practical/Studio	3
Total	4
Prerequisite	No.
Instructor name/Email	Prof. Eldesouki Eid Eldesouki.eid@sva.edu.eg

C- Professional Information

1- Course core:

Introductory descriptive geometry. Orthographic and pictorial drawing. Sectional views, auxiliary views, and conventions. Dimensioning. Free hand sketching, and both manual and computer-aided drafting

2- Course Learning Objectives:

- 1 Developing a basic understanding of engineering drawing
- 2 Studying the application of engineering drawing
- 3 Analysis of the different problems of Introductory descriptive geometry. Orthographic and



- 3 pictorial drawing. Sectional views, auxiliary views, and conventions.
- 4 Dimensioning. Free hand sketching, and both manual and computer-aided drafting

3- Learning outcomes of the course (LOs):

b. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the basic fundamental in Introductory descriptive geometry. Orthographic and pictorial drawing. Sectional views, auxiliary views, and conventions. Dimensioning. Free hand sketching, and both manual and computer-aided drafting
- Lo2 Evaluates problems of descriptive geometry. Orthographic and pictorial drawing. Sectional views, auxiliary views, and conventions. Dimensioning. Free hand sketching, and both manual and computer-aided drafting
- Lo3 Analyze and interpret Sectional views, auxiliary views, and conventions. Dimensioning.

c. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Conduct models to Dimensioning. Free hand sketching, and both manual and computer-aided drafting

d. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Express the opinion by drawing presentation and flexible model recalling the Introductory descriptive geometry.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO 2. Simulate, analyze and interpret data.
- LO 3 Assess and evaluate findings.
- LO 20 Use contemporary tools to implement engineering design drawings, and presentations.
- LO 29 . Use creative, innovative and flexible thinking.



5. The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.2
2	Lo2	LO.2
3	Lo3	LO.3
4	Lo4	LO.20
5	Lo5	LO.29

6- Contents

Week No.	Topic	Lecture hours	Tutorial hours	Practical Studio hours	LOS
1	Paper standard	1	0	3	Lo2
2	Engineering drawing tools	1	0	3	Lo1, Lo3
3	Tangency	1	0	3	Lo1, Lo2,Lo3
4	Engineering operations in technical drawing	1	0	3	Lo1, Lo2,Lo3
5	Engineering operations in technical drawing	1	0	3	Lo1, Lo2,Lo3
6	Ellipse	1	0	3	Lo1, Lo2,Lo3
7	Isometrics	1	0	3	Lo1, Lo2,Lo3,Lo4
8	midterm				Lo1, Lo2,Lo3,Lo4
9	Isometrics	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
10	Isometrics	1	0	3	Lo1, Lo2,Lo3,Lo4
11	Orthogonal projection	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
12	Orthogonal projection	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
13	Third view	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
14	Sectioning	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
15	Assembly drawing videos	1	0	3	Lo1, Lo2,Lo3,Lo4,Lo5
16	Final Exam		3		Lo1, Lo2,Lo3,Lo4,Lo5



	total	14	0	42	
--	-------	----	---	----	--

7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√			√		√					
Lo2	√			√		√					
Lo3	√			√		√					
Lo4	√			√		√					
Lo5	√			√		√				√	

Notes: • Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8-Student assessment method

a-Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modelling	Cooperative work
Lo1	√			√						
Lo2	√			√						
Lo3	√			√						
Lo4	√			√						
Lo5	√			√					√	

b-Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)



Sheets and Sketches	Every week
Researches and reports	Every week
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

e-Grading system		
Quizzes	10 marks	30marks
Attendance	10 marks	
Sheets and scketches	10 marks	
Mid-term exam	20marks	
Final exam		50marks
total		100 marks

9-List of references:

- **Course notes** Lecture notes and handouts
- **Required books** ENGINEERING DRAWING WITH CAD APPLICATIONS, Arnold, E. and Ostrowsky, O., 1995, London Sydney Aucklang
- **Recommende d books** الرسم الهندسي لطلبة كليات الهندسة والتكنولوجيا للأستاذ الدكتور فتحى الشريف والدكتور سمير الشريف طبعة 1995، كلية الهندسة والتكنولوجيا بالمطرية - جامعة حلوان، القاهرة
- **Periodicals, Web sites, etc** No periodicals are needed.

10-Facilities required for teaching and learning:

Lecturer notes , Internet - Data show - E-Learning Moodle

11-Requirements for Disable facilities:

- Extra assignments.

Course coordinator: Prof. Eldesouki Eid

(Head of the Department) Dr. Amera Marye

Date: 2023/2024



Course Specification

Course Code:	Course Name
ENGR 103	Engineering mechanics 1 (Statics)
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023/2024

B-Basic Information

Title	Statics
Code	ENGR 103
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	No.
Instructor name/Email	Prof. Eldesouki Eid Eldesouki.eid@sva.edu.eg

C- Professional Information

1- Course core:

Fundamentals of mechanics. Equilibrium of practices, forces in space, equivalent systems, equilibrium of rigid bodies, distributed forces, center of gravity, internal actions, analysis of simple structures and machine parts. Friction. Moment of inertia.

2- Course Learning Objectives:

- 1 Developing a basic understanding of mechanics
- 2 Studying the application of statics
- 3 Studying how to improve theoretically and practically.
- 4 Discuss the techniques of environmental engineering.



5

Analysis of the different problems of equilibrium of practices, forces in space, equivalent systems, equilibrium of rigid bodies, distributed forces, center of gravity, internal actions, analysis of simple structures and machine parts. Friction. Moment of inertia.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 identify the Fundamentals of mechanics
- Lo2 analyse data, to deal with center of gravity, internal actions, the distributed forces

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Solve problems concerning friction and moment of inertia
- Lo4 Develop models and theories of equilibrium of rigid bodies
- Lo5 Use formulas to interpret the equivalent systems, simple structures and machine parts.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 identify, formulate basic science and mathematics.
- LO.4 Use statistical analyses and objective engineering judgment to draw conclusions.
- LO.13 Solve complex engineering problems.
- LO.15 Develop and conduct appropriate experimentation.
- LO.20 Use contemporary tools to implement engineering design drawings, and presentations.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.4



3	Lo3	LO.13
4	Lo4	LO.15
5	Lo5	LO.20

6- Contents						
Week No.	Topic	Lecture hours	Tutorial hours	Practical hours	LOS	
1	Fundamentals of mechanics.	2	2	0	Lo1	
2	Equilibrium of practices	2	2	0	Lo1, Lo2,Lo3	
3	Forces in space	2	2	0	Lo1, Lo4	
4	Equivalent systems	2	2	0	Lo1, Lo2	
5	Equilibrium of rigid bodies,	2	2	0	Lo3	
6	Distributed forces,	2	2	0	Lo4	
7	Center of gravity	2	2	0	Lo4	
8	midterm				Lo1, Lo2,Lo3,Lo4	
9	Internal actions	2	2	0	Lo4	
10	Analysis of simple structures and machine parts.	2	2	0	Lo2	
11	Analysis of simple structures and machine parts.	2	2	0	Lo2	
12	Friction.	2	2	0	Lo5	
13	Moment of inertia	2	2	0	Lo5	
14	Moment of inertia	2	2	0	Lo5	
15	Revision	2	2	0	Lo1, Lo2,Lo3,Lo4, Lo5	
16	Final Exam	3			Lo1, Lo2,Lo3,Lo4, Lo5	
	total	28	28	0		



7-The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modelling	Cooperative work
Lo1	✓			✓	✓	✓					
Lo2	✓			✓	✓						
Lo3	✓			✓	✓						
Lo4	✓			✓	✓	✓					
Lo5	✓			✓	✓	✓					

Notes

- The exercises concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8-Student assessment method

a- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modelling	Cooperative work	
Lo1	✓			✓	✓						
Lo2	✓			✓	✓						
Lo3	✓			✓	✓						
Lo4	✓			✓	✓						
Lo5	✓			✓	✓						

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Sheets and Sketches		Every week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)



c- Grading system		
Quizzes	10 marks	30marks
Attendance	10 marks	
Sheets	10 marks	
Mid-term exam	20marks	
Final exam		50marks
total		100rks

9-List of references:

- Course notes
- Required books
- Recommended books
- Periodicals, Web sites, etc

Lecture notes and handouts

Engineering Mechanics Statics Re Hibbeler 12th Edition
Engineering Mechanics Volume 1 Statics J.L. MERIAM
L.G. KRAIGE Virginia Polytechnic Institute and State University
J.N. BOLTON Bluefield State College, 2018

No periodicals are needed.

10- Facilities required for teaching and learning:

Lecturer notes , Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Appropriate teaching design studios including presentation board, data show, lab for modelling
- Google class room
- E- Learning Moodle

Course Instructor:
(Head of the Department)
Date:

Prof. Eldesouki Eid
Dr. Amara Marye
2023/2024



First level courses (preparatory)

Second semester (spring)

No.	Cod	Course Name	Instructor
1	PHYS102	Electricity and magnetism	Dr. Neven Rostom
2	PHYS112	General physics laboratory (2)	Dr. Neven Rostom
3	MATH 102	Calculus 2	Dr Gamal Al-Anany
4	CECE 101	Fundamental to computer programming	Dr. Mohammed El-Ghabushi
5	ENGR 105	Production engineering	Dr Mervat Kaid
6	ENGR 104	Engineering mechanics 2 (Dynamics)	Prof. Eldesouki Aid
7	ENGL 101	Elementary English	Dr. Abdo El-Aziz Ramadan



Course Specification

Course Code:	Course Name
PHY102	Electricity and Magnetism
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Sciences
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Electricity and Magnetism
Code	PHY102
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	PHYS 101
Instructor name/Email	Neven.kamal@sva.edu.eg

C- Professional Information

1- Course core:

Electricity and magnetism; Conductive and insulating materials; an overview of Electric currents with a discussion of models and theories of electric circuits; introduction to Series and parallel combination of resistors, capacitors and inductors.

2- Course Learning Objectives:

- 1 Develop the student basic knowledge of electricity and magnetism.
- 2 Studying the applications of electricity and magnetism in industry.
- 3 Study Ohm's law, Kirchhoff's law, and dielectric constant and its application.
- 4 Differentiate between Conductive and insulating materials.



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the basic fundamental of Electricity and magnetism.
- Lo2 Analyse the properties the Conductive and insulating materials.
- Lo3 Discuss models and theories of electric circuits.
- Lo4 evaluate Series and parallel combination of capacitors to predict the total capacitance
- Lo5 Identify various industrial processes such as the electric boards industry

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Solve the different problem of Series and parallel combination of electric components.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.3 Assess and evaluate findings.
- LO.13 Solve complex engineering problems

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2
3	Lo3	LO.2
4	Lo4	LO.3



5	Lo5	L.O. 3
6	Lo6	L.O.13

6- Contents					
Week No.	Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1	Electricity and magnetism	2	2	0	Lo1
2	Conductive and insulating materials	2	2	0	Lo2
3	Electric currents with a discussion of models and theories of electric circuits	2	2	0	Lo3
4	Series and parallel combination of resistors.	2	2	0	L04, Lo5
5	Series and parallel combination of resistors	2	2	0	L04, Lo5
6	Series and parallel combination of resistors	2	2	0	L04, Lo5
7	R-L-C circuits	2	2	0	Lo5
8	Midterm				Lo1, Lo2, Lo3, lo4, Lo5
9	Dielectric constant	2	2	0	Lo3, lo4, Lo5, Lo6
10	Helmholtz arrangement	2	2	0	Lo3, lo4, Lo5, Lo6
11	Electromotive forces	2	2	0	Lo3, lo4, Lo5, Lo6
12	Kirchhoff's law	2	2	0	Lo3, lo4, Lo5, Lo6
13	Wheatstone Bridge	2	2	0	Lo3, lo4, Lo5, Lo6
14	Resonance in AC circuits	2	2	0	Lo3, lo4, Lo5, Lo6
15	Revision	2	2	0	Lo1, Lo2, Lo3, lo4, Lo5
16	Final Exam		3		Lo1, Lo2, Lo3, lo4, Lo5, Lo6
	total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√	√	√	√	√				√		√
Lo2	√	√	√	√	√				√		√
Lo3	√	√	√	√	√				√		√
Lo4	√		√	√	√	√			√		√
Lo5				√	√	√					
Lo6	√		√	√	√				√		√

Notes: - The research concerns the cooperative work, the discussion, and the presentations.
 • The exercises concerns the brain storming and the problem solving.
 • Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work
Lo1	√	√	√	√				√		√
Lo2	√	√	√	√				√		√
Lo3	√	√	√	√				√		√
Lo4	√		√	√				√		√
Lo5	√			√	√					√
Lo6	√		√	√	√			√		√

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Sheets and Sketches		Every week
Researches and reports		Every week



Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system			
Quizzes	Quiz (1)	5 marks	50marks
	Quiz (2)	5 marks	
Discussions	20%	10 marks	
Sheets and Sketches	50%		
Researches and reports	30%		
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total			100rks

9- List of references:

- Course notes	Lecture notes and handouts
- Required books	-Halliday, David, Fundamentals of physics / David Halliday, Robert Resnick, Jearl Walker.—9th ed., John Wiley & Sons Inc., New York, 2011. - Physics for Scientists and Engineers with Modern Physics, Ninth Edition Raymond A. Serway and John W. Jewett, Jr. USA 2014.
- Recommended books	• Young, Hugh D. Sears and Zemansky's university physics: with modern physics. -- 13th ed. / Hugh D. Young, Roger A. Freedman; contributing author, A. Lewis Ford. Addison-Wesley 2012.
- Periodicals, Web sites, etc	http://www.saunderscollege.cpm/physics http://en.wikipedia.org/wiki/Bernoulli_principle

10- Facilities required for teaching and learning:

Lecturer notes, Physics Lab -Library- Internet - Data show - E-Learning Moodle.

11- Requirements for Disable facilities:

- Extra assignments

Course Instructor: Dr. Neven Rostom
(Head of the Department) Dr. Amara Marye
Date: 2023/2024

Dr. Neven Rostom
Amara



Course Specification

Course Code:	Course Name
PHYS 112	General Physics Laboratory II
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Sciences
Date of department operation:	2008-2009
Date of approval from the Higher Ministry of education	
Date	2023-2024

B-Basic Information

Title	General Physics Laboratory II
Code	PHYS 112
Credit Hours	1 Cr. Hrs.
Lectures	0 Hrs.
Lab	3 Hrs.
Total	3 Hrs.
Prerequisite	Concurrent to PHYS 112
Instructor name/Email	Dr. Neven Rostom

C- Professional Information

1- Course core:

It's a Concurrent Course for (PHYS 102), as to fit all the applications of : electricity (electric fields, including Gauss's law; electric potential; capacitors and resistors; DC circuits), magnetism (sources of the magnetic field, including Ampere's law; induction, including Faraday's law and Lenz's law), and alternating current circuits, as well as introductory material on electromagnetic waves. The laboratory includes experiments illustrating the principles, laws and concepts discussed in the course.



2- Course Learning Objectives: oC

- oC1 The course aims to provide students with the basic concepts of lab of electricity and magnetism.
- oC2 enhances the practical knowledge of physical definitions, units and quantities techniques of the electricity and magnetism
- oC3 This course enables students to understand and apply physical experiments and concepts of electricity and magnetism
- oC4 Studying lab mathematical and physical laws of electricity and magnetism.
- oC5 Understanding of components of electrical circuits.
- oC6 Studying how to discuss and design electric circuits.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Recognize principles of electricity and magnetism lab experiments.
- Lo2 Identify physical quantities and units.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 . Conduct reports to express observations of the experiments
- Lo4 Apply laboratory experiments
- Lo5 Solve physical problems.
- Lo6 Create systematic and methodic approaches in dealing with new problems

e. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- None

4-Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.



- LO.13 Solve complex engineering problems.
LO.14 Apply engineering fundamentals, basic science and mathematics.
LO.18 Conduct techniques and methods of investigation

5-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1
3	Lo3	LO.13
4	Lo4	LO.14
5	Lo5	LO.18
6	Lo6	LO.18

6- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hours	Los
1	- Ohms law	0	0	3	Lo1, Lo2
2	- Combination of resistors	0	0	3	Lo1, Lo2
3	- Capacitors	0	0	3	Lo2, Lo3
4	- Combination of capacitors	0	0	3	Lo3
5	- Quiz I	0	0	3	Lo3, Lo4
6	- Dielectric constant	0	0	3	Lo2, Lo3, Lo4
7	- Combination of inductors	0	0	3	Lo3, Lo4, Lo5, Lo6
8	Midterm exam				Lo2, Lo4
9	Inductors in AC circuits	0	0	3	Lo2
10	- Helmholtz arrangements	0	0	3	Lo3, Lo4
11	- Helmholtz arrangements	0	0	3	Lo3, Lo4
12	- Dielectric constant	0	0	3	Lo1, Lo2, Lo3
13	R-L-C circuits+quize2	0	0	3	Lo1, Lo3, Lo4 Lo5, Lo6
14	Wheatstone bridge	0	0	3	Lo1
15	Final lab revisions	0	0	3	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
16	Final exam				Lo1, Lo2, Lo3, Lo4 Lo5, Lo6
Total hours		0	0	39	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1				✓	✓	✓	✓					✓	
Lo2				✓	✓	✓	✓					✓	
Lo3				✓	✓	✓			✓				
Lo4					✓							✓	
Lo5					✓								
Lo6					✓								

Notes:

- Online virtual lab is used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment											
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1	✓	✓	✓			✓	✓	✓	✓			
Lo2	✓	✓	✓			✓	✓	✓	✓			
Lo3	✓	✓	✓			✓		✓	✓		✓	
Lo4	✓	✓	✓					✓	✓			
Lo5			✓					✓				
Lo6			✓					✓			✓	

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions		Every week for any student
Sheets and Sketches		Weekly
Practical modelling		Week (5, 13)
Attendance		weekly



Mid-term exam	Week (8)
final exam	Week (16)

c- Grading system

Quizzes	Quiz (1)	(5) marks	(50) marks
	Quiz (2)	(5) marks	
Discussions	5 marks	(20) marks	
reports	5 marks		
Practical modeling	10 marks		
Attendance		(10) marks	
Mid-term exam		(10) marks	
final lab exam		(30) marks	
Final Sheet		(20) marks	
Total		(100) marks	

Notes:

- Student have to take written not based on the instructor's lecture
- Submission must be a periodical technical presentation.
- Final submission is A1 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- group work is allowed.

9- List of references:

- **Course notes** The instructor notes and lab handouts.
- **Required books** 1- Physics 2 lab book.
- **Recommended books** - None.
- **Periodicals, Web sites, etc.** - None.

10- Facilities required for teaching and learning:

- 6- White board + colored pens
- 7- Data show for presentation
- 8- Google Classroom
- 9- References in library

11- Requirements for disabled facilities:

3. Extra assignments
4. Online extra teaching hours

Course Instructor Dr. Neven Rostom
Head of the Department Dr. Amara Marye
Date 2023/2024

Dr. Neven Rostom
Amara



Course Specification

Course Code:	Course Name
Math102	Calculus II
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Calculus II
Code	Math102
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	Math 101
Instructor Name/Email	Dr. Gamal El -Anany gamalanani75@gmail.com

C- Professional Information

1- Course core:

Definite and indefinite integrals. The fundamental theorem of calculus and applications of the definite integral. Area, arc length, volumes and surfaces of revolution. Differentiation and integration of Exponential, Logarithmic, Trigonometric and other Transcendental functions. Techniques of integration. Numerical integration. Improper integrals

2- Course Learning Objectives:

- 1 Introducing the concepts of indefinite integrals.
- 2 Teaching the students the fundamental theorem of calculus.
- 3 Providing students with applications of the definite integral.



- 4 Providing students with numerical integration, improper integrals.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain concepts and theories of mathematics and sciences, appropriate to mathematics (II)
- Lo2 Demonstrate methodologies of solving engineering problems, data collection and interpretation
- Lo3 Select appropriate solutions for engineering problems based on analytical thinking

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Apply knowledge of linear algebraic equations, iterative methods, and infinite series to solve engineering problems.
- Lo5 Prepare and present technical reports about application of matrices to solve engineering problems.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Communicate effectively in tutorial class room with the demonstrator.
- Lo6 Effectively manages tasks, time, and resources, when solving mathematics problems, and in exams.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data
- LO.3 Assess and evaluate findings.
- LO.14 Apply engineering fundamentals, basic science and mathematics.
- LO.26 Prepare design reports. Project briefs and documents.
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1



2	Lo2	LO.2
3	Lo3	LO.3
4	Lo4	LO.14
5	Lo5	LO.26
6	Lo6	LO.28

6- Contents					
Week No.	Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1	Definite and indefinite integrals	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
2	The fundamental theorem of calculus	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
3	The integral by substitutions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
4	Rules of integral	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
5	integration of Exponential, Logarithmic, Trigonometric and other Transcendental functions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
6	Techniques of integration	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
7	The integral by parts	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
8	midterm				Lo1, Lo2, Lo3, Lo4, Lo5
9	The integral by partial fractions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
10	Improper integrals	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
11	Numerical integration	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
12	Area, arc length	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
13	volumes and surfaces	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
14	Applications of the integration	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5,Lo6
15	Revision	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
16	Final Exam		3		Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
	total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	✓			✓					✓		
Lo2	✓			✓	✓	✓			✓		
Lo3	✓			✓	✓	✓			✓		
Lo4	✓			✓	✓	✓			✓		
Lo5	✓			✓	✓	✓			✓		
Lo6	✓			✓					✓		

Notes:

- The exercises concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work	
Lo1	✓			✓				✓			
Lo2	✓			✓	✓			✓			
Lo3	✓			✓	✓			✓			
Lo4	✓			✓	✓			✓			
Lo5	✓			✓	✓			✓			
Lo6	✓			✓				✓			

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
reports		Week (6)
Sheets and Sketches		Every week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system



Quizzes	Quiz (1)	5 marks	30marks
	Quiz (2)	5 marks	
Sheets and Sketches reports	50%	10 marks	
	25%		
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total			100rks

9- List of references:

- **Course notes** **Lecture notes and handouts**
- **Required books**
 - Mary Attenborough, Engineering Mathematics, McGraw - HILL Book Company Europe, 1994.
 - Anthony croft, Robert Davison, Engineering Mathematics A modern Foundation for Electrical, Electronic & Control Engineering, Addison - Wesley - Publishing Company, 1992
- **Recommended books** Swokowski, E, Olinick ,M and Pence, D., Calculus, PWS Publishing Company - Boston, 1994
- **Periodicals, Web sites, etc** **No periodicals are needed.**
 Web Sites related to Mathematics and Mathematical engineering as:
www.math.hmc.edu,
www.tutorial.math.lamar.edu,
www.web.mit.edu

10- Facilities required for teaching and learning:

- Appropriate teaching class room including presentation board, data show.
- Google class room
- E- learning Moodle
- Library- Internet

11- Requirements for Disable facilities:

- Extra assignments

Course coordinator: Dr. Gamal El-Anany
(Head of the Department) Dr. Amera Marye
Date: 2023/2024



Course Specification

Course Code:	Course Name
CECE 101	Fundamentals to Computer Programming
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic science
Date of course operation:	2008-2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Fundamentals to Computer Programming
Code	CECE 101
Credit Hours	3h
Lectures	2h
Tutorial	-
Practical	3h
Total	5h
Prerequisite	---
Instructor name/Email	Dr. Mohamed El Ghaboushi Mohamed.ElGhaboushi@sva.edu.eg

C- Professional Information

1. Course core

2- Course Learning Objectives:

- oc 1 Addressing the computer systems.



- oc 2 Informing the students by the number systems. And the basic math concepts.
- oc 3 Teaching the student how to solve problems and how to write an algorithm.
- oc 4 Introducing the application of Mat lab programs.
- oc 5 Students should be able to Programming using Mat lab.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify computer systems, Programming process and algorithms...
- Lo2 Display M-File Scripts and Functions, Input and output to a script file.
- Lo3 Identify Learn Control flow part (1), Control flow part (2)

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Generate matrixes.
- Lo5 Array operations and Linear equations.
- Lo6 Practice Basic plotting: 2D, 3D plotting.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

-None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data
- LO.15 Develop and conduct appropriate experimentation.
- LO.16 Apply engineering design processes to make solution.
- LO.24 Generate working drawings and workshop drawings matching to the designs.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2



3	Lo3	LO.2
4	Lo4	LO.15
5	Lo5	LO.16
6	Lo6	LO.24

6- Course Content and the relation between the course contents and the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	course LOs
1	Introduction to computer systems	2	-	3	Lo1
2	Number systems	2	-	3	Lo2
3	Programming process and algorithms	2	-	3	Lo1, Lo3
4	Introduction to Mat-lab	2	-	3	Lo1, Lo4
5	Array operations	2	-	3	Lo3
6	M-File scripts and functions	2	-	3	Lo4
7	Matrix of Mat-lab	2	-	3	Lo2
8	Mid –Term Exam				Lo1, Lo2, lo3, Lo4
9	Input/output to script file	2	-	3	Lo4
10	Control flow (Select statement)	2	-	3	Lo5
11	Control flow (repeat statements)	2	-	3	Lo5
12	Switch case	2	-	3	Lo6
13	Basic plotting	2	-	3	Lo6
14	Applications	2	-	3	Lo6
15	Graphical user interface in Mat lab	2	-	3	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
16	Final Exam				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
	Total hours	28	-	42	

7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling



Attendance	(5) marks	
Mid-term exam	(20) marks	
final exam		(50) marks
Total		(100) marks

9- List of references:

- Course notes
- b-Required books
- c-Recommended books
- d-Periodicals, Web sites, etc.

Instructor notes and lecture handouts.

None.

None.

10- Facilities required for teaching and learning:

- Appropriate lecture hall including presentation board, data show
- Appreciate laboratory fitted with computer labs.
- Google classroom
- E- learning

11- Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments

Course Instructor:

Dr. Mohamed El-Ghabushi

Head of the Department

Dr. Amara Marye

Date:

2023/2024

Mohamed El-Ghabushi
Amara



Course Specification

Course Code:	Course Name
ENGR 105	Production Engineering
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date:	2023-2024

B-Basic Information

Title	Production Engineering
Code	ENGR105
Credit Hours	1 Cr. Hrs.
Lectures	1 Hrs.
Work shop	1 Hrs.
Total	2 Hrs.
Prerequisite	-
Instructor name/Email	Mervat Abdelkader Kaid mervat.kaeed@sva.edu.eg

C- Professional Information

1- Course core:

This module is designed to provide freshmen students with an understanding of the traditional machine tools used in forming and machining processes: turning, milling, grinding, drilling, boring, shaping, planing, shearing, bending, and rolling machines, as well as welding and casting equipment, wood working, and polymeric machines. An extensive coverage of health and safety into workshop practice, focusing on hazards control, safety precautions, and industrial hygiene, to develop a responsible awareness of hazards.



2- Course Learning Objectives: oC

- oC1 Connect the student to the field of applications especially the formation and the machining processes.
- oC2 Provide the student with the safety awareness and precautions concerns the industrial process.
- oC3 Study the effect of various factors (type of metal, operating conditions, etc....) on the forming or machining processes.
- oC4 Applying different techniques in forming and machining processes to obtain products with highly accurate surfaces in shapes, high specifications and high efficiency.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the technological properties of the basic engineering materials with emphasis on ferrous and nonferrous metals.
- Lo2 Discuss the basic methods of manufacturing relative to casting, welding, metal forming, and machining.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Use basic workshop tools safely.
- Lo4 Produce various applications to reach the high qualification of the products.
- Lo5 Conduct researches to differentiate between the properties materials in the industry process.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.8 Interpret adequate knowledge of manufacturing relative to casting, welding, metal forming, and machining.



- LO.14 Apply engineering fundamentals, basic science and mathematics.
LO.15 Develop and conduct appropriate experimentation.
LO.18 Conduct techniques and methods of investigation

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.8
3	Lo3	LO.14
4	Lo4	LO.15
5	Lo5	LO.18

6- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	General introduction to production engineering.	1	0	1	Lo2, Lo3
2	A general of metal forming and identification of the basic methods used in the metal forming process.	1	0	1	Lo2, Lo5
3	Introduction to welding, the most important methods used in the process of welding metals.	1	0	1	Lo2, Lo3, Lo5
4	Electric arc welding.	1	0	1	Lo2, Lo3, Lo5
5	Oxy-acetylene welding.	1	0	1	Lo2, Lo3, Lo5
6	Filings.	1	0	1	Lo2, Lo3, Lo5
7	Carpentry.	1	0	1	Lo2, Lo3, Lo5
8	Midterm Exam (MT)				Lo2, Lo3
9	Introduction to metal cutting, cutting tools.	1	0	1	Lo1, Lo2, Lo3, Lo3, Lo5
10	Cutting forces, cutting process mechanism, Mechanism of Chip formation.	1	0	1	Lo1, Lo2, Lo3, Lo3, Lo5
11	Cutting forces, cutting process mechanism, Mechanism of Chip formation.		0	1	Lo1, Lo2, Lo3, Lo3, Lo5
12	Turning, & Cutting fluids,	1	0	1	Lo1, Lo2, Lo3,



	Machining Operation and Types of Machining Tools				Lo3, Lo5
13	The different operations that can be done on a lathe machine.	1	0	1	Lo1, Lo2, Lo3, Lo3, Lo5
14	Cutting conditions and cutting time on the lathe.	1	0	1	Lo1, Lo2, Lo3, Lo3, Lo5
15	Solving some exercises for calculating cutting conditions cutting time, and Revision	1	0	1	Lo1, Lo2, Lo3, Lo3, Lo5
16	Final Written Exam (Final)				Lo2, Lo3
Total hours		13	0	13	

7-The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials; sheets/ sketches	projects	Problem-solving	Brainstorming	Practical: lab work shop discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling	
Lo1						√	√						
Lo2	√					√		√			√		
Lo3	√					√		√			√		
Lo4						√						√	
Lo5						√		√					

Notes

- Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.



8-Student Assessment Method

a. assessment method and its relation to the Los of the course										
Course LOs	Tools of assessment									
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab L work shop	Oral exam	discussions	Reports/ researches	presentation
Lo1						✓				
Lo2	✓	✓	✓			✓		✓	✓	
Lo3	✓	✓	✓			✓		✓	✓	
Lo4						✓				
Lo5						✓			✓	

b. Schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions		Week 5, 15
Researches and reports		Weekly
practical		Weekly
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(50) marks
	Quiz (2)	(5) marks	
Researches and reports		(5) marks	
Work shop attitude		(10) marks	
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(50) marks	
Total			(100) marks



9-List of references

- **Course notes** Lecture notes and handouts
- **Required books**
 - Metal Cutting and Forming: Machining Techniques and Applications Paperback – October 5, 2020
by Anup Goel (Author)
 - Advanced Metal Forming and Cutting Tools Theory and Practices Hardcover – 1 January 2019
by NILA FERRER (Author)
- **Recommended books** Theory of Metal Forming and Metal Cutting Paperback – 1 January 2018
by K. P. Sinha (Author), S. C. Prasad (Author), Dhanpat Rai and Sons (Contributor)
- **Periodicals, Web sites, etc.** No periodicals are needed.
Mechanical Engineering, <http://books-library.net>
<https://www.noor-book.cpm>

10- Facilities required for teaching and learning:

1. Whiteboard + colored pens
2. Data show for presentation
3. Google Classroom
4. E-Learning
5. References in the library

11- Requirements for Disable facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor Dr. Mervat Abdelkader Kaid
(Head of the Department) Dr. Amra Marey
Date 2023/2024

Dr. Mervat
Amra



Course Specification

Course Code:	Course Name
ENGR 104	Engineering mechanics 2 (Dynamics)
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Dynamics
Code	ENGR 104
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	ENGR 103, MATH 101.
Instructor name/Email	Eldesouki.eid@sva.edu.eg

C- Professional Information

1- Course core:

Kinematics and kinetics of a particle, system of particles, and rigid bodies. Energy and momentum methods. Engineering applications.

2- Course Learning Objectives:

- 1 Developing a basic understanding of mechanics
- 2 Studying the application of Kinematics
- 3 Discuss the techniques of environmental engineering.
- 5 Analysis of the different problems of Kinematics and kinetics of a particle, system of particles, and rigid bodies. Energy and momentum methods. Engineering applications.



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the Forms of motion, Energy, Energy conversion.
- Lo2 Formulate the Fundamentals of kinematics and Equations of motion, velocity, energy and acceleration

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Solve problems of the Erratic motion, Curvilinear motion, and Energy causes motion.
- Lo4 Conduct researches and analyze data, to deal with Rectilinear motion.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

-None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.13 Solve complex engineering problems.
- LO.18 Conduct techniques and methods of investigation.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2
3	Lo3	LO.13
4	Lo4	LO.18



6- Contents:				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- Fundamentals of kinematics	2	2	0	Lo1, Lo4
2- equation of motion	2	2	0	Lo1, Lo2, Lo3, Lo4
3- velocity and acceleration	2	2	0	Lo1, Lo2, Lo3, Lo4
4- erratic motion	2	2	0	Lo1, Lo2, Lo3, Lo4
5- erratic motion	2	2	0	Lo1, Lo2, Lo3, Lo4
6- successive behaviors of motions	2	2	0	Lo1, Lo2, Lo3, Lo4
7- rectilinear motion	2	2	0	Lo1, Lo2, Lo3, Lo4
8- midterm				Lo1, Lo3, Lo4
9- curvilinear motion	2	2	0	Lo1, Lo2, Lo3, Lo4
10- energy causes motion	2	2	0	Lo1, Lo2, Lo3, Lo4
11- forms of Energy	2	2	0	Lo1, Lo2, Lo3, Lo4
12- energy conversion	2	2	0	Lo1, Lo2, Lo3, Lo4
13- energy conversion	2	2	0	Lo1, Lo2, Lo3, Lo4
14- energy conversion	2	2	0	Lo1, Lo2, Lo3, Lo4
15- Revision	2	2	0	Lo1, Lo2, Lo3, Lo4
16- Final Exam		3		Lo1, Lo3, Lo4
total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches / reports	Modeling	Cooperative work
Lo1	√			√	√	√			√		
Lo2				√					√		
Lo3	√			√	√	√					
Lo4	√			√	√	√			√		

Notes

- The exercises concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work	
Lo1	√			√	√			√			
Lo2				√				√			
Lo3	√			√	√			√			
Lo4	√			√	√			√			

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Sheets and Sketches reports		weekly
Attendance		weekly
Mid-term exam		weekly
final exam		Week (8)
		Week (16)

c. Grading system



Quizzes	10 marks	30marks
Attendance	10 marks	
Reports	10 marks	
Mid-term exam	20marks	
Final exam		50marks
total		100 marks

9- List of references:

- **Course notes** **Lecture notes and handouts**
- **Required books** Engineering Mechanics dynamics Re Hibbeler 12th Edition
- **Recommended books** Engineering Mechanics Volume 1 dynamics J.L. MERIAM
L.G. KRAIGE Virginia Polytechnic Institute and State University
J.N. BOLTON Bluefield State College, 2018
- **Periodicals, Web sites, etc** **No periodicals are needed.**

10- Facilities required for teaching and learning:

Lecturer hall, Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Extra assignments

Course Instructor: Prof. Eldesouki Eid
(Head of the Department) Dr. Amara Marye
Date: 2023/2024



Course Specification

Course Code:	Course Name
ENGL 101	Elementary English
A- Affiliation	
Relevant program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the program:	Architecture engineering and design, Civil engineering, Electrical engineering
Department offering the course:	Basic Science
Date of course operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Elementary English
Code	ENGL 1 01
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	-
Instructor name/Email	Abdelaziz.ramadan@sva.edu.eg

C- Professional Information

- 1- Course core:** (Note: General description in the form to be used for the Bulletin or Handbook should be attached):

Develops proficiency in critical expository writing, critical reading and greater fluency in expression. Focuses on the writing process with an emphasis on developing the student's voice, organizing and developing ideas independently within the context of academic writing. Introduces library research and use of sources. Introductory level English.

2- Course Learning Objectives:

- 1 Enabling students to read and understand passages about the field of management and accounting.
- 2 Developing the proficiency in English language writing process and critical expository writing.
- 3 Preparing the student to demonstrate coherent texts within common college level forms

3- Learning outcomes of the course (LOs):



a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 evaluate and choose appropriate texts for citation
- Lo2 cite effectively and properly, conforming to academic expectations concerning paraphrase, quotation, attribution, and bibliographical forms
- Lo3 Search for specific topics, develop an argument, and organize supporting details.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Generate ideas by using critical reading and informal writing.
- Lo5 Revise and improve texts.
- Lo6 Make academic writing articulate calling for a process of thinking.
make informed choices about accent and style of speech, using one's reading as a resource for rhetorical models
- Lo7

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

-None

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.3 Assess and evaluate findings.
- LO.6 Define standards, quality guidelines conforming to academic expectations concerning paraphrase, quotation, attribution, and bibliographical forms
- LO.15 Develop and conduct appropriate experimentation
- LO.18 Conduct techniques and methods of investigation

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.3
2	Lo2	LO.6
3	Lo3	LO.6
4	Lo4	LO.15
5	Lo5	LO.15



6	Lo6	LO.18
7	Lo7	LO.18

6- Contents

Week No.	Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1	Introduction to English language basic.	2	1	0	Lo4, Lo5, Lo7
2	Nouns, verbs, adjectives and pronouns.	2	1	0	Lo2, Lo7
3	Sentence structure & sentences types.	2	1	0	Lo2, Lo7
4	Present simple, present continues & present perfect.	2	1	0	Lo2, Lo7
5	The past simple, past continuous and past perfect.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo, Lo7
6	Future tens, Future simple, Future continuous & Future perfect.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
7	State verbs and action verbs.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
8	Midterm				Lo1, Lo2, Lo3, Lo4, Lo5, Lo7
9	Nouns & Pronouns.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
10	Tenses.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
11	Ability: can, could and be able to.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
12	Permission: can, may, could and be allowed to.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
13	Possibility and certainty : may, might, could and must.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
14	The clock.	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
15	Revision	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
16	Final Exam		3		Lo1, Lo2, Lo3, Lo4, Lo5, Lo7
	total	28		14	0



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√	√	√	√					√		
Lo2	√			√							
Lo3	√			√					√		
Lo4	√			√					√		
Lo5	√	√	√	√							
Lo6	√			√					√		
Lo7	√	√	√	√					√		

Notes: • Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a-Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modeling	Cooperative work
Lo1	√	√	√	√				√		
Lo2	√			√						
Lo3	√			√				√		
Lo4	√			√				√		
Lo5	√	√	√	√						
Lo6				√				√		
Lo7	√	√	√	√				√		

b-Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Presentations and Movies		
Sheets and Sketches		Every week
Researches and reports		Every week
Attendance		weekly
Mid-term exam		Week (8)



final exam

Week (16)

c-Grading system			
Quizzes	Quiz (1)	5 marks	20marks
	Quiz (2)	5 marks	
Discussions	5 marks	15 marks	
Sheets and Sketches	5 marks		
Researches and reports	5 marks		
Attendance	5 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total	100 marks		

9- List of references:

- **Course notes** Lecture notes and handouts
- **Required books** Essential References (For students' use)
The English Language department implements two learning management systems, namely:
- **Recommended books**
 - Dutch Journal of Applied Linguistics
 - ELT Journal, Oxford University Press
 - International Journal of Applied linguistics
 - International Journal of Research and Practice in Interpreting
 - Journal of English Language Teaching- FTP Directory Listing
 - Journal of Clinical Linguistics & Phonetics
 - Journal of the International Phonetics Association
 - Second Language Research, University Press
 - Studies in Second Language Research, University Press
 - The Journal of Applied Linguistics
- **Periodicals, Web sites, etc**
 - Digital Learning Platform for Oxford University Press
www.Oxfordlearn.com
 - iTools for Q: Skills for Success (A digital reference for the book)
 - Randall's ESL Cyber Listening Lab
 - <http://www.esl-lab.com/>
 - <http://ud.edu.sa>
 - <http://ezp.ud.edu.sa/menu>
 - <http://library.ud.edu.sa>
 - <http://dictionary.cambridge.org/dictionary/british/criterion?q=criteria>
 - <http://oxforddictionaries.com/words/the-oxford-english-dictionary>

10- Facilities required for teaching and learning:

Electronic Materials, Web Sites etc



- Language laboratories
- Blackboard, E-Podium and smart board
- Library- Internet - Data show - E-Learning Moodle.

11- Requirements for Disable facilities:

- Extra assignments

Course Instructor: Dr. Abd El-Aziz Ramadan
(Head of the Department) Dr. Dr. Amera Marye
Date: 2023/2024



Second level courses

First semester (Fall)

No.	Cod	Course Name	Instructor
1	ARCH 201*	Architecture drawing	Dr. Nadia Ahmed
2	ARCH 205*	Building construction 1	Ass. Prof. Ahmed Hanafi
3	ARCH 211*	Visual training	Dr. Helmy El-Tayar
4	CVEE350	Structural analysis 1	Dr. Mohamed Hamdy El-feaky
5	ENGR 203	Strength and testing of materials	Ass. Prof Hani Ibrahim
6	MATH 301	Probability and statistics	Dr Gamal Al-Anani
7	ENGL 102	Lower intermediate English	Dr. Abd El-Aziz Ramadan



Course Specification

Course Code: ARCH 201	Course Name Architecture Drawing
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of Education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Architectural Drawing	
Code	ARCH 201	
Credit Hours	2 Cr. Hrs.	Note: 3 effective hrs. of the studio = 1 credit hr.
Lectures	1 Hrs.	
Studio	5 Hrs.	
Total	6 Hrs.	
Prerequisite	-	
Instructor name/Email	Dr Nadia Ahmed Mohammed Nadya.ahmed@sva.edu.eg	

C- Professional Information

1- Course core:

The course aims to provide students with the technical and observational skills of drawing in a variety of media by studying the main principles of architectural drawings, the skills and techniques of architectural drawings, and the forms and contents of architectural drawings. The course enables students to design and draw small and simple architectural projects that compose of one building, such as a houseman small rest chalet, a small restaurant, a public cafeteria etc.

2- Course Learning Objectives: oC

- oC1 Understanding the role and principles of architectural drawing including tools, techniques, architectural elements, and different types of architectural drawings.
- oC2 Enable students to apply the knowledge and produce different drawings of a small project
- oC3 Training students on utilizing different techniques of manual presentation of drawings (water color, ink, marker, and pencil presentation) with practicing neatness and aesthetics.
- oC4 Enhancing students' ability in imagination, creativity, and problem-solving.
- oC5 Enable the students to work in stressful environments and within constraints, and manage tasks, time and resources effectively.
- oC6 Building student's capabilities in conducting research and investigation using various techniques and methods of collecting and analyzing data



3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O5 Gain students' scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning

4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O1	oC4
O5	oC6
O6	oC1, oC2, oC3, oC5

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the principles of architectural drawing including tools, techniques, architectural elements, and different types of architectural drawings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Produce and present architectural drawings to apply the basic drawings of architectural projects that satisfy technical requirements as well as neatness and aesthetics.
- Lo3 Produce 3D models to develop the imagination skills.
- Lo4 Produce researches to recognize several basic data concerning the architectural drawings.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work in stressful environments and within constraints, and manage tasks, time and resources effectively.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- LO28 Communicate effectively, graphically, verbally and in writing with a range of audiences
- LO30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
- LO.31 Practice self-learning and other learning strategies.
- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning



7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO21, LO32
3	Lo3	LO.28
4	Lo4	LO.31
5	Lo5	LO.30

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	Studio hr.	Los
1	Introduction - The definition& importance of architectural drawing/graphic - The architectural drawing tools	1	0	5	Lo1, Lo2
2	- The different types of architectural drawing	1	0	5	Lo1, Lo2, Lo5
3	- How to draw the ground floor plan and its elements - How to take measurements for a lecture room - Research on Doors and windows	1	0	5	Lo1,Lo2, Lo4, Lo5
4	- How to draw and organize the furniture in the plan - Research on furniture	1	0	5	Lo1,Lo2, Lo4, Lo5
5	Drawing the elevations and its elements -Quiz 1	1	0	5	Lo1,Lo2, Lo5
6	- Drawing the section and its elements	1	0	5	Lo1,Lo2, Lo5
7	- Drawing the layout and its elements	1	0	5	Lo1,Lo2, Lo5
8	Midterm exam				Lo1,Lo2, Lo5
9	- How to draw the isometric of the building	1	0	5	Lo3
10	- -Architectural presentation technique	1	0	5	Lo2
11	- Architectural presentation techniques - Quiz 2	1	0	5	Lo2
12	- Developing the project	1	0	5	Lo1,Lo2,Lo3, Lo5
13	- Developing the project	1	0	5	Lo1,Lo2,Lo3, Lo5
14	- Semi-final submission	1	0	5	Lo1,Lo2,Lo3, Lo5
15	- Final submission of the project	1	0	5	Lo1,Lo2,Lo3, Lo5
16	Final exam				Lo1,Lo2,Lo3, Lo5
Total hours		13	0	70	



9- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials: sheets/sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√		√				√	√		√	√
Lo2	√	√	√		√		√				√		
Lo3	√	√	√		√		√			√			√
Lo4	√	√	√				√		√	√			
Lo5		√	√				√			√			

Notes

- Discussions and cooperative work appear in the researches.
- Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.

10- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√						
Lo2	√	√	√	√	√					√	
Lo3	√	√	√	√	√						√
Lo4	√	√	√	√	√						
Lo5	√	√	√	√	√						

b- Schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Presentations	Every week f- any student	
Sheets and Sketches	Weekly	
Researches and reports	Week (3,4)	
the Projects	Semi-Final	Week (14)
	Final	Week (15)
Practical modelling	Week (9)	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	



c- Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(25) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modelling	(10) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

11- List of references:

- a- Course notes**
 - Lecture presentations and handouts
- b- Required books**
 - Callender, John H., and De Chiara J., Time Saver Standards for Architectural Data, McGraw Hill Book Company, New York, (1974).
 - Neufert, Ernst and Peter, Neufert Architects' Data, Wiley-Blackwell , 2012)
 - Francis D. K. Ching, Architectural Graphics, 5th Edition, Wiley (November 23, 2009)
 - Thames&Hudson, Architects Sketchbooks - The Creative Process , 2019.
- c- Recommended books**
 - None
- d- Periodicals, Web sites,**
 - None

12- Facilities required for teaching and learning:

1. Studios
2. Whiteboard + colored pens+ Data show for presentation
3. Google Classroom
4. E-Learning
5. References in the library

13- Requirements for Disable facilities:

1. Extra assignments
2. Online extra teaching hours

Course Instructor	Dr Nadia Ahmed	
program coordinator	Dr Nadia Ahmed	
Head of the Department	Dr Fahima El-Shahed	
Date	2023/2024	



Course Specification

Course Code:	Course Name
ARCH 205	Building Construction, I

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Building construction, I	
Code	ARCH 205	
Credit Hours	2 Cr. Hrs.	
Lectures	1 Hrs.	Note: 3 effective hrs. of the studio = 1 credit hr.
Studio	5 Hrs.	
Total	6 Hrs.	
Prerequisite	N/A	
Instructor name/Email	Ass. Prof. Ahmed Hanafy	

C- Professional Information

1- Course core:

The course aims to clarify the main elements of the building, building materials, and different building construction systems (traditional and new systems) and to train the student to draw the construction details through the study: Loads affecting the building, building methods (bearing walls, skeleton structures) and structural elements of the building, wall thickness and bonds, openings, lintels and arches, vaults and domes.

2- Course Learning Objectives: oC

- oC1 Introducing the basics and the standards of building construction vocabularies and drafting symbolism.
- oC2 Covering the data concerning the Building systems of construction.
- oC3 Studying Load-bearing walls & skeleton construction and bearing walls.
- oC4 Studying Brick bonding and its types (Brick English & Flemish bond).
- oC5 Studying Building with stones and Arches.
- oC6 Prepare the student to produce professional working drawings.



3- Program objectives served by the course:

- O5 Preparing the students to conduct professional drawings related to the standards and the legislations.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O9 Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.
- O11 Provide students with the skills to conduct scientific research

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O5, O6, O11
oC2	O5, O6, O11
oC3	O5, O6, O9, O11
oC4	O5, O6, O9, O11
oC5	O5, O6, O11

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the building systems of construction.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Produce researches to reach the latest technologies of the building systems of construction and the materials used in it.
- Lo3 Draw and present building construction drawings.
- Lo4 Conduct physical and multimedia modeling

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work in stressful conditions.



6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles
- LO.24 Generate working drawings and workshop drawings matching to the designs.
- LO28 Communicate effectively, graphically, verbally and in writing with a range of audiences
- LO30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
- LO.31 Practice self-learning and other learning strategies.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.6, LO31
3	Lo3	LO24
4	Lo4	LO.28
5	Lo5	LO30

8- Course Content

Week No.	Topic	Lecture hr.	Lab hr.	Studio hr.	LOs
1	Introduction, course overview.	1	0	5	Lo1
2	Architectural icons	1	0	5	Lo1, Lo3, Lo5
3	Building system in architecture	1	0	5	Lo1, Lo3, Lo5
4	Load-bearing walls & skeleton construction	1	0	5	Lo1, Lo3, Lo5
5	Bearing walls	1	0	5	Lo1,Lo2 Lo3,Lo4 Lo5
6	Brick bonding	1	0	5	Lo1, Lo3, Lo5
7	Revision	1	0	5	Lo1, Lo3, Lo5
8	Midterm				Lo1, Lo3, Lo5
9	Brick English & Flemish bond	1	0	5	Lo1, Lo3, Lo5
10	Building with stones	1	0	5	Lo1, Lo2, Lo3, Lo5
11	Arches	1	0	5	Lo1,Lo2, Lo3, Lo5
12	Skeleton construction	1	0	5	Lo1, Lo3, Lo5
13	Plan and section details	1	0	5	Lo1, Lo2, Lo3,Lo4, Lo5
14	Final submission of portfolio	0	0	5	Lo1, Lo3, Lo5
15	Final exam				Lo1, Lo3, Lo5
Total hours		12	0	65	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√	√	√		√	√	√			√	√
Lo2		√	√	√	√				√	√			
Lo3		√	√								√		
Lo4		√	√	√	√					√			√
Lo5		√	√	√	√		√				√	√	√

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	quizzes	Mid -term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/researches	presentation	modeling	
Lo1	√	√	√	√	√			√	√		√	
Lo2									√			
Lo3	√	√	√	√	√					√		
Lo4					√						√	
Lo5	√	√	√	√	√			√	√	√	√	

b. Time schedule of assessment

Quizzes/ Class works		Every week for any student
Discussions		Every week for any student
Presentations		Week (5,10)
Sheets and Sketches		Weekly
Researches and reports		Week (5, 10,11,13)
The Projects	Semi Final	Week (13)
	Final	Week (14)
Practical modelling		Week (5, 13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)



c. Grading system			
Reports	(2)	(5) marks	(40) marks
Classwork	(10) %	(15) marks	
Project (Semi-final)	(5) %		
Project (Final)	(15) %		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

a. Course notes

b. Required books

Lecture presentations and handouts

- انشاء المباني أ.م. د/ احمد حنفي (دار الكتب والوثائق المصرية رقم الإيداع: 7993/2016)
- انشاء المباني 1 د خالد الليثي
- الموسوعة الهندسة المعمارية م/ عبد اللطيف أبو العطا البقري
- تشييد المباني د فاروق عباس حيدر و م/ عمر فاروق حيدر
- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
- Architects Guide
- Materials for Architects and Builders
- Josep Ferrando , **Architectural Material & Detail Structure Concrete**, UK , 2019.
- Fernando Perez ,**Architectural Material & Detail Structure Metal**, UK,2019
- Heungchae Jung ,**Details Architecture Annu Facility**) , A&C&Publishing Co.Ltd ,2019.

c. Recommended books

d. Periodicals, Web sites, etc.




- None.

12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Google Class Room
5. E-Learning
6. References in library

13-Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours

Course Instructor:	Ass. Prof. Ahmed Hanafy	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023/2024	



Course Specification

Course Code:	Course Name
ARCH 211	Visual Training

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	Visual Training	
Code	ARCH 211	
Credit Hours	2 Cr. Hrs.	Note: 3 effective hrs. of the studio = 1 credit hr.
Lectures	1 Hrs.	
studio	3 Hrs.	
Total	4 Hrs.	
Prerequisite	N/A	
Instructor name/Email	Dr.Helmy El Tayar Magiclne71@gmail.com	

C- Professional Information

1- Course core:

The task of the course is forming observational skills (including a sense of proportion, forms, the effects of light in space, sensitivity to beauty), improving artistic expression, rapid formal synthesis and recording spatial images through sketching. Emphasis is placed upon the skills of imagination using pen and pencil. This course includes developing students' free hand skill as well as mastering other drawing techniques using different other tools and equipment. With emphasis of using light and shadow in architectural representation by studying the principle casting shades and shadows in architectural plans and elevation.

2- Course Learning Objectives: oC

- oC1 Develop the student's skills concerning the visual perception.
- oC2 Develop the students free hand sketching while using the pen tones and techniques
- oC3 Enhance the usage of the various tools concerning the presentation of the architectural design projects
- oC4 Emphasize the concept of light and shadow in the presentation of the graphical projects.
- oC5 High light on the aspects of producing perspective.



3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O8 Students gain experiences in effective communication with the surrounding community.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O6, O8
oC2	O6
oC3	O6
oC4	O6, O8

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Differentiate between the various techniques used in presenting projects
- Lo2 Differentiate between the aspects of producing perspective.
- Lo3 Identify the visual perceptions

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Draw free hand sketches using various techniques of pens and pencils.
- Lo5 Apply the scale and respond to proportions in the sketches
- Lo6 Draw free hand sketches with respect to visual perceptions

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo7 Use drawings to express and present the design concepts.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- Lo.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO.20 Use contemporary tools to implement engineering design drawings, and presentations.
- LO.22 Produce designs that meet building users' requirements.
- LO.27 Work efficiently as an individual and share in team works
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.



7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1
3	Lo3	LO.1
4	Lo4	LO.20
5	Lo5	LO.22
6	Lo6	LO.8, LO.22, LO.27
7	Lo7	LO.28

8- Course Content

Week No.	Topic	Lecture hr.	studio hr.	Lab hrs,	LOs
1	introduction to the visual perception	1	3	0	Lo1, Lo2, Lo3
2	open tools and tones and various presentations concerning the usage of pens and pencils. (simple applications on line shapes)	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
3	Advanced applications on line shapes	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
4	Advanced applications on line shapes	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
5	The techniques of producing the perspective	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
6	Drawing and presenting the elevations	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
7	Drawing detailed items (phreonic column)	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
8	Mid- term exam				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
9	outdoor sketches (elevations)	1	3	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7
10	ornaments	1	3	0	Lo4, Lo5, Lo6, Lo7
11	Land escape sketches	1	3	0	Lo4, Lo5, Lo6, Lo7
12	Land escape sketches	1	3	0	Lo4, Lo5, Lo6, Lo7
13	outdoor sketches (perspective for a mosque)	1	3	0	Lo4, Lo5, Lo6, Lo7
14	Presentation for the final projects	1	3	0	Lo1, Lo4
15	Presentation for the final projects	1	3	0	Lo1, Lo4
16	Final exam				Lo4, Lo5, Lo6, Lo7
Total hours		14	42	0	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/	projects	Problem	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√					√	√					
Lo2	√	√					√	√					
Lo3	√	√					√	√					
Lo4		√						√			√		
Lo5		√						√			√		
Lo6		√						√			√		
Lo7		√						√			√		

Notes: Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: Lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√							
Lo2	√	√	√	√							
Lo3	√	√	√	√							
Lo4	√	√	√	√						√	
Lo5	√	√	√	√						√	
Lo6	√	√	√	√						√	
Lo7	√	√	√	√						√	

b. Time schedule of assessment

Sheets and Sketches	Weekly
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

sketches	(25) marks	(40) marks
Attendance	(5) marks	
Mid-term exam	(20) marks	
final exam	(40) marks	
Total	(100) marks	



11- List of references:

- a- Course notes** Lecture presentations, handouts by El Tayar, H.I.
- b- Required books**
- علي رأفت، ثلاثية الإبداع المعماري دورات الإبداع الفكري عمارة المستقبل الدورة البيئية ، Inter Consult ، 2007.
 - I.Focus I (Concept Diagram), Archiworld Co.Ltd , Kwang Young Jeong,2019.
 - Cho Baeyeon **Process Architectural Design Thinking : The Expression Of Diagram**, Archi Lab Co,2019.
- c- Recommended books** -NONE
- d- Periodicals, Web sites, etc.** - NONE

12- Facilities required for teaching and learning:

1. Design Studios+ White board + colored pens
2. Data show for presentation
3. E-Learning
4. Google Class Room
5. References in library

13- Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours.

Course instructor:	Dr. Helmy El-Tayar	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code: CVEE 350	Course Name Structural Analysis I
A- Affiliation	
Department offering the program:	Architecture & design department Civil Engineering department
Relevant program:	Architecture & design program Civil Engineering program
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Structural Analysis I
Code	CVEE 350
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	ENGR 103
Instructor name/Email	Dr. Mohamed EL-feaky

C- Professional Information

1- Course core:

The course focuses on the determination of the external and internal reactions on beams, frames, Trusses and arches under the effect of all types of loadings. In addition, students will learn about the behavior of beams with link members and frames, through modeling. Also, students will learn about internal forces for trusses

2- Course Learning Objectives:

- 1 Computing the external reactions in statically determinate beams, frames, Trusses and arches under the effect of all types of loadings.
- 2 Enable the student to Analyze the behavior of statically determinate beams, beams with link members and frames, through modeling.
- 3 Studying how to Compute and interpret internal forces in statically determinate beams and frames under the effect of external loads.
- 4 Computing the internal forces for trusses
- 5 Observing the structure stability.



3- Learning outcomes of the course (Los):

1. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Recall concepts and theories of mathematics appropriate to structural engineering.
- Lo2 Identify principles of building technologies, structure and construction methods, technical installations and the way they may influence structural design.
- Lo3 Select appropriate solutions for engineering problems based on analytical thinking
- Lo4 Integrate knowledge of mathematics, science, information technology, design, business context and engineering practice to solve engineering problems
- Lo5 Merge the engineering knowledge, understanding, and feedback to improve geometric, intersections, and structural design of roadway.

2. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

none

3. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.4 Use statistical analyses and objective engineering judgment to draw conclusions
- LO.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- LO.10 Identify structural design, construction, technology and engineering problems associated with building designs.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1, LO.6
2	Lo2	LO.1, LO.6, LO.10
3	Lo3	LO.2, LO.4
4	Lo4	LO.6, LO.10
5	Lo5	LO.10



6- Course Content					
Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	Modeling of Structures-Principal of Plane Statics	2	2	0	Lo1. Lo2, Lo3
2	Reactions for Beams, Frames, Trusses and Arches	2	2	0	Lo1. Lo2, Lo3
3	Reactions for Beams, Frames, Trusses and Arches (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
4	Reactions for Beams, Frames, Trusses and Arches (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
5	Structures with Link-Member	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
6	Structures with Link-Member (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
7	Thrust (N.F.), Shearing Force (S.F.), Bending Moments (B.M.)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
8	Mid-term exam				Lo1. Lo3, Lo4, Lo5
9	Thrust (N.F.), Shearing Force (S.F.), Bending Moments (B.M.) (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
10	Thrust (N.F.), Shearing Force (S.F.), Bending Moments (B.M.) (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
11	Thrust (N.F.), Shearing Force (S.F.), Bending Moments (B.M.) (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
12	Thrust (N.F.), Shearing Force (S.F.), Bending Moments (B.M.) (Examples)	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
13	Statically Determinate Trusses	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
14	Stability of Structures	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
15	Revision for all course content	2	2	0	Lo1. Lo2, Lo3, Lo4, Lo5
16	Final exam				Lo3, Lo4, Lo5
Total hours		28	28	0	

7- The Teaching and Learning Methods and their relation to the Los of the course													
Course Los	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modelling
Lo1	√	√	√	√	√							√	
Lo2	√	√	√	√	√							√	
Lo3	√	√	√	√	√							√	
Lo4	√	√	√	√	√							√	
Lo5	√	√	√	√	√							√	

8- Student assessment method

1- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment											
	quizzes	Mid - term exam	Final exam	sheets/ sketches	projects	Practica l: lab	Oral	discussi ons / reports	research	presenta tion	modell ing	
Lo1	√	√	√	√				√				
Lo2	√	√	√	√				√				
Lo3	√	√	√	√				√				
Lo4	√	√	√	√				√				
Lo5	√	√	√	√				√				

9- Time schedule of assessment

Quizzes	Week (3,6,14)
Discussions	Weekly for any student
Sheets and Sketches	weekly
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

10- Grading system

quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	Set as a bonus	(10) marks	
Sheets and Sketches	10 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam			(60) marks
Total			(100) marks

10- 9- List of references:

Course notes Required books

Lecture notes.

“Theory of Structures” Part 1, By W.M.El-Dakhkhini, Cairo, Dar El-Maaref, 2000.
- Fernando Perez Architectural Material & Detail Structure Metal, UK.2020.
- Russell Brown, Architectural Facade 2 Architectural Material Manual 1 Metal, Hkpi, 2019.

Recommended books Periodicals, Web sites, etc

NONE
<http://www.greatbuildings.com/>.

11- Facilities required for teaching and learning:

- Lecture hall including presentation board, data show
- Appropriate teaching design studios including presentation board, data show
- Google classroom
- References in the library

12- Requirements for Disable facilities:

Extra assignments

Course Instructor	DR. Mohamed EL-feaky	
Head of the Department	Dr. Ashraf Abdel Khaliq Mostafa	
Date:	2023/2024س	



Course Specifications

A- Basic Information

Course Specification

Course Code:	Course Name
ENGR 203	Strength and testing of material
<u>A- Affiliation</u>	
Relevant program:	-
Department offering the program:	Architecture & Civil Engineering
Department offering the course:	Basic Science
Date of program operation:	2008-2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Strength and testing of material
Code	ENGR 203
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	N/A
Instructor name/Email	Ass. Prof. Hany Ibrahim

1- Course Core

General view on the different properties of materials; physical properties, chemical properties and mechanical properties.

- Building materials.
- Binder materials; lime, gypsum and cement.
- Properties and testing of concrete materials: cement, Aggregates, water.
- Static tension test and Types of reinforcing steel and tensile test.
- Specifications of building materials.
- Scientific visits to a cement factory, steel factory and aggregate quarry

1- Professional Information

2- Course Learning Objectives: (oc)

- oc1 Learn mechanical behavior of materials under tensile loads
- oc2 Learn mechanical behavior of materials under compressive loads
- oc3 Learn mechanical behavior of materials under shear loads
- oc4 Compute stress and strain in components
- oc5 Apply axial loading, torsion, bending, and transverse loading.
- oc6 Transformation of plane stresses, and Mohr's circle.



3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display mechanical behavior of materials under tensile loads
- Lo2 Analyze mechanical behavior of materials under compressive loads
- Lo3 assess mechanical behavior of materials under shear loads
- Lo4 Compute stress and strain in components
- Lo5 Apply axial loading, torsion, bending, and transverse loading. Transformation of plane stresses, and Mohr's circle.
- Lo6 Examine mechanical behavior of materials under tensile loads

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- none

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.3 Assess and evaluate findings.
- LO7 State the factors affecting the engineering projects.
- LO.10 Identify structural design, construction, technology and engineering problems associated with building designs.
- LO.11 Display adequate knowledge of industries, organizations, regulations and procedures involved into projects.

4-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2
3	Lo3	LO.3
4	Lo4	LO7
5	Lo5	LO.10
6	Lo6	LO.11



5- Course Content and they're to the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction & production of cement	2	2	0	Lo1
2	Properties of Fresh concrete	2	2	0	Lo2, Lo3
3	Factors affecting workability	2	2	0	Lo2, Lo3
4	Workability tests	2	2	0	Lo1, Lo6
5	Properties of hardened concrete	2	2	0	Lo2
6	Compressive strength test	2	2	0	Lo2
7	Revision + Quiz (1)	2	2	0	Lo1, Lo2, Lo3, Lo6
8	Mid-term exam	1			Lo1, Lo2, Lo3, Lo6
9	Bending test	2	2	0	Lo2
10	Creep and shrinkage	2	2	0	Lo2
11	Design of concrete mix using absolute volume eq.	2	2	0	Lo4, Lo5
12	B.S. method for concrete mix design	2	2	0	Lo4, Lo5
13	Corrosion of reinforcement + Quiz (2)	2	2	0	Lo1, Lo2, Lo3
14	Corrosion of reinforcement	2	2	0	Lo2
15	Revision	2	2	0	Lo1: Lo6
16	Final exam	2			Lo1: Lo6
Total hours		28	28	0	

6-The Teaching and Learning Methods and their relation to the Los of the course

Course Los	Teaching and Learning Methods												
	On line / face to face	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	modelling
Lo1	√	√	√	√	√							√	
Lo2	√	√	√	√	√							√	
Lo3	√	√	√	√	√							√	
Lo4	√	√	√	√	√							√	
Lo5	√	√	√	√	√							√	
Lo6	√	√	√	√	√							√	



7-Student assessment method

a- Assessment method and its relation to the Los of the course											
LoCourse ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentatio n	modelling
Lo1	√	√	√	√				√			
Lo2	√	√	√	√				√			
Lo3	√	√	√	√				√			
Lo4	√	√	√	√				√			
Lo5	√	√	√	√				√			
Lo6	√	√	√	√				√			

b- Time schedule of assessment

Quizzes	Week (7,15)
Discussions	Weekly for any student
Sheets and Sketches	Week (7-10-13-15)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c- Grading system

quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	Set as a bonus	(10) marks	
Sheets and Sketches	10 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

a- Course notes

b- Required books

Teaching and Learning Methods

c- Recommended books

d- Periodicals, Web sites, etc

Lecture notes

- M. Imam, L. Vandewalle, and F. Mortarman's "Indirect Tensile Strength of Very High

Strength Concrete" Proceedings of International Symposium on Utilization of High Strength

Concrete, **Lillehammer, Norway**, June 1993, pp. 1114-1121.

Fernando Perez, **Architectural Material & Detail Structure Metal**, UK, 2019.

Eckhard Gerber, **Architectural Material & Detail Structure Advanced Materials**, UK,2020.

- Egyptian Code for Concrete Construction.



12- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- References in the library

13- Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments

Course Instructor:	Ass. Prof. Hany Ibrahim	D.H.IBRAHIM
Head of the Department:	Dr. Amera Marye	Amera
Date:	2023-2024	



Course Specification

Course Code: Math301	Course Name Probability & Statistics
--------------------------------	--

A- Affiliation

Relevant program:	-
Department offering the program:	Architectural Engineering program Electrical Power Engineering program Civil Engineering program
Department offering the course:	Basic Science
Date of department operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Probability & Statistics
Code	MATH 301
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	Math 102
Instructor Name/Email	Dr. Gamal El -Anany gamalanani75@gmail.com

C- Professional Information

1- Course core:

The course introduces students to some important statistical concepts and techniques that are of common application in engineering. Covers graphical and numerical summaries of data, plotting data, probabilities of random events, random variables, properties of density and distribution functions, measures of location and dispersion, expected values, independence of random variables, scaling and adding random variables, the binomial Poisson and normal distributions, the central limit theorem, hypothesis testing, confidence intervals, t test, paired t test, standard errors, least squares, residuals, correlation, examples of regression, quality control, clustering of rare events.

2- Course Learning Objectives:

- 1 Understand the concept of statistics and probability theory.
- 2 Understand the methods to calculate the measures of central tendency and the measures of dispersion
- 3 Understand the coefficient of skewness
- 4 Aiding the student to be familiar with probability and the rules of probability.
- 5 Understand the methods to find the conditional probability, Bayes' theorem
- 6 Aiding the student Be familiar with discrete and continuous probability, and its applications



3- Learning outcomes of the course (LOs):

d. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain concepts and theories of mathematics and sciences, appropriate to Probability & Statistics
- Lo2 Demonstrate methodologies of solving engineering problems, data collection and interpretation
- Lo3 Select appropriate solutions for engineering problems based on analytical thinking

e. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Apply knowledge of linear algebraic equations, iterative methods, and infinite series to solve engineering problems.

f. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Communicate effectively in tutorial class room with the demonstrator.
Effectively manages tasks, time, and resources, when solving mathematics problems, and in exams.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.3 Assess and evaluate findings.
- LO.4 Use statistical analyses and objective engineering judgment to draw conclusions.
- LO.14 Apply engineering fundamentals, basic science and mathematics.
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

6-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2
3	Lo3	LO.3&LO.4
4	Lo4	LO.14
5	Lo5	LO.28



6- Contents				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- The course introduces students to some important statistical concepts.	2	2	0	Lo1
2- techniques that are of common application in engineering.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
3- Covers graphical and numerical summaries of data.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
4- plotting data, probabilities of random events.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
5- random variables, properties of density and distribution functions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
6- measures of location and dispersion	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
7- expected values, independence of random variables	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
8- Midterm				Lo1, Lo2, Lo3, Lo4,
9- scaling and adding random variables, the binomial Poisson and normal distributions	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
10- the central limit theorem, hypothesis testing, confidence intervals	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
11- t test, paired t test, standard errors,	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
12- least squares, residuals	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
13- correlation, examples of regression, quality control,	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
14- clustering of rare events.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
15- Revision	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
16- Final Exam		3		Lo1, Lo2, Lo3, Lo4,Lo5
total	28	28	0	



6-The Teaching and Learning Methods and their relation to the Los of the course

Course Los	Teaching and Learning Methods													
	On line / face to face	Lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√				√							√	
Lo2	√	√				√							√	
Lo3	√	√			√	√							√	
Lo4	√	√			√	√							√	
Lo5		√												

7-Student assessment method

d- Assessment method and its relation to the Los of the course

LoCourse ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√			
Lo2	√	√	√	√				√			
Lo3	√	√	√	√				√			
Lo4	√	√	√	√				√			
Lo5	√	√	√	√							

e- Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		weekly
Sheets and Sketches		Every week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)



f- Grading system			
Quizzes	Quiz (1)	5 marks	30marks
	Quiz (2)	5 marks	
Discussions	bonus	10 marks	
Sheets and Sketches	10 marks		
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total	100 marks		

9- List of references:

e- Course notes

f- Required books

g- Recommended books

h- Periodicals, Web sites, etc

Lecture notes and handouts

Mendenhall, W., Introduction to Probability and Statistics, Boston: Duxbury Press, 10thEd., 1999.

- Barry C. Arnold, N. Balakrishnan, H.N. Nag raja, A First Course in Order Statistic, John Wiley& Sons, Inc., 1992.
- Kevin R.M Murphy, Brett Myers, Statistical Power Analysis, A Simple and General Model for Traditional and Modern Hypothesis Tests, Lawrence Erlbaum Associates,2nd Ed., 2004.
- Rosencrantz, W., Introduction to Probability and Statistics for Scientists and Engineers, New York: McGraw –Hill, 1997.
- Ross S., A First Course in Probability Englewood Cliffs, NJ: Prentice Hall, 4th Ed.,1994.
- Rozanov, Y.A., Probability Theory: A Concise Course, New York: Dover, 1997.
- Terrell, G., Mathematical Statistics:A Unified Introduction, New York: Springer – Verlag, 1999

No periodicals are needed.

Web Sites related to Mathematics and Mathematical engineering as:

www.math.hmc.edu,

www.tutorial.math.lamar.edu,

www.web.mit.edu





10-Facilities required for teaching and learning:

Lecturer notes , Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Appropriate teaching design studios including presentation board, data show.
- Google class room
E- Learning Moodle
- Extra assignments

Course coordinator:	Dr. Gamal El-Anany 
Head of the Department:	Dr. Amara Maray 
Date:	2023-2024



Course Specification

Course Code:	Course Name
ENGL 102	Lower Intermediate English
A- Affiliation	
Relevant program:	-
Department offering the program:	Architectural Engineering program Electrical Power Engineering program Civil Engineering program
Department offering the course:	Basic Science
Date of program operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Lower Intermediate English(2)
Code	ENGL 102
Credit Hours	3
Lectures	2
Tutorial	2
Total	3
Prerequisite	ENGL 102
Instructor name/Email	Dr. Abd El-Aziz Ramadan

C- Professional Information

2. **Course core:** (Note: General description in the form to be used for the Bulletin or Handbook should be attached):

The ENGL-102 course introduces the students to the form, style, content, and nature of scientific English and establishes a connection with their respective field of specialty. With these aspects fully introduced, students are gradually orientated with their prospective fields of specialty and placed in a position where they can proceed confidently toward their undergraduate and later on postgraduate studies.

3. Course Learning Objectives:

- 1 Enabling students to read and understand passages about the field of management and accounting.
- 2 How to write CVs and official letters.
- 3 How to use this knowledge in open market environments.
- 4 Acquiring business terminologies and abbreviations



4. The relation between the course objectives and the program objectives

5. Learning outcomes of the course (LOs):

b. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 analyze and respond thoughtfully to competing claims
- Lo2 evaluate and choose appropriate texts for citation
- Lo3 cite effectively and properly, conforming to academic expectations concerning paraphrase, quotation, attribution, and bibliographical forms

c. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 make informed choices about voice and style, using one's reading as a resource for rhetorical models

d. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6. Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.3 Assess and evaluate findings
- LO.14 Apply engineering fundamentals, basic science and mathematics.

6-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1& LO.2
2	Lo2	LO.2
3	Lo3	LO.3
4	Lo4	LO.14

6- Contents				
Topic	Lecture hrs	Tutorial hrs	Practical hours	LOS
1- understand the differences between the kinds of writing academic writers are called upon to do abbreviations	2	2	0	Lo1. Lo4
2- understand that readers in different disciplines approach text with different expectations and preferences	2	2	0	Lo1. Lo4
3- imagine meaningful shapes for ideas, so that a text's form is a natural manifestation of what one wants to say	2	2	0	Lo1. Lo2
4- recognize identifiable genres and shape texts around different generic expectations where appropriate	2	2	0	Lo2, Lo3
5- sequence thoughts effectively,	2	2	0	Lo1. Lo2



articulating connections between a text's individual discussions				
6- How to write CVs and official letters	2	2	0	Lo1, Lo2, lo3
7- How to write CVs and official letters	2	2		Lo1, Lo2, Lo3,
8- midterm				Lo1, Lo2, Lo3,
9- Reading session using specific and chosen dialogue.	2	2	0	Lo4
10-Reading session using specific and chosen dialogue.	2	2	0	Lo4
11- Reading session using specific and chosen dialogue.	2	2	0	Lo4
12- Reading session using specific and chosen dialogue.	2	2		Lo4
13- Reading session using specific and chosen dialogue.	2	2		Lo4
14- Reading session using specific and chosen dialogue.	2	2	0	Lo4
15- revision	2	2	0	Lo1, Lo2, Lo3, Lo4
16- Final Exam		3		Lo1, Lo2, Lo3,
total	26	26	0	

7. The Teaching and Learning Methods and their relation to the Los of the course

Course Los	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modeling	Cooperative work
Lo1	√										
Lo2	√										
Lo3	√										
Lo4	√										

Notes

- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8. Student assessment method

g- Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	Quizzes/exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modelling	Cooperative work	
Lo1	√	√	√	√	√	√	√	√		√	
Lo2	√	√	√	√	√	√	√	√		√	
Lo3	√	√	√	√	√	√	√	√		√	
Lo4	√	√	√	√	√	√	√	√		√	



h- Time schedule of assessment		
Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Week (6)
Presentations and Movies		
Sheets and Sketches		Every week
Researches and reports		Every week
lab		Every Week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

i- Grading system			
Quizzes	Quiz (1)	5 marks	50marks
	Quiz (2)	5 marks	
Discussions	5 marks	15 marks	
Sheets and Sketches	5 marks		
Researches and reports	5 marks		
Attendance	5 marks		
Mid-term exam	20 marks		
Final exam		50marks	
total		100 marks	

10- List of references:

i- Course notes

Lecture notes and handouts

j- Required books

Essential References (For students' use)

- The English Language department implements two learning management systems, namely:
- Digital Learning Platform for Oxford University Press, www.Oxfordlearn.com
- iTools for Q: Skills for Success (A digital reference for the book)
- Randall's ESL Cyber Listening Lab, <http://www.esl-lab.com/>

k- Recommended books

- Dutch Journal of Applied Linguistics
- ELT Journal, Oxford University Press
- International Journal of Applied linguistics
- International Journal of Research and Practice in Interpreting
- Journal of English Language Teaching- FTP Directory Listing



**I- Periodicals,
Web sites, etc**

- Journal of Clinical Linguistics & Phonetics
- Journal of the International Phonetics Association
- Second Language Research, University Press
- Studies in Second Language Research, University Press
- The Journal of Applied Linguistics
- Electronic Materials, Web Sites etc
- Language laboratories
- Blackboard, E-Podium and smart board, <http://ud.edu.sa>
- <http://ezp.ud.edu.sa/menu>
- <http://library.ud.edu.sa>
- <http://www.oclc.org/worldcat.en.html>
- <http://www.classzone.com/books/researchguide/> -
- <http://dictionary.cambridge.org/dictionary/british/criterion?q=criteria>
- <http://www.merriam-webster.com/>
- <http://oxforddictionaries.com/words/the-oxford-english-dictionary>

9. Facilities required for teaching and learning:

Lecturer notes, Chemical Lab -Library- Internet - Data show - E-Learning moodle

10. Requirements for Disable facilities:

- Extra assignments.
- Extra teaching hours.

Course Instructor:	Dr. Abd El-Aziz Ramadan	ABD EL-AZIZ
Head of the Department:	Dr. Amera Marye	Amera
Date:	2023-2024	



Second level courses

Second semester (spring)

No.	Cod	Course Name	Instructor
1	ARCH 213	History of architecture 1	Dr. Helmy El-Tayar
2	ARCH 219	Theory of architecture 1	Dr. Sherehan Adel
3	ARCH 220*	Shade, shadow and perspective 1	Dr. Sherehan Adel
4	ARCH 210*	Fundamentals of design and color and painting	Dr. Helmy El-Tayar
5	ARCH 301*	Architecture design 1	
6	ARCH 317*	Building construction 2	Ass. Prof. Ahmed Hanafi
7	CVEE351	Structural analysis 2	
8	Base 306	Research Methods	



Course Specification

Course Code:	Course Name
ARCH 213	History of architecture (1)

A- Affiliation

Relevant program:	Architecture Engineering and design
Department offering the program:	Architecture Engineering and design
Department offering the course:	Architecture Engineering and design
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	History of architecture (1)
Code	ARCH 213
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	---
Instructor name/Email	Dr. Helmy El Tayar Magicline71@gmail.com

C- Professional Information

1- Course core:

An introduction to history, society, religion, art and architecture of Ancient Egypt, Mesopotamia, Greek and Roman traditional civilizations. Including a description of the nature and character of the field of Egyptology. The continuing impact of Ancient Egypt on subsequent societies and cultures including that of modern Egypt will be examined. It discusses the various systems employed to order architectural compositions. This module is designed to give students a broad survey of major monuments and architectural development in the Eastern and Western Christian traditions. It includes the Early Christian, Byzantine, Romanesque and Gothic periods. Furthermore, it outlines the shift from the buildings of the Middle Ages to those of the Renaissance and Baroque. These lectures are essential for understanding the architectural revivals of the 18th and 19th centuries.

2- Course Learning Objectives: oC

oC1	understanding the contextual and cultural influences of each selected period on its architecture
oC2	Examining different characters of architectural style in each selected period
oC3	Analysis of some architectural theories such as the organic, functionalism, structural and expression theories.
oC4	Focusing on analyzing and presenting the intellectual trends that have affected contemporary global architecture.



3- Program objectives served by the course:

- O1 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve the goals of sustainable development 2030.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O8 Students gain experiences in effective communication with the surrounding community.
- O11 Provide students with the skills to conduct scientific research

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1,O6
oC2	O1,O6
oC3	O6,O11
oC4	O6,O11,O8

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Differentiate the styles of each architectural era
- Lo2 Display the main characteristics of each historical era in architecture.
- Lo3 Analyze the range of patterns and traditions that have shaped the historical architecture

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Conduct researches on the various style of the identified historical eras of architecture
- Lo5 Use computer tools and programs to present data

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Present research issues and share teams while conducting research's
- Lo7 Practice self-learning to reach the main aspects of historical architecture that can develop the contemporary architecture

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements
- LO20 Use contemporary tools to implement engineering design drawings, and presentations.
- LO27 Work efficiently as an individual and share in team works.
- LO31 Practice self-learning and other learning strategies.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1, LO.8
2	Lo2	LO.1, LO.8
3	Lo3	LO.1, LO.8
4	Lo4	LO.17
5	Lo5	LO.20
6	Lo6	LO.27
7	Lo7	LO31



8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introducing the Historical trends and its importance for the architect	2	0	0	Lo2
2	Ancient Egyptian architecture and Mesopotamia	2	0	0	Lo1, Lo2
3	Ancient Egyptian architecture (research presentation)	2	0	0	Lo3, Lo4, Lo5, Lo6, Lo7
4	Ancient Greek and Roman architecture	2	0	0	Lo1, Lo2
5	Ancient Greek and Roman architecture (research presentation)	2	0	0	Lo3, Lo4, Lo5, Lo6, Lo7
6	the Eastern and Western Christian traditions + quiz	2	0	0	Lo1, lo2, Lo4, Lo7
7	Architectural trends of modernist thinking	2	0	0	Lo1, Lo2
8	Mid-term exam				Lo1, Lo2, Lo5
9	Late Modernism	2	0	0	Lo1, Lo2
10	Late Modernism (research presentation)	2	0	0	Lo3, lo4, Lo5 Lo6, Lo7
11	Postmodernism	2	0	0	Lo1, Lo2
12	Postmodernism (research presentation)	2	0	0	Lo3, Lo4, Lo5, Lo6, Lo7
13	The relation between the contemporary architecture in Egypt and the global architecture	2	0	0	Lo1, Lo2
14	The relation between the contemporary architecture in Egypt and the global architecture (research presentation)	2	0	0	Lo3, Lo4, Lo5, Lo6, Lo7
15	Final exam				Lo1, Lo2, Lo5
Total hours		26	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

program competencies Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√								√			√	
Lo2	√								√			√	
Lo3									√	√			
Lo4											√		
Lo5										√		√	
Lo6											√		
Lo7							√					√	

Notes

- The site visit, Presentations, and the Cooperative work raises in the research
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.



10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modeling
Lo1	√	√	√					√				
Lo2	√	√	√					√				
Lo3									√	√		
Lo4											√	
Lo5	√	√	√					√	√	√		
Lo6											√	
Lo7	√	√	√					√				

b. Time schedule of assessment

Discussions	Every week for any student
Presentations	Every week
Researches	Week (3, 5, 10, 12,14)
Attendance	weekly
Quizzes	Week (6)
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Presentations	5 marks	20 marks	(40) marks
Researches and reports	10 marks		
quizzes	5 marks		
Attendance	5 marks	15 marks	
Mid-term exam	15 marks		
final exam	60 marks	100 marks	
Total	100 marks		

Remarks:

- bonus marks are used to let students involve into discussions
- Cooperative work is assessed while assessing the research presentation
- self- learning is assessed within the discussions and the written exams.

11- List of references:

a- Course notes

b- Required books

c- Recommended books

d- Periodicals, Web sites, etc

- Lecture presentations, handouts by El Tayar, H.I.
- 1. Frank Sear, Roman Architecture 2nd Edition, 2021
- 2. Sam Griffiths, Writing the Materialities of the Past: Cities and the Architectural Topography of Historical Imagination (Routledge Research in Architecture) , 2021
- 3. Hamlin, Alfred D. F., **History of architecture**, seven edition, Longmans, Green, and Co., London And Bombay,1906.
- 4. Fletcher, History of architecture, university of London, the Athlone press, 1990.
- 5. Vedula V.L.N.Murthy, **Architecture Pre - History To Pre - Gothic West Asia, Mediterranean And Europe**, Vedula V.L.N.Murthy, 2019.
- 6. Emily Cole, Architectural Details – **a visual guide to 5000 years of building styles**, IVY press 2014.
- 7. ثروت عكاشة ، "الفن الإغريقي" ، الهيئة المصرية العامة للكتاب – القاهرة، الطبعة الثانية، 2013
- Kimball, Fisk and Harold, George, History of architecture, Harper & brother publisher, New York,1918
- Francis D.K.ching, Mark M jarzombek&Vikramadity Prakash, A Global history of Architecture, Wiley, Education, 2007



12- Facilities required for teaching and learning:

1. Lecture room.
2. Data show-white board.
3. E-Learning platform.
4. References in library.

13- Requirements for Disable facilities:

- Extra assignments.
- On line extra teaching hours.

Course Instructor:	Dr. Helmy El-Tayar
Program Coordinator:	Dr. Nadia Ahmed
Head of the Department:	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 219	Theory of architecture 1

A- Affiliation

Relevant program:	Architectural program Engineering
Department offering the program:	Architecture Engineering
Department offering the course:	Architecture Engineering
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	theory of architecture 1
Code	ARCH 219
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	-
Instructor name/Email	Dr. sherihan adel dr.sherihan.adel@gmail.com

C- Professional Information

1. Course core:

The course focuses on architectural theory of different building project to use this theories in design concept drawing and develop imaginative skills in the design process , human scale in plan and elevation , develop scientific research skills with different computer programs .

2- Course Learning Objectives: oC

- oC1 This course presents the interaction between the theory and practice of architecture by addressing issues related to the development of architectural theory.
- oC2 Relates architectural theory to associated philosophical and intellectual movements to develop the students ability for creating concepts.
- oC3 The course presents the interaction between the theory and practice of architecture by addressing issues related to the development of architectural theory.
- oC4 Developing the skills of the student as conducting researches and use computer prgrams for presenting these researches.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 Gain students scientific research skills.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1,O2,O8
oC2	O1, O2,O3
oC3	O2,O3
oC4	O5, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display different standards of designing the buildings of different functions.
- Lo2 Display the role of the aspects of sustainability in developing the concept of designing buildings.
- Lo3 analyze the range of patterns and traditions that have shaped and sustained cultures and the way that they can inform design process

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Practice research to investigate the various dimensions of housing problem, the approaches policies that could motivate the students to solve real problem.
- Lo5 Use PowerPoint as a technical tool to present the research and the projects.
- Lo6 Conduct physical and multimedia modeling while sharing teams.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.5 Display 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.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO.20 Use contemporary tools to implement engineering design drawings, and presentations.
- LO.26 Prepare design reports. project briefs and documents.
- LO.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.5
3	Lo3	LO.8
4	Lo4	LO.20
5	Lo5	LO.26, LO.27
6	Lo6	LO.27



8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	-Course introduction and its objectives	2	0	0	Lo1, Lo2
2	-Basic of concept design	2	0	0	Lo1, Lo2, Lo3
3	-Basic of house design	2	0	0	Lo1, Lo2, Lo3
4	-Basic of house design	2	0	0	Lo1, Lo2, Lo3
5	- research - Quiz I	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
6	- Basic of disable people design	2	0	0	Lo1, Lo2, Lo3
7	- Basic of parking design	2	0	0	Lo1, Lo2, Lo3
8	Midterm exam				Lo1, Lo2, Lo3
9	-Basic of school design	2	0	0	Lo1, Lo2, Lo3
10	- Basic of school design	2	0	0	Lo1, Lo2, Lo3
11	- Basic of daycare design	2	0	0	Lo1, Lo2, Lo3
12	modeling	2	0	0	Lo6
13	- Quiz II -research	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
14	- Semifinal Project.	2	0	0	Lo1, Lo2, Lo3
15	- Final project	2	0	0	Lo1, Lo2, Lo3
16	Final exam				Lo1, Lo2, Lo3
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√		√		√	√	√	√	√
Lo2	√	√	√	√	√		√		√	√	√	√	√
Lo3	√	√	√		√				√	√	√	√	√
Lo4		√							√	√	√		
Lo5		√							√	√	√		
Lo6		√	√							√	√		√

10- Student assessment Method

a. Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√			√	√	√	√
Lo3	√	√	√	√	√			√	√	√	√
Lo4									√		
Lo5										√	
Lo6					√						√



b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (1, 2)	Week (5) Week (5,13)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		NONE
Researches and reports		Week (5,1 3)
the Projects	Semi Final Final	Week (14) Week (15)
Practical modelling		Week (13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(10) marks	
Sheets and Sketches	0		
Researches and reports	(10) %		
the Projects	(30) %		
Practical modeling	(15) %		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

<p>a. Course notes</p>	<ul style="list-style-type: none"> - Student have to take written not based on the instructor's lecture - Submission must be a periodical technical presentation. - Final submission is A3 paper and technical presentation. - The discussion and students' participants are very essential. - Student grades are available and posted in the class. - Only group work is allowed.
<p>b. Required books</p>	<ul style="list-style-type: none"> • Samantha Krukowski , T-Squared: Theories and Tactics in Architecture and Design, 2022 • Jtart , " World Architecture 3 school Building " , 2014 • Sibylle Kramer , " schools Educational Spaces " , 2014 • Callender, J. et al., " Time Saver Standards for Architectural Design Data ", 6th Ed., McGraw – Hill, Singapore, 1982. • Michelle galindo , " kindergartens education space " , 2018 • Kwang Young Jeong, Focus I (Concept Diagram) , Arch world Co.Ltd,2020. • Cho Baeyeon, Diagram Architectural Design Thinking: The Expression of Diagram, Arc hi Lab Co, 2001.
<p>c. Recommended books</p>	<p>Basic architecture design Architecture basics Architecture design</p>



12- Facilities required for teaching and learning:

- References in library
- Appropriate teaching design studios including presentation board, data show
- Google classroom
- E- learning Moodle

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	DR. Sherihan Adel
program Coordinator:	Dr. Nadia Ahmed
Head of the Department:	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 220	Shade, Shadow & Perspective 1

A- Affiliation

Relevant program:	Architectural program Engineering
Department offering the program:	Architecture Engineering
Department offering the course:	Architecture Engineering
Date of program operation:	2009 -2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Shade, shadow & perspective 1
Code	ARCH 220
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical /Studio	5 Hrs.
Total	6 Hrs.
Prerequisite	ENGR 102
Instructor name/Email	Dr. sherihan adel dr.sherihan.adel@gmail.com

C- Professional Information

1- Course core:

The course focuses on shade and shadows theories by several techniques of color drawing to use these theories in design concept drawing and develop imaginative skills in the design process, imagining a three-dimensional of building and develop hand drawing skills.

2- Course Learning Objectives: oC

- oC1 The course aims to enhance the students' skills of imagining the three-dimensional form through studying fundamental basics of drawing perspective.
- oC2 conducting the study of drawing shade and shadows theories.
- oC3 applying shade & shadow it on points, lines, two dimensional shapes, three dimensional, and simple architectural forms.
- oC4 enables students to draw perspectives, shade and shadow of simple architectural forms and elements.
- oC5 introducing presentation and communication skills using simple three dimensional modeling exercises in manual and digital format.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 preparing the students to conduct professional drawings related to the standards and the legislations.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O9
oC2	O1, O9
oC3	O5
oC4	O3 ,O8
oC5	O1, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify the main principles and theories of shade and shadow and 3D modeling.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Produce shade and shadow for models and buildings.

Lo3 Produces 3D models in form of isometric and prespectives.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo4 Display imagination and creativity.

Lo5 Work in stressful environment and within constraints

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.20 Use contemporary tools to implement engineering design drawings, and presentations.

LO.22 Produce designs that meet building users' requirements.

LO.29 Use creative, innovative and flexible thinking.

LO.31 Practice self-learning and other learning strategies.

7-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.20
3	Lo3	LO.22
4	Lo4	LO.29
5	Lo5	LO.31

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hours	Practical hr.	Los
1	- Course introduction and its objectives	1	0	5	Lo1
2	General definition of shadow and perspective	1	0	5	Lo1, Lo2, Lo4, Lo5
3	Lines and Shadow Techniques	1	0	5	Lo1, Lo2, Lo4, Lo5
4	Shadows from a light source	1	0	5	Lo1, Lo2, Lo4, Lo5
5	-Research & Quiz 1	1	0	5	Lo1, Lo2, Lo4, Lo5
6	Architectural Drawing Elements	1	0	5	Lo1, Lo2, Lo4, Lo5



	Shadows				
7	ink shadows	1	0	5	Lo1, Lo2, Lo4, Lo5
8	Midterm exam				Lo1, Lo2, Lo4, Lo5
9	Color pencil shadow	1	0	5	Lo1, Lo2, Lo4, Lo5
10	general definition of perspective	1	0	5	Lo1, Lo3, Lo4, Lo5
11	Official Holiday (Eid El-Fater)	1	0	5	Lo1, Lo3, Lo4, Lo5
12	One perspective point & Two perspective point	1	0	5	Lo1, Lo3, Lo4, Lo5
13	-Research & Quiz 2	1	0	5	Lo1, Lo3, Lo4, Lo5
14	Interior perspective	1	0	5	Lo1, Lo3, Lo4, Lo5
15	Exterior perspective	1	0	5	Lo1, Lo3, Lo4, Lo5
16	Final exam				Lo1, Lo2, Lo3, Lo4, Lo5
Total hours		14	0	70	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√					√						√
Lo2		√		√	√						√		
Lo3		√		√	√						√		√
Lo4		√					√						
Lo5		√					√						

Note: site visit may be included to enrich the students free hand perspective.
- On line lectures may be used in case of hybrid learning.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√							√
Lo2	√	√	√	√						√	
Lo3	√	√	√	√						√	√
Lo4	√	√	√	√							
Lo5	√	√	√	√							

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (13)
Presentations and Movies		weekly
Sheets and Sketches		weekly
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)



c. Grading system		
Quizzes	Quiz (1)	(5) marks
	Quiz (2)	(5) marks
Sheets and Sketches	(25) marks	
Attendance	(5) marks	
Mid-term exam	(20) marks	
final exam	(40) marks	
Total	(100) marks	

11- List of references:

- Course notes

- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.

- Required books

- Jessica & Jack, "Perspectives & Sketching for Designers", 2012.
- Joseph damelio, **perspective drawing hand book**,2008 .
- E.l.koller , light , shade & shadow,2014 .
- Gatherine v.holmes , **shading techniques**,2011.
- Craig Attebery, **The Complete Guide to Perspective Drawing From One-Point to Six-Point**, Routledge Taylor&Francis Group, 2018.
- نبيل مرعى، أسرار تصميم المنظور المعماري، دار الكتب العلمية للنشر والتوزيع، 2021

- Recommended books Lessons on shade

12- Facilities required for teaching and learning:

1. References in library
2. Appropriate teaching design studios including presentation board, data show
3. Google classroom
4. E- learning Moodle

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	DR. Sherehan Adel
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code:	Course Name
ARCH 210	Fundamentals of Design & Color & Painting

A- Affiliation

Relevant program:	Architecture Engineering and design
Department offering the program:	Architecture Engineering and design
Department offering the course:	Architecture Engineering and design
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2022

B-Basic Information

Title	Fundamentals of Design & Color & Painting
Code	ARCH 210
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	3 Hrs.
Total	4 Hrs.
Prerequisite	---
Instructor name/Email	Dr. Helmy El Tayar Magicline71@gmail.com

C- Professional Information

1- Course core:

An introduction to fundamental principles of two-dimensional design, including composition, visual language, color theory. Theory of Colors: Light – nature of colors – Colors stimuli and color selection – The human eye – C mixture – Color characteristics and relationships – color schemes and applications – Elements and basis of v design – Visual studies and applications. Students will explore visual communication tools, creative processes, visual theory. Introducing the principles of Lighting. Explores light and color as important elements especial interior space. The course investigates and explores processes involved in perception, nature of light, movement, c and depth and distance cues. The course involves lectures, discussions, and class exercises.

2- Course Learning Objectives: oC

- oC1 The importance of light in the concept of color and its relation to interior and exterior space.
- oC2 Introducing visual communication tools and encouraging the student visual applications with creative processes, and visual theory
- oC3 Study the principles of Lighting, perception, nature of light, movement, color, and depth and distance cues.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O8 Students gain experiences in effective communication with the surrounding community.
- O11 Provide students with the skills to conduct scientific research



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O8, O11
oC2	O1, O8
oC3	O1, O8, O11

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify nature of light and color and their principles.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Conduct researches on color in architecture and interior space.

Lo3 Conduct various visual sketches (free hand and using engineering tools)

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo4 Present neatness and accuracy

Lo5 Function efficiently as a member of the research team

Lo6 Present free hand sketches effectively by using light principles and color to state the situations and the concept.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.18 Conduct techniques and methods of investigation.

LO.20 Use contemporary tools to implement engineering design drawings, and presentations.

LO27 Work efficiently as an individual and share in team works.

LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

7-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.18
3	Lo3	LO.18 & LO.20
4	Lo4	LO.27
5	Lo5	LO.27
6	Lo6	LO.28

8-Course Content

Week No.	Topic	Lecture hr.	Lab hr.	Studio hrs	LOs
1	introduction to color nature and the aims of the course	1	0	3	Lo1
2	newtons law for light analysis and properties of colors + (research presentation)	1	0	3	Lo1, Lo2, Lo5
3	Color circles and the identification of colors	1	0	3	Lo1, Lo3, lo4
4	Values of colors	1	0	3	Lo1, Lo3, lo4
5	Hot and cold colors	1	0	3	Lo1, Lo3, lo4



6	The aspects of coloring the plans + quiz	1	0	3	Lo1, Lo3, lo4
7	The aspects of coloring the elevations	1	0	3	Lo1, Lo3, lo4
8	Mid- term exam				Lo1, Lo3, lo4
9	The aspects of coloring the land scape & The properties of colors (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
10	The aspects of coloring the land scape & The properties of colors (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
11	Complementary colors (free hand sketches) & Contrast in colors (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
12	Complementary colors (free hand sketches) & Contrast in colors (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
13	The usage of color in architecture internally and externally + (research presentation)	1	0	3	Lo1, Lo2, Lo5
14	The mechanics of the eye response to the color (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
15	The mechanics of the eye response to the color (free hand sketches)	1	0	3	Lo1, Lo3, Lo4, Lo6
16	Final exam				Lo1, Lo3, Lo4, Lo6
Total hours		12	0	36	

9-The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√					√		√			√	
Lo2		√							√	√			
Lo3		√						√					√
Lo4		√											
Lo5		√							√	√			
Lo6		√					√	√					√

Notes: -

- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.
- Site visit is used for free hand sketches.

10-Student assessment Method

d. Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√	√		
Lo2									√		
Lo3	√	√	√	√							√
Lo4	√	√	√	√							
Lo5								√			
Lo6	√		√	√						√	√



e. Time schedule of assessment

Discussions	Every week for any student
Presentations	weekly
Sheets and Sketches	Weekly
Researches	Week (2, 13)
quiz	Week (6)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (15)

f. Grading system

Discussions	Set for bonus	(20) marks	(40) marks
Sheets and Sketches	10 marks		
Researches and reports	5 marks		
Quiz	5 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

a- Course notes

b- Required books

- Lecture presentations, handouts by El Tayar, H.I.

- Deborah Ascher Barnstone , The Color of Modernism: Paints, Pigments, the Transformation of Modern Architecture in 1920s Germany, 2021
- Architectural Illustration Inside & Out, Albert Lorenz & Leonard Lizak.
- Design Drawing, Francis D. K. Ching with Steven P. Juroszek.
- سيد رمضان هدارة- دار الضو واللون، هارولد جوزيف هايلاند، جامعة لويج ايلاند، ترجمة د الشروق
- The Art of City Sketching: A Field Manual, Michael C. Abrams, Routledge, 2021.
- Architectural Details Sketchbook: The Virtues of Divine Proportion, Romeo & JWDA, Romeo Ty, 2016
- The Making of Things: Modeling Processes and Effects in Architecture, Frank&Angela&cel., Routledge, 2021

c- Recommended books

d- Periodicals, Web sites, etc

NONE

- نظرية اللون، د/ يحيى حمودة

12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- E-Learning (Google Class Room)
- Data show
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	Dr. Helmy El-Tayar
Program Coordinator:	Dr. Nadia Ahmed
Head of the Department:	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 301	Architectural Design 1

A- Affiliation

Relevant program:	Architecture Engineering
Department offering the program:	Architecture Engineering
Department offering the course:	Architecture Engineering
Date of program operation:	2009-20010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation:	2023-2024

B-Basic Information

Title	Architectural Design 1
Code	ARCH 301
Credit Hours	3 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	7 Hrs.
Total	8 Hrs.
Prerequisite	ARCH 201
Instructor name/Email	

C- Professional Information

1- Course core:

The course aims to provide students with principles and phases of architectural design process through studying the types of data and constrains related to architectural project, and how to be gathered and incorporated to develop the architectural program, studying the functional relationships of spaces, the different types of spaces organization and building form. The course enables students to create an architectural design of a simple project with emphasis on special needs requirements and environmental criteria.

2- Course Learning Objectives: oC

- oC1 Understanding the principles of architectural design including elements design, compositional aspects, proportion, balance.
- oC2 Enable students to form building design concepts that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability.
- oC3 Enable students to develop, prepare, and present an architectural design project in a variety of contexts, scales by using the manual techniques.
- oC4 Think in a creative and innovative way in problem solving, and design
- oC5 Work in stressful environment and within constraints, and manage tasks, time and resources effectively.
- oC6 Building student's capabilities in conducting researches and investigation using various techniques and methods of collecting and analyzing data

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O1	oC1
O4	oC1, oC2, oC3
O5	oC6
O6	oC2, oC3, oC4, oC5
O7	oC3
O9	oC3, oC6

5- Learning outcomes of the course (LOs):

g. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the principles of architectural design including elements design, process, compositional aspects of spatial design- proportion, balance, rhythm, etc.

h. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 conduct researches and investigation using various techniques and methods of collecting and analyzing data

- Lo3 create design concepts, design drawings, models that meet user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability

i. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Work in stressful environment and within constraints, and manage tasks, time and resources effectively.

- Lo5 think in a creative and innovative way in problem solving, and design

- Lo6 Practice self-education and self-motivation to do this and learn independently in familiar and unfamiliar situations with open minded

- Lo7 Present architectural design projects in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.

- LO.18 Conduct techniques and methods of investigation.

- LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.

- LO.27 Work efficiently as an individual and share in team works.

- LO.29 Use creative, innovative and flexible thinking

- LO.31 Practice self-learning and other learning strategies.

- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.18
3	Lo3	LO.21
4	Lo4	LO.27
5	Lo5	LO.29
6	Lo6	LO.31
7	Lo6	LO.32



8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical/Studio hours	Los
1	- Course introduction and its objectives - Introduction to the design project	1	0	7	Lo1
2	- Research discussion as ; Data gathering: site analysis, climatic studies, zoning and analysis of similar relevant projects (either International or local projects).	1	0	7	Lo1, Lo2, Lo6
3	- Research presentation and discussion	1	0	7	Lo1, Lo2, Lo6
4	- Sketch 1 (Schematic / conceptual design) + 3d concept model	1	0	7	Lo1, Lo3, Lo5
5	- Sketch 2 (focuses on developing 3D model+ Quiz 1	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
-6	- Sketch 3 (project plans)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
7	- Sketch 4 (Final Plans)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
8	Midterm exam				Lo1, Lo3, Lo4, Lo5, Lo7
9	- Sketch 5 (focuses on preparing project sections)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
10	- Sketch 6 (focuses on designing and formulating project elevations)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
11	- Sketch 7 (focuses on designing and formulating project elevations) + Quiz2	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
12	- Sketch 8 (focuses on preparing project Layout)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
13	- Sketch 5 (focuses on preparing project sections)	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
14	- Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, Lo3, Lo4, Lo5, Lo7
15	- Final Submission & discussion	1		7	Lo1, Lo3, Lo4, Lo5, Lo7
16	Final exam				Lo1, Lo3, Lo4, Lo5, Lo7
Total hours		14	0	98	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√					√	√	√		√	√
Lo2		√							√	√			
Lo3		√	√	√	√								√
Lo4		√	√				√						
Lo5		√	√	√	√		√					√	√
Lo6		√						√	√	√		√	
Lo7		√	√				√				√		√

Note: - site visit is impeded in the research
 - Cooperative work is in the research
 - On line lectures and tutorials are used in case of hybrid learning.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

	Tools of assessment											
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1	√	√	√	√	√			√	√		√	
Lo2									√			
Lo3	√	√	√	√	√						√	
Lo4	√	√	√	√	√							
Lo5	√	√	√	√	√			√			√	
Lo6								√	√			
Lo7	√	√	√	√	√					√	√	

b. Schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (11)
Presentations		Every week for any student
Sketches		Weekly
Researches		Week (2,3)
the Projects	Semi-Final	Week (14)
	Final	Week (15)
Practical modelling		Week (4, 5, 15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	Set for bonus	(25) marks	
Sketches	(10) marks		
Researches	(5) marks		
the Projects	(5) marks		
Practical modeling	(5) marks		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	



11- List of references:

a. Course notes

b. Required books

c. Recommended books

d. Periodicals, Web sites, etc



- The lecturer notes, The researches out hands and handouts
- طارق فاروق, تحليل الموقع, مؤسسة سكاى للكتاب, 2014
- فاروق حيدر & عمر فاروق, 2014, التصميم المعماري, منشأة المعارف.
- ياسر محجوب, 2014, التصميم المعماري,
- <https://www.slideshare.net/ymahgoub/architectural-design-book-arabic>
- Neufert, Ernst and Peter, **Neufert Architects' Data**, Wiley-Blackwell , 2012)
- Jtart , " **World Architecture 3 Hotel Building** " , 2012
- Sibylle Kramer , " **Colleges & Univrsties Educational Spaces** " , 2014
- Peter Fawcett, architecture :**design notebook**, 2nd edition, Architectural Press,2003.
- , Sharon&Rob&Mark&, Wiley Publishing, Sustainable Design Basics2020.
- Thames Hudson وArchitects Sketchbooks "The Creative Process, Will Jones", Publishing, 2019.
- Samantha Krukowski , T-Squared: Theories and Tactics in Architecture and Design,2022.
- None.
- Architectural record, Published monthly by the McGraw – Hill companies
- Al – Bena Magazine, Published monthly by Medina Publishing Inc., Kingdom of Saudi Arabia.
- Electronic Pub. URL: www.greatbuildings.com
- www.greatbuildings.com
- www.archinform.com

12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Data show for presentation
- Site visits
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	
program Coordinator :	Dr. Nadia Ahmed 
Head of the Department:	Dr. Fahima El-Shahed 
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 317	Building construction II

A- Affiliation

Relevant program:	Architecture Engineering
Department offering the program:	Architecture Engineering
Department offering the course:	Architecture Engineering
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Building construction II
Code	ARCH 317
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	5 Hrs.
Total	6 Hrs.
Prerequisite	ARCH 205
Instructor name/Email	Prof. Dr. Ahmed Hanafy

C- Professional Information

1- Course core:

The course aims to illustrate Shallow and deep foundations, different kinds of slabs, damp proofing, heat and insulation, expansion and settlement joints.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of building construction vocabularies and drafting symbolism.
- oC2 Examining different Shallow and deep foundations through studying their role.
- oC3 Studying different kinds of slabs.
- oC4 Studying damp proofing, heat and sound insulation.
- oC5 Studying expansion and settlement joints.

3- Program objectives served by the course:

- O5 Preparing the students to conduct professional drawings related to the standards and the legislations.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O9 Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O5, O6, O9
oC2	O5, O6, O9
oC3	O5, O6, O9
oC4	O5, O6, O9
oC5	O5, O6, O9



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Differentiate between Shallow and deep foundations.
- Lo2 Display the role of the life load and the dead load in constructing the various shapes of slabs.
- Lo3 Identify the various types of the damp proofing, heat and sound insulation.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Draw professional drawings to present the construction elements of the building.
- Lo5 Conduct researches to reach the information.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Communicate effectively in conducting and presenting researches in groups.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.7 State the factors affecting the engineering projects
- LO.10 Identify structural design, construction, technology and engineering problems associated with building designs.
- LO.18 Conduct techniques and methods of investigation.
- LO.24 Generate working drawings and workshop drawings matching to the designs.
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

7-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1&LO.7&LO.10
3	Lo3	LO.1&LO.7&LO.10
4	Lo4	LO.18&LO.24
5	Lo5	LO.18&LO.24
6	Lo6	LO.28

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical/St-udio hours	LOs
1	Study the foundation in building	1	0	5	Lo1, Lo4
2	Shallow foundation – deep foundation	1	0	5	
3	The simple construction system (column–beams)	1	0	5	Lo1, Lo4
4	Study types of insulation (damp proofing - heat)	1	0	5	Lo3, Lo4
5	Detail of moisture insulation (sound)	1	0	5	Lo3, Lo4
6	Research discussion	1	0	5	Lo1, Lo5, Lo6
7	Revision the section in building	1	0	5	Lo1, Lo3, Lo4
8	Midterm				Lo1, Lo3, Lo4
9	Study types of expansion joints	1	0	5	Lo1, Lo4
10	Study types of settlement joints	1	0	5	Lo1, Lo4
11	Types of slabs	1	0	5	Lo2, Lo4
12	Types of slabs	1	0	5	Lo2, Lo4
13	Research discussion	1	0	5	Lo2, Lo4, Lo5, Lo6
14	Research discussion	1	0	5	Lo1, Lo4, Lo5, Lo6
15	Revision	1	0	5	Lo1, Lo2, Lo3
16	Final Submission & discussion	1	0	5	Lo1, Lo2, Lo3
17	Final exam				Lo1, Lo2, Lo3, Lo4
	Total hours	12	0	60	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√	√	√		√	√	√	√	√	√	√
Lo2	√	√	√	√	√		√	√	√	√	√	√	√
Lo3	√	√	√	√	√		√	√	√	√	√	√	√
Lo4		√	√										
Lo5		√							√				
Lo6									√	√			

10- Student assessment method

j. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√			√	√	√	√
Lo3	√	√	√	√	√			√	√	√	√
Lo4	√	√	√	√	√						
Lo5									√		
Lo6									√	√	

k. Time schedule of assessment

Quizzes/ Class works	Every week for any student
Discussions	Every week for any student
Presentations	Week (6,13,14)
Sheets and Sketches	Weekly
Researches and reports	Week (6, 13,14)
The Projects	Final
Practical modelling	Week (5, 13)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (17)

1. Grading system

Quiz	(5) marks	(40) marks
discussion	5 marks	
researches	10 marks	
Sheets and sketches		
Project (Final)		
Attendance	(5) marks	
Mid-term exam	(15) marks	
final exam	(60) marks	
Total	(100) marks	



11- List of references:

a- Course notes

Course notes

b- Required books

-1 انشاء المباني أ.م. د/ احمد حنفي (دار الكتب والوثائق المصرية رقم الإيداع: 7993/2016)

-2 انشاء المباني 1 د خالد الليثي

-3 الموسوعة الهندسة المعمارية م/ عبد اللطيف أبو العطا البقري

-4 تشييد المباني د فاروق عباس حيدر و م/ عمر فاروق حيدر

-5 مصطفى رمضان الأشقر، المصطفى في أعمال التشطيبات، دار الكتب العلمية، 2019.

-6 Architects Guide

-7 Materials for Architects and Builders

- Ching, F, "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York., 2014.

- Heungchae Jung, Details Architecture Annu Facility, A&C Publishing, Co.Ltd.2018.

c- Recommended books

None

d- Periodicals, Web sites, etc.

None.

12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Google Class Room
5. E-Learning
6. References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course instructor:

Ass. Prof. Ahmed Hanafy

program Coordinator

Dr. Nadia Ahmed

Head of the Department

Dr. Fahima El-Shahed

Date:

2023-2024



Course Specification

Course Code:	Course Name
CVEE 351	Structural Analysis II

A- Affiliation

Relevant program:	Civil Engineering
Department offering the program:	Architecture & Civil Engineering
Department offering the course:	Civil Engineering
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
date	2023-2024

B-Basic Information

Title	Structural Analysis II
Code	CVEE 351
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	CVEE 350/ENGR 203
Instructor name/Email	

C- Professional Information

1- Course core:

This course focuses on the methods to analysis the statically determinate closed frame structures, Compute the internal forces for parabolic and circular arches, Normal and shear stresses calculations, in addition to how to draw stress distribution for different sections. Finally, apply three moment equation method for statically indeterminate structures.

2- Course Learning Objectives: oC

- oC1 This course focuses on the methods to analysis the statically determinate structures.
- oC2 Analyze closed frames and draw internal forces.
- oC3 Compute the internal forces for different types of Arches.
- oC4 Observe the effect of moving load and draw influence line for different structures.
- oC5 Calculate, analyze and draw the normal stress and shear stress distributions.
- oC6 Apply three moment equation method to solve the indeterminate structures.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Adopt appropriate mathematical principles, computing methods, design techniques and codes of practice in civil engineering disciplines, for modeling, analyzing and solving engineering Problems.
- Lo2 Select appropriate mathematical methods for modeling and analyzing structural problems.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Apply numerical modeling methods and appropriate computational techniques to structural engineering problems.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Adopt, create and innovate thinking in solving problems, and in designing systems, components and processes.



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO1.	Identify, formulate basic science and mathematics.
LO2	Simulate, analyze and interpret data.
LO3	Assess and evaluate findings.
LO4	Use statistical analyses and objective engineering judgment to draw conclusions.
Lo13	Solve complex engineering problems.
Lo14	Apply engineering fundamentals, basic science and mathematics
Lo20	Use contemporary tools to implement engineering design drawings, and presentations.
Lo29	Use creative, innovative and flexible thinking.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1,LO2, LO3, LO14
2	Lo2	LO2,
3	Lo3	LO1, LO4,LO20
4	Lo4	LO29

6- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	Closed Frames and Applications I	2	2	0	Lo1. Lo2. Lo3, Lo4
2	Closed Frames and Applications II	2	2	0	Lo1. Lo2. Lo3, Lo4
3	Introduction to Arches, Parabolic Arches and Circular Arches I	2	2	0	Lo1. Lo2. Lo3, Lo4
4	Applications, Parabolic Arches and Circular Arches I	2	2	0	Lo1. Lo2. Lo3, Lo4
5	Influence Line for different structures I	2	2	0	Lo1. Lo2. Lo3, Lo4
6	Influence Line for different structures II	2	2	0	Lo1. Lo2. Lo3, Lo4
7	Introduction to Normal Stresses	2	2	0	Lo1. Lo2. Lo3, Lo4
8	Midterm exam				
9	Application of Normal Stresses I	2	2	0	Lo1. Lo2. Lo3, Lo4
10	Application of Normal Stresses II	2	2	0	Lo1. Lo2. Lo3, Lo4
11	Introduction to Shear Stresses	2	2	0	Lo1. Lo2. Lo3, Lo4
12	Application of Shear Stresses I	2	2	0	Lo1. Lo2. Lo3, Lo4
13	Application of Shear Stresses II	2	2	0	Lo1. Lo2. Lo3, Lo4
14	Introduction to Three Moment Equation	2	2	0	Lo1. Lo2. Lo3, Lo4
15	Application of Three Moment Equation I	2	2		Lo1. Lo2. Lo3, Lo4
16	Final exam				
Total hours		28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face	Tutorials: sheets/	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√		√								√	√
Lo2	√	√		√	√							√	√
Lo3	√	√		√	√							√	√
Lo4	√	√		√	√							√	√

Notes

- The discussions are set for bonus marks to keep the students attention in the lecture or the tutorial.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√			√
Lo2	√	√	√	√				√			√
Lo3	√	√	√	√				√			√
Lo4	√	√	√	√				√			√

b- Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13)
Discussions		Every week for any student
Sheets and Sketches		Every week for any student
Practical modelling		Week (13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system

Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	Set as bonus	(10) marks	
Sheets	10 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

9- List of references:

- a- Course notes – Lecturer notes
- b- Required books
- “Theory of Structures” Part 1 and 2, By W.M.El-Dakhkhini, Cairo, Dar El-Maaref., 2000.
 - <http://www.greatbuildings.com/>
- c- Recommended books -



10- Facilities required for teaching and learning:

1. References in library
1. Appropriate teaching Hall and class rooms including presentation board, data show
2. Google classroom
3. E- learning Moodle

11- Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours

Course Instructor	
program Coordinator	Civil Engineering
Head of the Department	DR. Ashraf Abdelkhalek
Date	2023-2024



Course Specification

Course Code:	Course Name
Base 306	Research Methods
A- Affiliation	
Relevant program:	Architecure and design Program
Department offering the program:	Architecure and design department
Department offering the course:	Basic Sciences
Date of Department operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Research Methods
Code	Base 306
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	none
Instructor name/Email	

C- Professional Information

1- Course core:

Develops the skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, and critical thinking. Provides training in the use and integration of sources, library, and online research.

2- Course Learning Objectives:

- 1 Developing the basic understanding of preparing the researchs and writing the reports.
- 2 Studying the application of Research Tools
- 3 Discuss the Qualities of a good researcher, Criteria for preparing a good report.
- 4 Analysis of Scientific research data analysis, Raw data views.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- | | |
|-----|---|
| Lo1 | Identify the basic skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, and critical thinking. |
| Lo2 | evaluate the Basics of the Scientific Research, Problem Meaning, How to choose a problem, a research plane. |

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- | | |
|-----|---|
| Lo3 | Practice trainings in the use and integration of sources, library, and online research. |
| Lo4 | express opinion by writing and oral presentation. |

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- | | |
|-----|---|
| Lo5 | Cooperate with teams to conduct and present researches. |
|-----|---|



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.
- LO18 Conduct techniques and methods of investigation
- Lo27 Work efficiently as an individual and share in team works.
- Lo31. Practice self-learning and other learning strategies.

5-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO1.
2	Lo2	LO.1, LO.2
3	Lo3	LO.17&LO.18
4	Lo4	LO.17&LO.18
5	Lo5	LO.27&LO.28

6- Contents				
Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1- Science and Scientific Research	2	2	0	Lo1
2- Fundamentals of scientific research	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
3- Ways to gain knowledge	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
4- Research hypotheses and their formulation	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
5- Scientific research tools	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
6- Steps to configure the research tool	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
7- characteristics of the research tool	2	1	0	Lo1, Lo2, Lo3, Lo4, Lo5
8- midterm				Lo1, Lo2,
9- Research Methods	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
10- Research Categories	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
11- The study Community and samples	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
12- Steps to prepare the research and write the report	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
13- Organizing the research and writing its report	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
14- Qualities of a good researcher	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
15- Revision	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
16- Final Exam		3		Lo1, Lo2,
total	28	28	0	



7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modelling	Cooperative work
Lo1	✓	✓	✓	✓				✓			✓
Lo2	✓	✓	✓	✓				✓			✓
Lo3		✓		✓				✓			✓
Lo4		✓		✓				✓			✓
Lo5		✓		✓				✓			✓

Notes

- The research concerns the cooperative work, the discussion, and the presentations.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8- Student assessment method

a- Assessment method and its relation to the Los of the course									
Course ILOs	Tools of assessment								
	Quizzes/exams	Presentations and Movies	Discussions	Sheets and Sketches	Site visits	Researches and reports	Modelling	Cooperative work	
Lo1	✓	✓	✓			✓		✓	
Lo2	✓	✓	✓			✓		✓	
Lo3			✓			✓		✓	
Lo4			✓			✓		✓	
Lo5			✓			✓		✓	

b- Time schedule of assessment

Discussions	Week (6)
Presentations and Movies	Week (6)
Researches and reports	Every week
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c- Grading system

Researches and reports	10 marks	20 marks	50marks
Discussions	5 marks		
presentations	5 marks		
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total	100 marks		

9- List of references:

- a- Course notes
b- Required books

Lecture notes and handouts

- Murdoch-Eaton, Deborah, et al. "What do medical students understand by research and research skills? Identifying research opportunities within undergraduate projects." *Medical Teacher* 32.3 (2010): e152-e160.
 - Johnson, M.P., (2006). Decision models for the location of community corrections centers. *Environment And Planning B-Planning & Design* 33 (3): 393-412 May.
 - Gulsecen, S. and Kubat, A., (2006). Teaching ICT to teacher candidates using PBL: A qualitative and quantitative evaluation. *Educational Technology & Society*, 9 (2): 96-106.
- The Research Methods Knowledge Base, 3rd Edition, by William M. K. Trochim (Author), James P. Donnelly
No periodicals are needed.
Sites: <https://www.educatorstechnology.com/2017/04/12-of-best-research-methodology.html>

c- Recommended books

d- Periodicals, Web sites, etc



10- Facilities required for teaching and learning:

Lecture hall, class room, Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Extra researches

Course Instructor:

Head of the Department:

Dr. Amera Marye

Date:

2023-2024



Third level courses

First semester (Fall)

No.	Cod	Course Name	Instructor
1	ARCH 302*	Architecture design 2	Dr. Nadia Ahmed
2	ARCH 320*	Building construction 3	Ass. Prof. Ahmed Hanafi
3	ARCH 202	Computer application in architecture	Dr. Nadia Ahmed
4	ARCH 215	History of architecture 2	Dr. Helmy El-Tayer
5	ARCH 304	Theory of architecture 2	Dr. Sherhan Adel
6	CVEE 250	Field plan and topographic surveying	Dr. Tarek Waled
7	CVEE354	Reinforced concrete design1	Dr. Waled Abdallah
8	BASE303	Engineering economics	Dr. Abd El-Aziz Ramadan



Course Specification

Course Code:	Course Name
ARCH 302	Architectural Design II

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of Education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Architectural Design II
Code	ARCH 302
Credit Hours	3 Cr. Hrs.
Lectures	1 Hrs.
Studio	7 Hrs.
Total	8 Hrs.
Prerequisite	ARCH 301- ARCH 220
Instructor name/Email	Dr Nadia Ahmed Mohammed Nadya.ahmed@sva.edu.eg

C- Professional Information

1- Course core:

The course aims to enhance the students' skills of creating architectural form, space and composition. Students are required to think of architecture from the "outside-in" approach with an emphasis on the compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc. As well as focusing on three-dimensional models and its role in design development. Students will be encouraged to think about the requirements of special needs besides sustainability demands and how to apply within architectural design.

2- Course Learning Objectives: oC

- oC1 Understanding the principles of architectural design including elements design, process, and compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc.
- oC2 Enable students to transform design concept into a building that meets user's needs, particularly special needs, complies with the environment, and achieve the principles of sustainability
- oC3 Enable students to develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degrees of complexity by using an appropriate range of media and design-based software
- oC4 Elevate the students creatively and innovatively in problem-solving, and design.
- oC5 Training the student to work in stressful environments and within constraints, and manage tasks, time and resources effectively.
- oC6 Building student's capabilities in conducting research and investigation using various techniques and methods of collecting and analyzing data

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modelling process.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O1	oC1
O4	oC1, oC2, oC3
O5	oC6
O6	oC2, oC3, oC4, oC5
O7	oC3
O9	oC3, oC6

5. Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify the principles of architectural design including elements design, process, and compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc.

Lo2 Interpret the principles of sustainability in the projects.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo3 conduct research and investigation using various techniques and methods of collecting and analyzing data

Lo4 Transform the program of the project into conventional designs that meets user's needs, particularly special needs, complies with the environment, and achieve the principles of sustainability

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo5 Work in stressful environments and within constraints, and manage time and tasks (develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degrees of complexity by using an appropriate range of media and design-based software) effectively.

Lo6 Think creatively and innovatively in problem-solving and design.

6. Program LOs served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.

Lo.18 Conduct techniques and methods of investigation.

Lo.22 Produce designs that meet building users' requirements.

Lo.29 Use creative, innovative and flexible thinking.

Lo.30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.

7. The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1&lo.8
3	Lo3	Lo.18
4	Lo4	Lo.22
5	Lo5	Lo.30
6	Lo6	Lo.29



8. Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	PracticalStudio hr.	Los
1	- Course introduction and its objectives - Introduction to the design project	1	0	7	Lo1, Lo2
2	- Research: relevant architectural data and similar projects (either International or local projects).	1	0	7	Lo1, Lo3
3	- Research submission and discussion - What's the design concept and how it can be developed?	1	0	7	Lo1, Lo3
4	- Sketch 1 (Schematic/conceptual design) + 3d concept model	1	0	7	Lo1, Lo2,, Lo4, lo5, Lo6
5	- Sketch 2 (focuses on developing a 3D model+ Quiz 1	1	0	7	Lo1, Lo2, Lo4, lo5, Lo6
-6	- Sketch 3 (Developing plans+ feedback).	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
7	- Sketch 4 (Developing plans+ feedback).	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
8	Midterm exam				Lo1, Lo2, , Lo4, lo5, Lo6
9	- Sketch 5 (Final submission of Plans)	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
10	- Sketch 6 (submission of project sections + feedback).	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
11	- Sketch 7 (submission of project elevations+ feedback) - Quiz2	1	0	7	Lo1, Lo2, Lo4, lo5, Lo6
12	- Sketch 8 (focuses on preparing project Layout)	1	0	7	Lo1, Lo2, Lo4, lo5, Lo6
13	- Sketch 9 (developing 3D model)	1	0	7	Lo1, Lo2, Lo4, lo5, Lo6
14	- Semi-final Submission of the project. - Final Feedback.	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
15	- Final Submission & Discussion	1	0	7	Lo1, Lo2, , Lo4, lo5, Lo6
16	Final exam				Lo1, Lo2, Lo4, lo5, Lo6
Total hours		14	0	98	

9. The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials: sheets/sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√				√	√	√			√	√
Lo2	√	√	√	√	√				√			√	√
Lo3		√							√	√	√	√	
Lo4		√	√	√	√						√		√
Lo5		√	√				√						
Lo6	√	√	√	√	√							√	√

Notes

- The research concerns cooperative work, the discussion, the site visit and the presentations.
- The project concerns brainstorming and problem-solving.
- Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.



10. Student assessment Method

a- Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	Quizzes	Midterm exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√		√
Lo2	√	√	√	√	√			√	√		√
Lo3								√	√	√	
Lo4	√	√	√	√	√					√	√
Lo5	√	√	√	√	√						
Lo6	√	√	√	√	√						√

b- Schedule of assessment		
Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions		Every week - any student
Presentations and Movies		Every week - any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3)
the Projects	Semi-Final	Week (14)
	Final	Week (15)
Practical modelling		Week (5, 6, 13)
Attendance		Weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(20) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modelling	(15) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total			(100) marks

11. List of references:

a- Course notes

- Submission must be a periodical technical presentation.
- The final submission is an A1 paper and technical presentation.
- The discussion and students' participation are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.

b- Required books

- طارق فاروق, تحليل الموقع, مؤسسة سكاى للكتاب, 2014
- فاروق عباس حيدر, التصميم المعماري منشأة المعارف, 1998

c- Recommended books

- Callender, John H., and De Chiara J., Time Saver Standards for Architectural Data, McGraw Hill Book Company, New York, (1974).
- Neufert, Ernst and Peter, Neufert Architects' Data, Wiley-Blackwell , (2012)
- Jtart, " World Architecture 3 Hotel Building ", 2012
- Sibylle Kramer , " Colleges & Univrsities Educational Spaces ", 2014
- Paul, Laseau, "Graphic Thinking of Architects and Designers", Reinhold Co., NY, USA, 1980.
- White, Edward T., "A vocabulary of Architectural Forms", Architectural Media, 1975.
- A. Peter Fawcett, architecture: design notebook, 2nd edition, Architectural Press, 2003
- ACA: Architecture competition annual. Vol 14 (Education/Culture/ Welfare &



d- Periodicals, Web sites, etc.

Sports) Lee Hwa-jeong,2020.

- Architectural Record, Published monthly by the McGraw – Hill companies
- Electronic Pub. URL: www.greatbuildings.com
- <https://www.archdaily.com/projects>
- <https://www.designboom.com>
- <https://www.dezen.com>

12. Facilities required for teaching and learning:

1. Design Studios
2. Whiteboard + coloured pens
3. Data show
4. Site visits
5. Google Class Room
6. E-Learning
7. References in library

13. Requirements for Disable facilities:

1. Extra assignments
2. Online extra teaching hours

Course Instructor	Dr Nadia Ahmed	<i>Nadia</i>
program coordinator	Dr Nadia Ahmed	<i>Nadia</i>
Head of the Department	Dr Fahima El-Shahed	<i>Fahima</i>
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 320	Building construction III

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Building construction III
Code	ARCH 320
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	5 Hrs.
Total	6 Hrs.
Prerequisite	ARCH 317
Instructor name/Email	Ass. Prof. Ahmed Hanafy

C- Professional Information

1- Course core:

Different structure systems and materials to cover large span spaces (frames- folded slabs- shell structures), truss and steel structures, stairs and ramps.

2- Course Learning Objectives: Oc

- oC1 Developing the basic understanding of building construction vocabularies and drafting symbolism.
- oC2 Studying different structural Systems through studying their role.
- oC3 Studying different types of Ceilings (Concrete and wood)
- oC4 Studying Trusses and their types.
- oC5 Studying Concrete Stairs construction systems and Elevators through studying its roles.

3- Program objectives served by the course: O

- O5 preparing the students to conduct professional drawings related to the standards and the legislations.
- O9 preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O5
oC2	O5, O9
oC3	O5, O9
oC4	O5, O9
oC5	O5, O9



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Explain methodologies of forming structure systems for mega voids.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Practice research to investigate the various structure systems and the materials of forming these structures.

Lo3 Transform design concepts in form of professional drawings.

Lo4 Conduct physical and multimedia modeling.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo5 Use creative, innovative and flexible thinking to solve the problems of the structure system.

Lo6 Cooperate with colleges in conducting researches and their presentations.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.

Lo.15 Develop and conduct appropriate experimentation.

Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.

Lo.29 Use creative, innovative and flexible thinking.

Lo.30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.8
3	Lo3	Lo.15
4	Lo4	Lo.8 & lo.20
5	Lo5	Lo.29
6	Lo6	Lo.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical /Studio hours	LOs
1	Introduction, course overview	1	0	5	Lo1
2	Ceilings	1	0	5	Lo1, Lo3, Lo5
3	Various structural system	1	0	5	Lo1, Lo2,Lo6
4	different types of Ceilings	1	0	5	Lo1, Lo2,Lo6
5	Section details	1	0	5	Lo1, Lo4,
6	Concrete and wooden ceilings	1	0	5	Lo1, Lo3, Lo5
7	wooden ceilings	1	0	5	Lo1, Lo3, Lo5
8	Midterm				Lo1, Lo3, Lo5
9	Trusses and their types	1	0	5	Lo1, Lo3, Lo5
10	Research applications	1	0	5	Lo1, Lo2,Lo6
11	Trusses	1	0	5	Lo1, Lo3, Lo5
12	Basic of stairs plan concrete	1	0	5	Lo1, Lo3, Lo5
13	Basic of stairs section and Details of stairs	1	0	5	Lo1, Lo4
14	Final submission of portfolio & Discussion	0	0	5	Lo1, Lo3, Lo5
15	Final exam				Lo1, Lo3, Lo5
Total hours		13	0	70	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√				√	√	√	√		√	√
Lo2									√	√		√	
Lo3		√	√	√	√								
Lo4		√											√
Lo5	√	√	√	√	√							√	
Lo6		√							√	√	√		

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project and the sketches concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

d- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√		√
Lo2								√	√		
Lo3	√	√	√	√	√				√		
Lo4									√		√
Lo5	√	√	√	√	√			√	√		
Lo6									√	√	

e- Time schedule of assessment

Quizzes/ Class works	Every week for any student
Discussions	Every week for any student
Presentations	Week (3,4,10)
Sheets and Sketches	Weekly
Researches and reports	Week (3,4,10)
The Projects	Semi Final Week (13) Final Week (14)
Practical modelling	Week (5, 13)
Attendance	Weekly
Mid-term exam	Week (8)
final exam	Week (15)

f- Grading system

quizzes	5 marks	
Reports	5 marks	
Classwork	10 marks	(40) marks
Project (Semi-final)		
Project (Final)		
Attendance	(5) marks	
Mid-term exam	(15) marks	
final exam		
Total		(100) marks



11- List of references:

a. Course notes

- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.

b. Required books

- 1 انشاء المباني أ.م. د/ احمد حنفي (دار الكتب والوثائق المصرية رقم الإيداع: 7993/2016)
- 2 انشاء المباني I د خالد الليثي
- 3 الموسوعة الهندسة المعمارية م/ عبد اللطيف أبو العطا البقري
- 4 تشييد المباني د فاروق عباس حيدر و م/ عمر فاروق حيدر
- 5 Architects Guide
- 6 Materials for Architects and Builders
- 7- Nils Van Merrienboer, Architectural Material & Detail Structure Masonry (Brick & Ceramic/ Stone),2017

c. Recommended books

- None.




d. Periodicals, Web sites, etc.

12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Google Class Room
5. E-Learning
6. References in library

11- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	Ass. Prof. Ahmed Hanafy	
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 202	Computer Application in Architecture
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Computer Application (1)
Code	ARCH 202
Credit Hours	1 Cr. Hrs.
Lectures	0 Hrs.
Lab	3 Hrs.
Total	3 Hrs.
Prerequisite	N/A
Instructor name/Email	Dr. Nadia Ahmed

C- Professional Information

1- Course core:

The course aims to provide students with the basic techniques of the two-dimensional architectural drawings (2D), using computer software, and studying simple architectural elements as (Dots, Lines, Shapes, and Geometries) and how to use architectural computer software in creating simple architectural projects and technical drawings. This course enables students to be computer-literate, familiar with commercial software and provide a basic working vocabulary and knowledge of computing and information concepts.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of Computer-Aided Drafting and Design.
- oC2 Develop 2d/ designs into 3D models.
- oC3 Studying computer applications in developing a digital computer model of buildings
- oC4 Studying 2D drawings, 3D modeling, rendering, and Image processing in Architectural field.
- oC5 Understanding of software tools design approach.
- oC6 Studying how to Present the project digitally.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O6 Develop students' professional skills and the ability to self- and continuous learning.
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O7
oC2	O7, O9
oC3	O6, O7
oC4	O1, O6, O7
oC5	O9, O7
oC6	O7, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify principles of dealing with computer programs.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Apply physical modeling, multi-dimensional visualization, multimedia applications, and computer aided design.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo3 Use computational facilities and techniques efficiently.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.14 Apply engineering fundamentals, basic science and mathematics.

Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.

Lo.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program Los

	Course (LOs)	program Los
1	Lo1	Lo.1
2	Lo2	Lo.14 & lo.20
3	Lo3	Lo.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hours	Los
1	- AutoCAD introduction	0	0	3	Lo1,Lo3
2	- AutoCAD Interface	0	0	3	Lo1,Lo3
3	- Draw Plans in AutoCAD	0	0	3	Lo1,Lo3
4	- Dimension and annotation in AutoCAD	0	0	3	Lo1,Lo3
5	- Plotting from AutoCAD and preparing sheets - Quiz I	0	0	3	Lo1,Lo3
6	- Settings and advanced drawing	0	0	3	Lo1,Lo3
7	- Entrance of ArchiCAD	0	0	3	Lo1,Lo3
8	Midterm exam				Lo1,Lo3
9	- Create 3D plan in ArchiCAD	0	0	3	Lo1, Lo2, Lo3
10	- Add doors and windows opening	0	0	3	Lo1,Lo3
11	- Finishing in walls and floors	0	0	3	Lo1,Lo3
12	- Covering of roof and stairs	0	0	3	Lo1, Lo2, Lo3
13	- Advanced technical in ArchiCAD - Quiz II - Semifinal Project.	0	0	3	Lo1, Lo2, Lo3
14	- Final Submission & discussion	0	0	3	Lo1, Lo2, Lo3
15	-Final exam				Lo1, Lo2, Lo3
	Total hours	0	0	42	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods													
	On line / face to face	tutorials: sheets/	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling	
Lo1		√	√	√	√	√	√		√	√	√	√	√	
Lo2	√	√	√	√	√									
Lo3	√	√	√	√	√									

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	Presentation	modeling
Lo1	√	√		√		√	√	√	√	√	
Lo2	√	√	√	√	√			√	√		
Lo3	√	√	√	√	√			√	√		

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
the Projects	Semi Final Final	Week (13) Week (14)
Practical modelling		Week (5, 13)
Attendance		Weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	Set for bonus	(25) marks	
Sheets and Sketches	10 marks		
the Projects	5 marks		
Practical modeling	10 marks		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	



11- List of references:

- a. Course notes**
 - Student have to take written not based on the instructor's lecture
 - Submission must be a periodical technical presentation.
 - Final submission is A1 paper and technical presentation.
 - The discussion and students' participants are very essential.
 - The evaluations are internal periodical assessments.
 - Student grades are available and posted in the class.
 - group work is allowed.
- b. Required books**
 - 8- Moore, F., (1993), "Environmental Control (heating, cooling, lighting)", McGraw-Hill. Inc., USA.
 - 9- Mary, J., (2015), "Architecture and Passive Design", Design Media Publishing Limited, UK.
 - 10- Lecture presentations, handouts by Dunia, S.E.
 - 11- My ArchiCAD 2014
 - 12- Dominos in Auto cad 2016
- c. Recommended books** - None.
- d. Periodicals, Web sites, etc** - None.

12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Data show for presentation
- Site visits
- Google Classroom
- E-Learning
- References in library

13- Requirements for disabled facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor	Dr. Nadia Ahmed	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 215	History of architecture (2)

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	History of architecture (2)
Code	ARCH 215
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 213
Instructor name/Email	Dr. Helmy El Tayar Magicline71@gmail.com

C- Professional Information

1- Course core:

Important works in architecture and decorative arts from the seventh century AD to the Ottoman period; artistic achievements of Muslim Spain, North Africa, Syria, Mesopotamia, Iran, and Turkey. Includes a coverage of the various phases of Islamic architecture: Caliphate, Tulunid, Mamluk, Ottoman and Turkish periods. It aims to outline the development of cultural social traditions in the Islamic Art and Architecture of the World.

2- Course Learning Objectives: oC

- oC1 understanding the contextual and cultural influences of each selected period on its architecture
- oC2 Examining different characters of architectural style in each selected period
- oC3 Analysis of some architectural theories such as the organic, functionalism, structural and expression theories.
- oC4 Focusing on analyzing and presenting the intellectual trends that have affected contemporary global architecture.

3- Program objectives served by the course:

- O1 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve the goals of sustainable development 2030.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O8 Students gain experiences in effective communication with the surrounding community.
- O11 Provide students with the skills to conduct scientific research



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1,O6
oC2	O1,O6
oC3	O6,O11
oC4	O6,O11,O8

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the main characteristics of each historical era.
- Lo2 Differentiate the styles of each architectural era
- Lo3 Analyze the range of patterns and traditions that have shaped the historical architecture

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Conduct researches on the various styles of the identified historical eras of architecture.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Present research issues by using computer tools and programs.
- Lo6 share teams while conducting research's

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- Lo.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.
- Lo.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1& lo.6
3	Lo3	Lo.6 & lo.8
4	Lo4	Lo.18
5	Lo5	Lo.28
6	Lo6	Lo.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hr.	Los
1	An introduction to Islamic history and the urban development of Islamic architecture in Egypt and the countries of the world	2	0	0	Lo1, Lo3
2	Islamic architecture and the different types of arts that have passed since the beginning of the spread of Islam.	2	0	0	Lo1, Lo2, Lo3
3	Islamic architecture and arts in Egypt during the eras of the Umayyad rule, the Abbasid era, and the countries of the Levant and the Levant.	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
4	- Islamic architecture in the Levant	2	0	0	Lo1, Lo2, Lo3



5	Islamic artistic achievements in, North Africa	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
6	Quiz I decorative arts from the seventh century AD to the Othman era	2	0	0	Lo1, Lo2, Lo3
7	Islamic artistic achievements in, North Africa, Syria, Mesopotamia, Iran and Turkey	2	0	0	Lo1, Lo2, Lo3
8	Midterm exam				Lo1, Lo2, Lo3
9	Islamic architecture in Egypt since the conquest of Islam	2	0	0	Lo1, Lo2, Lo3
10	Islamic architecture in Egypt, Persia, Andalusia and North Africa	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
11	Islamic architecture and arts in Egypt and Turkey	2	0	0	Lo1, Lo2, Lo3
12	- Islamic architecture and arts in the era of Muhammad Ali	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
13	- Quiz II Islamic artistic achievements in Spain	2	0	0	Lo1, Lo2, Lo3
14	Islamic artistic achievements in Spain	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
15	Final revision	2	0	0	Lo1, Lo2, Lo3
16	Final exam				Lo1, Lo2, Lo3
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

program competencies Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√							√	√	√	√	√	
Lo2	√							√	√	√	√	√	
Lo3	√							√	√	√	√	√	
Lo4									√	√			
Lo5	√								√	√			
Lo6								√	√	√			

Notes

- The site visit, Presentations, and the Cooperative work raises in the research
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10 Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment												
Lo1	√	√	√						√	√	√	√	
Lo2	√	√	√						√	√	√	√	
Lo3	√	√	√						√	√	√	√	
Lo4										√	√		
Lo5										√	√		
Lo6										√	√		



b. Time schedule of assessment

Discussions	Every (3, 5, 10, 12,14)
Presentations	Every (3, 5, 10, 12,14)
Researches	Week (3, 5, 10, 12,14)
Attendance	weekly
Quizzes	Week (6, 13)
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Presentations	5 marks	20 marks	(40) marks
Researches and reports	10 marks		
quizzes	5 marks		
Attendance		5 marks	
Mid-term exam		15 marks	
final exam		60 marks	
Total		100 marks	
Remarks:			
<ul style="list-style-type: none"> • bonus marks are used to let students involved into discussions • Cooperative work is assessed while assessing the research presentation • self-learning is assessed within the discussions and the written exams. 			

11- List of references:

- Course notes
- Required books

- Lecture presentations, handouts by El Tayar, H.I.
 - Hamlin, Alfred D. F., History of architecture, seven edition, Longmans, Green, and Co., London and Bombay, 1906
 - Fletcher, History of architecture, university of London, the Athlone press, 1990
 - Vedula V.L.N.Murthy, Architecture Pre - History To Pre - Gothic West Asia, Mediterranean And Europe, Vedula V.L.N.Murthy, 2019.
 - محمد ماجد عباس خلوصي ، دائرة المعارف المعمارية من 3800 قبل الميلاد حتى فجر العصور الحديثة الجزء الثاني ، المعادي الجديدة ، 2018

- Recommended books
- Periodicals, Web sites, etc

- Kimball, Fisk and Harold, George, History of architecture, Harper & brother publisher, New York, 1918
- Francis D.K. Ching, Mark M Jarzombek & Vikramadity Prakash, A Global history of Architecture, Wiley, Education, 2007

12- Facilities required for teaching and learning:

- Lecture room
- Data show-white board
- E-Learning platform
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Helmy El-Tayar	<i>Dr. Helmy El Tayar</i>
Program Coordinator	Dr. Nadia Ahmed	<i>Nadia</i>
Head of the Department	Dr. Fahima El-Shahed	<i>Fahima</i>
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 304	Theory of architecture 2
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009 -2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	theory of architecture 2
Code	ARCH 212
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 219
Instructor name/Email	Dr. sherihan adel dr.sherihan.adel@gmail.com

C- Professional Information

1- Course core:

The course focuses on architectural theory of different building project to use this theories in design concept drawing and develop imaginative skills in the design process, develop scientific research skills with different computer programs .

2- Course Learning Objectives: oC

- oC1 This course presents the interaction between the theory and practice of architecture by addressing issues related to the development of architectural theory.
- oC2 Traces the various factors that can develop the methodologies of design.
- oC3 Relates architectural theory to associated philosophical and intellectual movements.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O9 Develop analysis skills through simulation methods.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O2, O9
oC2	O1, O3
oC3	O9



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the range of factors that can shape the strategies of designing buildings.
- Lo2 Explain Principles of sustainable design and climatic considerations that can be merged in different types of buildings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Practice research to investigate the various standards of designing the various types of buildings.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Work efficiently while using power point program to present research.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1 & lo.8
3	Lo3	Lo.18
4	Lo4	Lo.28

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	- Course introduction and its objectives	2	0	0	Lo1. Lo2
2	- Basic of cultural center design	2	0	0	Lo1. Lo2
3	Basic of cultural center for kid's design	2	0	0	Lo1. Lo2
4	Basic of sport stadiums design - Quiz I	2	0	0	Lo1. Lo2
5	-.Research	2	0	0	Lo1. Lo2, Lo3, Lo4
6	- Basic of libraries and reading hall design	2	0	0	Lo1. Lo2
7	- Basic of restaurant design	2	0	0	Lo1. Lo2
8	Midterm exam				Lo1. Lo2
9	Basic of hotels & motels design	2	0	0	Lo1. Lo2
10	- Basic of theater design	2	0	0	Lo1. Lo2
11	- Basic of administrative building design	2	0	0	Lo1. Lo2
12	- Quiz II	2	0	0	Lo1. Lo2
13	-research	2	0	0	Lo1. Lo2, Lo3, Lo4
14	-research	2	0	0	Lo1. Lo2, Lo3, Lo4
15	- Final revision	2	0	0	Lo1. Lo2
16	Final exam				Lo1. Lo2
Total hours		28	0	0	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√							√	√	√		√	
Lo2	√							√	√	√		√	
Lo3									√	√			
Lo4										√	√		

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√					√	√		
Lo2	√	√	√					√	√		
Lo3									√		
Lo4										√	

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (4) Week (12)
Discussions		Week (5,1 3)
Presentations		Week (5,1 3)
Sheets and Sketches		NONE
Researches and reports		Week (5,1 3)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	(5) marks	(10) marks	
Researches and reports	(5) marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	



11- List of references:

- **Course notes**
 - Student have to take written not based on the instructor's lecture
- **Required books**
 - Jtart , " World Architecture 3 Hotel Building " , 2012
 - Sibylle Kramer , " Colleges & Univrsities Educational Spaces " , 2014
 - Callender, J. et al., " Time Saver Standards for Architectural Design Data " , 6th Ed., McGraw – Hill, Singapore, 1982.
 - Ching, F., "Architecture – Form, Space and Order ",-2nd Ed. International Thomson Publishing Inc., New York, 1996.
 - 2020, ايمان محمد عيد , الاتجاهات المعمارية المعاصرة
 - Enis Aldal&Husam , Site And Composition Design Strategies In Architecture And Urbanism , 2016.
 -
- **Recommended books**
 - Basic architecture design
 - Architecture basics
 - Architecture design

12- Facilities required for teaching and learning:

- References in library
- Appropriate teaching hall including presentation board, data show
- Google classroom
- E- learning Moodle

13-Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	DR. Sherehan Adel	Sherehan Adel
program Coordinator	Dr. Nadia Ahmed	Nadia
Head of the Department	Dr. Fahima El-Shahed	Fahima
Date	2023-2024	



Course Specification

Course Code: CVEE 250	Course Name Field Plane Surveying
A- Affiliation	
Department offering the program:	Architecture and design department &Civil Engineering department
Relevant program:	Architecture and design program &Civil Engineering program
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Field Plane Surveying
Code	CVEE 250
Credit Hours	3h
Lectures	2h
Tutorial	2h
Total	4h
Prerequisite	MATH 102
Instructor name/Email	Dr. Tarek Waled

C- Professional Information

1- Course core:

The course is an entry level course to mapping and surveying sciences, considering a planar Earth surface as a reference for surveying measurements and computations. The development and advances of surveying sciences are reviewed and related to current civil engineering practices. The concepts and practices of using surveying measurements to produce large scale maps are explained. The use of plane surveying methods for mapping and setting-out; and large-scale maps in setting-out, in relation to engineering project phases is highlighted. Linear and angular surveying measurements (optical and electronic measurements), are explained and practiced, through hands-on contact with popular surveying equipment; e.g., tapes, levels, EDM and theodolites. Methods for determining areas, height differences survey leveling, profiling, contour generation, and calculating horizontal coordinates from traverse computations, using standard surveying field practices and computation forms are explained and applied in the field, along with an introduction to theory of errors in plane surveying.

2- Course Learning Objectives: (oc)

- oc 1 Developing an understanding of the principles of surveying.
- oc 2 Understanding the basic skills of surveying work including distance and angles measurements.
- oc 3 Developing the skill for using surveying instrumentation.
- oc 4 Understanding how to collect, document, and analyze surveying measurements
- oc 5 Learned how to conduct a variety of surveying exercises with emphasis on layout surveys.
- oc 6 Developing an understanding of applying basic surveying techniques in the field.
- oc 7 Demonstrating and understanding of how to perform basic surveying computations.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Describe the concepts of plane surveying, including the Public Land Survey System
- Lo2 Interpret and record data and field notes.
- Lo3 Analyze and compute survey and engineering findings

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 set up and operate plane surveying equipment Properly

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work efficiently in the field.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.2 Simulate, analyze and interpret data.
- Lo.6 Define standards, quality guidelines, health and safety requirements, environmental issues



- and risk management principles.
- Lo.14 Apply engineering fundamentals, basic science and mathematics.
- Lo.27 Work efficiently as an individual and share in team works.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.2
3	Lo3	Lo.2& Lo.6
4	Lo4	Lo.14
5	Lo5	Lo.27

6. Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction to Plane Surveying	2	2	0	Lo1
2	Field Notes: Preparation and Use of Field Notes	2	2	0	Lo2
3	Land Surveying and Measurement Error	2	2	0	Lo1, Lo3, Lo4, Lo5
4	Leveling	2	2	0	Lo1
5	Distance Measurement	2	2	0	Lo1
6	Horizontal Curves	2	2	0	Lo1
7	Quiz (1)	2	2	0	Lo1, Lo3
8	Mid-term exam				Lo1, Lo3
9	Vertical Curves	2	2	0	Lo1
10	Electronic Instruments and Electronic Measurements	2	2	0	Lo1, Lo3, Lo4, Lo5
11	Traversing	2	2	0	Lo1
12	Mapping Surveys	2	2	0	Lo1, Lo3, Lo4, Lo5
13	Introduction to Public Land Survey System	2	2	0	Lo1, Lo3, Lo4, Lo5
14	Introduction to Public Land Survey System	2	2	0	Lo1, Lo3, Lo4, Lo5
15	Quiz (2)	2	2	0	Lo1, Lo3
16	Final exam				Lo1, Lo3
Total hours		28	28	0	

7. The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods												
	face to face Tutorials : sheets/	projects	Problem solving	Brain storming	Practical : lab	discover ing	Site visit	Reports/ research	Coopera tive	presentat ion	Discussi on	modellin g	
Lo1	√	√					√		√				
Lo2							√		√				
Lo3	√	√		√	√		√		√				
Lo4							√		√				
Lo5						√	√		√				

Notes

- Field training is used in form of site visit and using instruments as group tasks
- The Tutorials concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8. Student assessment method

a- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid - term exam	Final exam	sheets/ sketches	projects	Practical:	Oral	discussio ns	Reports/ researche	presentati on	modellin g
Lo1	√	√	√	√		√		√	√		
Lo2						√			√		
Lo3	√	√	√	√		√		√	√		
Lo4						√					
Lo5						√					



b- Time schedule of assessment		
Quizzes	Quiz (1)	Week (7)
	Quiz (2)	Week (15)
Discussions		Weekly
Sheets and Sketches		Weekly
Practical/ reports		Week (7-10-13-15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system			
quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	Set for bonus	(10) marks	
Sheets and Sketches	5 marks		
reports	5 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

9. List of references:

- a- Course notes
- b- Required books
- c- Recommended books
- d- Periodicals, Web sites, etc

Staff lectures notes.

- Agor, R. (1981), "**Advanced Surveying**". Channa Publishers, Press.
- Anderson, J. M. and E. Mikhail, (1997), "**Surveying: Theory and Practice**", McGraw-Hill, New York.
- Brinker, R. C. and P. R. Wolf, (1988), "**Elementary Surveying**", 8th ed., Harper & Row, New York.
- Mikhail, E., and F. Ackermann (1976), "**Observation and least squares**". Harper and Row Publishers Inc., New Yor.
- Schofield, W. and M. Breach (2001), "**Engineering Surveying**", ISBN-13: 978-0-7506-6949-8
- Introduction to Surveying.

None

10. Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- E- learning Moodle

11. Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments

Course Instructor	Dr. Tarek Waled	
program Coordinator	Civil Engineering	
Head of the Department	Dr. Ashraf Abdel Khaliq Mostafa	
Date:	2023-2024	



Course Specification

A- Basic Information

Course Specification

Course Code:	Course Name
CVEE 354	Reinforced Concrete Design 1

A- Affiliation

Department offering the program:	Architecture and design department & Civil Engineering department
Relevant program:	Architecture and design program & Civil Engineering program
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Reinforced Concrete Design 1
Code	CVEE 354
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	CVEE 350
Instructor name/Email	Dr. Mohamed Hamdy EL-Feaky

1- Course core:

Properties of plain concrete and reinforced concrete, behavior of composite sections, ultimate strength and working stress, load distribution, design of structural elements, beams (Simple beams, continuous beams, cantilever beams), Check of shears, columns (Short), detailing of reinforcing steel.

1- Professional Information

2- Course Learning Objectives: (oc)

By the end of the course the student will be able to:

- Oc1 Know what reinforced concrete is.
- Oc2 How to compute the loads acting on beams using load distribution.
- Oc3 How to Apply first principal equations for beam design.
- Oc4 How to Apply limit state method for beam design.
- Oc5 Know how to design short columns.

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify and compute the design loads on concrete beams.
- Lo2 Illustrated the first principles of structural design for reinforced concrete sections.
- Lo3 Assess the Behavior of reinforced concrete sections applied to flexural moment and/or normal compression force.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Design reinforced concrete sections using charts (C1 & J).
- Lo5 Design reinforced concrete beams for flexural moment, shear, and torsion.
- Lo6 Draw reinforcement details for reinforced concrete beams and short columns.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.3 Assess and evaluate findings.
- Lo.14 Apply engineering fundamentals, basic science and mathematics.
- Lo.15 Develop and conduct appropriate experimentation
- Lo.24 Generate working drawings and workshop drawings matching to the designs.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1&Lo.3
3	Lo3	Lo.3
4	Lo4	Lo.14 & lo.15
5	Lo5	Lo.14 & lo.15
6	Lo6	Lo.24

6- Course Content and they're to the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Load distribution on beam	2	2	0	Lo1, Lo2
2	First principal (over and under reinforcement)	2	2	0	Lo1, Lo2
3	Beam design using the first principal	2	2	0	Lo1, Lo3
4	First principal (over and under reinforcement)	2	2	0	Lo1, Lo5
5	Beam design using the first principal	2	2	0	Lo4
6	Beam design using design limits	2	2	0	Lo4, Lo6
7	Check of shear for beam	2	2	0	Lo1, Lo2, Lo4, Lo6
8	Mid-term exam				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
9	Reinforcement details for beams	2	2	0	Lo1, Lo5
10	Examples for design beams	2	2	0	Lo6
11	Design of short column	2	2	0	Lo5, Lo6
12	Examples for design short column	2	2	0	Lo6
13	Revision for all course content	2	2	0	Lo1, Lo2, Lo3 Lo4
14	Revision for all course content	2	2	0	Lo1: Lo3
15	Quiz (2)	2	2	0	Lo4: Lo6
16	Final exam		Final exam		Lo1: Lo6
Total hours		28	28	0	0

7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√											
Lo2	√	√											
Lo3	√	√		√	√								
Lo4	√	√		√	√								
Lo5	√	√		√	√								
Lo6	√	√		√	√								

Notes

- The Tutorials concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.



8- Student assessment method

a- Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical:	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√							
Lo2	√	√	√	√							
Lo3	√	√	√	√							
Lo4	√	√	√	√							
Lo5	√	√	√	√							
Lo6	√	√	√	√							

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (14)
	Quiz (2)	Week (15)
Discussions		Weekly
Sheets and Sketches		Weekly
Practical/ reports		Week (7-10-11-15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(10) marks	(60) marks
	Quiz (2)	(10) marks	
Discussions	(40) %	(10) marks	
Sheets and Sketches	(60) %	(10) marks	
Attendance		(10) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

9- List of references:

- | | |
|--------------------------------|---|
| a- CourseNotes | Lecture notes |
| b- required books | Design of Reinforced Concrete Structure - Volume 1 - Prof. Mashhour Ghoneim & Prof. Mahmoud El-Mihilmy.2012 |
| c- recommended books | Egyptian Code design for reinforced concrete2020. |
| d- periodicals, Web sites, etc | none |

10- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google Classroom
- E-learning

11- Requirements for Disable facilities:

- Online teaching hours if it is needed
- Extra assignments

Course Instructor	Dr. Mohamed Hamdy EL-Feaky	
program coordinator	Civil Engineering	
Head of the Department	Dr. Ashraf Abdel Khaliq Mostafa	
Date:	2023-2024	



Course Specification

Course Code:	Course Name
BASE 303	Engineering Economics

A- Affiliation

Relevant program:	Architecture and design program & Civil Engineering Program
Department offering the program:	Architecture and design department & Civil Engineering Program
Department offering the course:	Basic Science
Date of department operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Engineering Economics
Code	BASE 303
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2
Total	4 Hrs.
Prerequisite	Math 201
Instructor Name/Email	Dr. Abdul Aziz Ramadan

C- Professional Information

1- Course core:

The objective of the course is to address the economic aspects of buildings with defining the scope, elements and features of cost during [(a) design (b) implementation / (c) building operation] as well as providing the student with skills and techniques to control the cost of construction operations and introducing the economic feasibility study of projects and their components site feasibility studies and evaluation thereof / preliminary feasibility studies in design operations and marketing studies). The course also deals with the study of the national economic field and its impact on the formulation and development of construction operations.

2- Course Learning Objectives:

- 1 Introducing the economic feasibility study of projects and their components site feasibility studies and evaluation of / preliminary feasibility studies in design operations and marketing studies).
- 2 Practicing and dealing with the study of the national economic field and its impact on its formulation and development of construction operations.
- 3 Providing the student with the skills and techniques of controlling the cost of construction operations and introducing the economic feasibility study of projects.
- 4 Informing the students how to Explore the economics concepts and theories of planning, and how Cover the bases and methods of economic analysis of engineering projects and the application these principles in understanding economic activity of private and public engineering companies various micro- and macroeconomic levels.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1	Identify economic and cost concepts, the time value of money, single, multiple and series of cash flows, gradients, functional notation, nominal and effective interest rates, continuous compounding, rates of return. Computation and applications, economic feasibility of projects and worth of investments, comparison of alternatives.
-----	---



- Lo2 **Compare** the costs and benefits of alternative and mutually exclusive projects using time value of money approaches, including present worth, annual worth, payback period, and Internal Rate of Return (IRR)
- Lo3 **Assess** the effect of inflation and taxation on costs and benefits of projects, as well as developing numerical methods to account for their impact
- Lo4 **Assess** the elements which may affect the decision-making process for public sector projects

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 **Develop** cash flow engineering-economic models of costs and benefits of projects
- Lo6 **Develop** a strategy to account for uncertainty and risk through the use of sensitivity analysis and probability distribution

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics
- Lo.3 Assess and evaluate findings.
- Lo.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles
- Lo.15 Develop and conduct appropriate experimentation

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.6
3	Lo3	Lo.3& Lo.6
4	Lo4	Lo.3& Lo.6
5	Lo5	Lo.15
6	Lo6	Lo.15

6- Contents

Topic	Lecture hours	Tutorial hours	Practical hours	LOS
1. Introduction to engineering economics.	2	2	0	Lo1
2. Phases of engineering projects/operation1.	2	2	0	Lo1, Lo2, Lo5
3. Phases of engineering projects/operation2.	2	2	0	Lo1, Lo3, Lo5
4. Project activity versus time plan	2	2	0	Lo1, Lo4, Lo5
5. Project total investment costs; fixed assets costs, current assets costs, pre operation costs.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
6. Project total investment costs; current assets costs, pre operation costs.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
7. Derivation of equation of cash future value	2	2	0	Lo1, Lo6
8. Midterm.				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
9. Derivation of equation of present of future cash flow.	2	2	0	Lo1, Lo6
10. Derivation of equation of cash net present of expected future cash flow.	2	2	0	Lo1, Lo6
11. Calculation of the internal rate of return 1 .	2	2	0	Lo3, Lo4
12. Calculation of the internal	2	2	0	Lo3, Lo4



rate of return 2 .				
13. The payback periods.	2	2	0	Lo5
14. Factory breakeven point (BEP).	2	2	0	Lo5
15. Revision.	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
16. Final Exam.				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
Total	28	28	0	

7-The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods											
	Interactive lectures	Presentations and Movies	Discussions	Tutorials/Sketches	project	Problem solving	Brain storming	Lab	Site visits	Researches	Modelling	Cooperative work
Lo1	√		√		√							
Lo2	√		√		√	√	√					
Lo3	√		√		√	√	√					
Lo4	√		√		√	√	√					
Lo5	√		√		√	√	√					
Lo6	√		√		√	√	√					

- Notes
- discussions may be used in the lectures and set for bonus.
 - The project concerns the brain storming and the problem solving.
 - Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.

8-Student assessment method

a- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment									
	Quizzes/exams	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	lab	Site visits	Researches and reports	Modelling	Cooperative work
Lo1	√		√		√					
Lo2	√		√		√					
Lo3	√		√		√					
Lo4	√		√		√					
Lo5	√		√		√					
Lo6	√		√		√					

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Every week
project		Every week
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system

Quizzes	Quiz (1)	5 marks	30marks
	Quiz (2)	5 marks	
Discussions	Set for bonus	10 marks	
project			
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total	100 marks		



9- List of references:

- a- Course notes
- b- Required books
- c- Recommended books
- d- Periodicals, Web sites, etc-

Handouts, prepared by the instructor

- - د. ماجد خلوصي، الإدارة التنفيذية لمشروعات التشييد ج 1-2، د. 1996 -
فاروق حيدر، منشأة المعارف، تشييد المباني ج 1-2 ، 1997
- Rory Burke, Project Management: Planning and Control Techniques” NewYork: Wiley, 2005
- James Lewis .“Fundamentals of Project Management”, NewYork:Amacom, 1995.6-3
- none

10-Facilities required for teaching and learning:

- Appropriate teaching hall including presentation board, data show
- Library- Internet
- E-Learning Moodle.

11-Requirements for Disable facilities:

- Google class room
- E- learning Moodle
- Lecturer notes

Course Instructor:	Dr. Abdul-Aziz Ramadan	ABD EL-AZIZ
(Head of the Department)	Dr. Amera Marye	Amera
Date:	2023-2024	



Third level courses

Second semester (Spring)

No.	Cod	Course Name	Instructor
1	ARCH 402*	Architecture design 3	
2	ARCH 330*	Building construction 4	Ass. Prof. Ahmed Hanafi
3	ARCH 318	Concepts of urban planning	Dr. Fahima El-Shahed
4	ARCH 206	Environmental control systems and design	Dr. Nadia Ahmed
5	ARCH 208	Three dimensional designs	Dr. Nadia Ahmed
6	ARCH 305*	Shade, shadow and perspective 2	Dr. Sherehan Adel
7	CVEE355	Reinforced concrete design2	
8	CVEE352	Soil mechanics and foundation	



Course Specification

Course Code: ARCH 402	Course Name Architectural Design 3
---------------------------------	--

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2008-2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation:	2023-2024

B-Basic Information

Title	Architectural Design 3	
Code	ARCH 402	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio = 3 effective hrs.
Lectures	1 Hrs.	
Practical/Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 206, ARCH 302	
Instructor name/Email		

C- Professional Information

1- Course core:

The course aims to enhance the students' skills of creating architectural form, space and composition. Students are required to think of architecture from with an emphasis on the compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc. As well as focusing on three-dimensional models and its role in design development. Students will be encouraged to think about the requirements of special needs besides sustainability demands and how to apply within architectural design.

2- Course Learning Objectives: oC

- oC1 Understanding the principles of architectural design including elements design, process, compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc.
- oC2 Enable students to transform design concept into a building that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability
- oC3 Enable students to develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software
- oC4 The student practice how to think in a creative and innovative way in problem solving, and design
- oC5 The student practice how to Work in stressful environment and within constraints, and manage tasks, time and resources effectively.
- oC6 Building student's capabilities in conducting researches and investigation using various techniques and methods of collecting and analyzing data

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O1	oC1
O4	oC2
O5	oC6
O6	oC2, oC3, oC4, oC5
O7	oC3
O9	oC2, oC3, oC6

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 display the principles of architectural design including elements design, process, compositional aspects of spatial design- proportion, balance, rhythm, dynamics etc.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 conduct researches and investigation using various techniques and methods of collecting and analyzing data
- Lo3 create design concept that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability
- Lo4 develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work in stressful environment and within constraints, and manage tasks, time and resources effectively.
- Lo6 have the ability to think in a creative and innovative way in problem solving, and design

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.
- Lo.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- Lo.29 Use creative, innovative and flexible thinking.
- Lo.30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.18
3	Lo3	Lo.21
4	Lo4	Lo.20
5	Lo5	Lo.29&Lo.30
6	Lo6	Lo.29&Lo.30

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	studio hrs.	Los
1	- introduction to the course and its objectives - Introduction to the design project	1	0	7	Lo1
2	- Research: relevant architectural data and similar projects (either International or local projects).	1	0	7	Lo1, Lo2, Lo5
3	- Research: Data gathering, site	1	0	7	Lo1, Lo2, Lo5



	analysis, climatic studies, zoning and analysis of similar projects				
4	- Sketch 1 (Schematic / conceptual design) + 3d concept model	1	0	7	Lo1, lo3,Lo5 Lo6
5	- Sketch 2 (focuses on developing 3D model+ Quiz 1	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
6	- Sketch 3 (project plans)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
7	- Sketch 4 (Final Plans)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
8	Midterm exam				Lo1, lo3,Lo5, Lo5 Lo6
9	- Sketch 5 (focuses on preparing project sections)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
10	- Sketch 6 (focuses on designing and formulating project elevations)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
11	- Sketch 7 (focuses on designing and formulating project elevations)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
12	- Sketch 8 (focuses on designing and formulating project elevations) +Quiz2	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
13	- Sketch 8 (focuses on preparing project Layout)	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
14	- Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
15	- Final Submission & discussion	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
16	Final exam				Lo1, lo3,Lo5, Lo5 Lo6
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√			√	√	√	√	√	√
Lo2		√								√			
Lo3		√	√	√	√								√
Lo4		√	√	√	√								
Lo5		√	√				√						
Lo6		√	√				√						

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a- Assessment method and its relation to the Los of the course

	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2									√		
Lo3	√	√	√	√	√						√
Lo4	√	√	√	√	√						
Lo5	√	√	√	√	√						
Lo6	√	√	√	√	√						



b- Time schedule of assessment		
Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3)
the Projects	Semi Final	Week (14)
	Final	Week (15)
Practical modelling		Week (5, 6, 13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)
Notes:		
<ul style="list-style-type: none"> • Submission must be a periodical technical presentation. • Final submission is AI paper and technical presentation. • The discussion and students' participants are very essential. • The evaluations are internal periodical assessments. • Student grades are available and posted in the class. 		

c- Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(20) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modeling	(15) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total			(100) marks

11- List of references:

a- Course notes

- The lecturer notes, The researches out hands and handouts

b- Required books

- طارق فاروق, تحليل الموقع, مؤسسة سكاى للكتاب, 2014
- Neufert, Ernst and Peter, Neufert Architects' Data, Wiley-Blackwell , 2012)
- Jtart , " World Architecture 3 Hotel Building " , 2012
- Sibylle Kramer , " Colleges & Univrsities Educational Spaces " , 2014
- A. Peter Fawcett, architecture :design notebook, 2nd edition, Architectural Press,2003
- Steele, J., 2001,"Architecture Today", 2nd Ed., Phaeton Press Limited, London, UK.
- Jencks, C., 2000, "Architecture 2000 and Beyond", John Wiley & Sons Ltd, UK .
- Architecture competition annual VI 2016 (Education & Sports / Office & Terminal / Urban Planning & Distribution).
- Jinguang Shouhui, 2016, **The New Model of Landscape Hand Drawings**,

c- Recommended books

- None.

d- Periodicals, Web sites, etc

- Architectural record, Published monthly by the McGraw – Hill companies
- Al – Bena Magazine, Published monthly by Medina Publishing Inc., Kingdom of Saudi Arabia.
- Electronic Pub. URL: www.greatbuildings.com



12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Site visits
5. Google Class Room
6. E-Learning
7. References in library

13- Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours

Course Instructor	
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: ARCH 330	Course Name Building construction IV
---------------------------------	--

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/20108
Date of course operation	2023-2024

B- Basic Information

Title	Building construction IV
Code	ARCH 330
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	5 Hrs.
Total	6 Hrs.
Prerequisite	ARCH 320
Instructor name/Email	Prof. Dr. Ahmed Hanafy

C- Professional Information

1- Course core:

The course aims to Study various types of details for internal and external finishes (walls- floors- doors- windows- ceiling), and special structures.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of building construction vocabularies and drafting symbolism.
- oC2 Studying different types of floors
- oC3 Studying wood works (floors - doors and windows)
- oC4 Studying Iron and aluminum works (doors and windows)
- oC5 Studying Whitening works

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the construction design process
- O2 Interpret in the supervision process in the sites

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O1, O2
oC3	O1, O2
oC4	O1
oC5	O1

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify various types of details for internal and external finishes.
- Lo2 Explain and discuss special structure systems.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Practice research to investigate the various types of details for internal and external finishes (walls- floors- doors- windows- ceiling), and special structures.
- Lo4 Draw various details for the internal and external elements of the building
- Lo5 Conduct physical and multimedia modeling



c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 collaborate effectively within multidisciplinary team and communicate effectively in conducting researches, physical and multimedia modeling

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.10 Identify structural design, construction, technology and engineering problems associated with building designs.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.
- Lo.24 Generate working drawings and workshop drawings matching to the designs.
- Lo.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1&Lo.10
3	Lo3	Lo.18
4	Lo4	Lo.24
5	Lo5	Lo.20
6	Lo6	Lo.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction, course overview	1	0	5	Lo1, Lo2
2	Study types of different floor (internal – external)	1	0	5	Lo1, Lo2, Lo4
3	Various structural system	1	0	5	Lo1, Lo2, Lo4
4	Wood floor	1	0	5	Lo1, Lo2, Lo4
5	Wood floor (parquet)	1	0	5	Lo1, Lo2, Lo4
6	Research discussion (floors)	1	0	5	Lo1, Lo3, Lo6
7	Study simple doors (carpentry)	1	0	5	Lo1, Lo2, Lo4
8	Midterm				Lo1, Lo2, Lo4
9	Study simple doors (carpentry)	1	0	5	Lo1, Lo2, Lo4, Lo5
10	Study simple windows (carpentry)	1	0	5	Lo1, Lo2, Lo4, Lo5
11	Study simple windows (aluminum)	1	0	5	Lo1, Lo2, Lo4, Lo5
12	Research discussion (aluminum and plastic)	1	0	5	Lo1, Lo3, Lo6
13	Visit the Window Rex exhibition	1	0	5	Lo1
14	Research discussion (iron and glass)	1	0	5	Lo1, Lo3, Lo6
15	Research discussion (Whiteness and paints)	1	0	5	Lo1, Lo3, Lo6
16	Revision	1	0	5	Lo1, Lo2
17	Final exam				Lo1, Lo2, Lo4
Total hours		14	0	70	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√		√	√			√	√	√	√	√	√
Lo2	√	√						√	√	√	√	√	√
Lo3		√								√	√		
Lo4		√								√	√		
Lo5		√								√	√		√
Lo6		√							√	√	√		

Notes:

- The research concerns the cooperative work, the discussion, and presentations.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.



10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√	√	√	√
Lo2	√	√	√	√				√	√	√	√
Lo3									√	√	
Lo4										√	
Lo5	√	√	√	√						√	√
Lo6									√	√	√

b. Time schedule of assessment

Quizzes/ Class works	Week (5, 13)
Discussions	Every week for any student
Presentations	Week (6,12,14,15)
Sheets and Sketches	Weekly
Researches and reports	Week (6,12,14,15)
Practical modelling	Week (9 10, 11)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

quiz	(5) marks	(40) marks
Reports	(5) marks	
Classwork	(5) marks	
Project (Semi-final)	(5) marks	
Project (Final)	(5) marks	
Attendance	(5) marks	
Mid-term exam	(15) marks	(60) marks
final exam	(60) marks	
Total	(100) marks	

11-List of references:

- e- Course notes – Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
- f- Required books
- 1- انشاء المباني أ.م. د/ احمد حنفي (دار الكتب والوثائق المصرية رقم الإيداع: 7993/2016)
 - 2- انشاء المباني 1 د خالد اللبثي
 - 3- الموسوعة الهندسة المعمارية م/ عبد اللطيف أبو العطا البقري
 - 4- تشبيد المباني د فاروق عباس حيدر و م/ عمر فاروق حيدر
 - 5- Architects Guide
 - 6- Materials for Architects and Builders
 - 7- MG Shah&C M kale, Principles of Building Drawing,2017
 - 8- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
 - 9- Heungchae Jung, Details Architecture Annu Facility) A&C&Publishing Co.Ltd.2018.
- g- Recommended books – عبد اللطيف أبو العطا البقري , " جزء 1 المنشأة المعمارية (التصميمات الانشائية / الكميات والمواصفات / دراسة العطاءات) " , 2009
- h- Periodicals, Web sites, etc. <http://products.construction.com/> - Sweets Construction.



12-Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities

- Extra assignments
- On line extra teaching hours

Course Instructor:	Ass. Prof. Ahmed Hanafy
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 318	Concepts of Urban Planning
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Concepts of Urban Planning
Code	ARCH 318
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 213
Instructor name/Email	Dr. Fahima El Shahed Fahima.elshahed@gmail.com

C- Professional Information

1- Course core:

Coverage the history of city planning in various eras, as well as the most important theories of planning. The curriculum covers the concepts and terminology of urban planning including planning unites of the city. It also ensures the definition of deferent levels of planning and relations between them (national level, regional level and local level) and clarifying the methodologies of preparing the strategic plans at the local level. Also cover the concepts of sustainability within the city's sustainable, eco-friendly city, smart city..etc.

2- Course Learning Objectives: oC

- oC1 Understanding the history and development of the city planning.
- oC2 Understanding the relationship between national regional and local (city/village) planning levels and their respective roles.
- oC3 Understanding sustainability meaning in planning.
- oC4 Understanding the steps of preparation the strategic plan starting from data collection till how to choose the proposed alternative to development.

3- Program objectives served by the course:

- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 Gain students scientific research skills.
- O6 Developing students' professional skills and the ability to self- and continuous learning.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O3, O5
oC2	O2, O6
oC3	O3
oC4	O2, O3



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain the methodologies of planning cities and the factors affecting these methodologies.
- Lo2 Define the planning terminologies.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Conduct researches to differentiate between methodologies of planning cities and how sustainability can appear in such methodologies.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Work in groups while conducting and presenting researches.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.1&lo.6
3	Lo3	Lo.18
4	Lo4	Lo.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hr.	LOs
1	-Introducing the course and its objectives. -Explanation of assignment.	2	0	0	Lo1, Lo2
2	- City (concepts and definitions).	2	0	0	Lo1, Lo2
3	- Cities of ancient Egyptian civilization.	2	0	0	Lo1, Lo2
4	- Cities of Mesopotamia civilization. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
5	- Cities of Greek Civilization - Quiz 1.	2	0	0	Lo1, Lo2
6	- Cities of Roman civilization. - Cities of Islamic era. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
7	- Cities of the Middle Ages. - Cities of the Renaissance and the Baroque era	2	0	0	Lo1, Lo2
8	Midterm exam				Lo1, Lo2
9	- Post-industrial cities. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
10	- Post-industrial cities. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
11	- Theories of Planning. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
12	- Theories of Planning. - Follow-up research	2	0	0	Lo1, Lo2, Lo3, Lo4
13	- Concepts and levels of Planning. - Quiz 2	2	0	0	Lo1, Lo2
14	- Concepts of sustainability. - Final feedback of Research.	2	0	0	Lo1, Lo2
15	- Final Research.	2	0	0	Lo1, Lo2, Lo1, Lo2, Lo3, Lo4
16	Final exam				Lo1, Lo2
	Total hours	28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√							√	√	√	√	√	
Lo2	√							√	√	√	√	√	
Lo3									√	√			
Lo4										√	√		

Notes

- The site visit, Presentations and Movies, self- learning and the Cooperative work raises in the research and Project.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√					√	√	√	
Lo2	√	√	√					√	√	√	
Lo3									√		
Lo4										√	

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13)
Discussions		Week (4, 6, 9, 10, 11,12,15)
Presentations		Week (4, 6, 9, 10, 11,12,15)
Researches and reports		Week (4, 6, 9, 10, 11,12,15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions		(10) marks	
Presentations			
Researches and reports			
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

a. Course notes b. Required books

- Lecture notes and power points.
- كتاب التخطيط العمراني - الجزء الأول - د/ شفق الوكيل
- كتاب أسس ونظريات التخطيط العمراني - عام 1997 - د/ عنتر أبو قورين
- كتاب: "التخطيط الحضري - مارس 2017 - د/ عنتر أبو قورين
- كتاب "تخطيط المدن - أسلوب ومراحل" - د/ عاطف حمزة
- كتاب "التخطيط العمراني من منظور جغرافي" - ديسمبر 2017 - د/ مؤمن محمد ذيب نصر
- كتاب "تخطيط المدن" - د/ أسامة خصاونة
- كتاب "تخطيط المدن" - د/ خالد علام



c. Recommended books

- Smith, Michael E. (May 2005). "City Size in Late Post-Classic Mesoamerica"(PDF). Journal of Urban History. Beverley Hills, CA: SAGE Publications. 31 (4): 403- 434. OCLC 1798556. doi:10.1177/0096144204274396.
- Urban planning in ancient Egypt
- Morris 1972, pp. 39-41, 51-60; Kolb 1984, pp. 169-238.
- Benevolo, Leonardo (1993). Die Geschichte der Stadt. Frankfurt am Main/New York. pp. 256-267.
- Harris, W. (1989). "Invisible Cities: the Beginning of Etruscan Urbanization". Atti del Secondo Congresso Internazionale Etrusco. Roma, 1989. pp. 375-392. p. 85. The Etruscans were, in their turn, probably also influenced in this respect by Greek and Hellenic culture.
- Jerke, Porter & Lassar (2008), pp. 8–9: "In his [Mark Salette of Gehry Partners] view, the core qualities of good design—loosely based on principles laid down by Vitruvius in the first century B.C. and countless reconceptualizations since—
- John Julius Norwich 2008, The Great Cities in History, Thames & Hudson generally are functionality and durability, contextual compatibility, and enduring respect and value."
- Demandt, Alexander (1998) "Die Kelten". München: Verlag Ch. Beck. In fact, many sites where the Romans created towns, such as Paris, Vienna and Bratislava, had previously been Celtic settlements of more or less urban character
- www.rudi.net
- www.scribd.com
- www.balaq.com
- www.urbandesign.org
- www.census.gov/geo/www/
- www.tpoint.net/neighbor/tre.html

d. Periodicals, Web sites, etc

12- Facilities required for teaching and learning:

- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor	Dr. Fahima El-Shahed
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code:	Course Name
ARCH 206	Environmental Control Systems & Design

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of Education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Environmental Control Systems & Design
Code	ARC 206
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 205
Instructor name/Email	Dr Nadia Ahmed Mohammed Nadya.ahmed@sva.edu.eg

C- Professional Information

1- Course core:

The course aims to develop a greater focus on holistic and sustainable approaches to design by studying the relationship between humans, the environment and buildings, examining the impacts of environmental elements (solar radiation, temperature, humidity, air movement) on the energy efficiency of the building, studying the thermal comfort of human, addressing the bioclimatic design and passive design as a sustainable approach. The course enables students to apply passive design strategies to an architectural project.

2- Course Learning Objectives: oC

- oC1 Understanding the relationships between humans, environment and building.
- oC2 Enable students to examine the impacts of environmental elements (solar radiation, temperature, humidity, air movement) on the energy efficiency of the building.
- oC3 Enable students to understand the thermal comfort of humans, the thermal performance of buildings, bioclimatic design, and passive design methods as sustainable approaches.
- oC4 Think creatively and innovatively in problem-solving.
- oC5 Work in stressful environments and within constraints, and manage tasks, time and resources effectively.
- oC6 Building student's capabilities in conducting research and investigation using various techniques and methods of collecting and analyzing data

3- Program objectives served by the course:

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 Gain students' scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modelling process.



4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O3	oC1, oC2, oC3
O5	oC6
O6	oC4, oC5
O7	oC6

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the impacts of environmental elements (solar radiation, temperature, humidity, air movement) on the energy efficiency of the building.
- Lo2 Define bioclimatic design, and passive design methods as sustainable approaches.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Conduct researches to display and analyze case studies for environmental and sustainable buildings and projects.
- Lo4 Design Shading devices Glazing

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Cooperate effectively in groups to conduct and present researches

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.5 Display 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
- Lo.18 Conduct techniques and methods of investigation.
- Lo.23 Produce environmental, conservation and rehabilitation designs.
- Lo.27 Work efficiently as an individual and share in team works.
- Lo.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

7 -The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1 & lo.5
2	Lo2	Lo.1 & lo.5
3	Lo3	Lo.18
4	Lo4	Lo.23
5	Lo5	Lo.27&lo.28

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hr.	Los
1	Introduction, course overview, Developing the relationship between humans, buildings and the natural environment through ages	2	0	0	Lo1, Lo2
2	Developing the relationship between humans, buildings and the natural environment	2	0	0	Lo1, Lo2
3	Vernacular Architecture: Environmental Analysis of some cases from Egypt	2	0	0	Lo1, Lo2
4	The building (Thermal behaviour of Buildings)	2	0	0	Lo1, Lo2
5	Quiz + Research discussion	2	0	0	Lo1, Lo2, Lo3, Lo5
-6	The Environment elements: The sun, solar	2	0	0	Lo1, Lo2



	radiation, sun position, measuring the azimuth at an altitude angle				
7	Elements of climate (Temperature, Wind, Humidity, etc.)	2	0	0	Lo1, Lo2
8	Midterm Exam (MT)				Lo1, Lo2
9	The Human: Thermal Balance and Comfort The psychometric chart	2	0	0	Lo1, Lo2
10	Bioclimatic Design	2	0	0	Lo1, Lo2
11	Passive Cooling and heating strategies Quiz 2	2	0	0	Lo1, Lo2
12	Natural Ventilation	2	0	0	Lo1, Lo2
13	Fenestration; size, position and orientation of windows	2	0	0	Lo1, Lo2
14	Design Shading devices Glazing	2	0	0	Lo1, Lo2, Lo4
15	Final submission of Research and discussion	2	0	0	Lo1, Lo2, Lo3, Lo5
16	Final Written Exam (Final)				Lo1, Lo2, Lo4
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods													
	Online / face-to-face	lectures	sheets/ sketches	projects	Problem-solving	Brainstorming	Practical: lab	discoverin	Site visit	Reports/ researches	Cooperativ e-work	presentatio n	Discussion	Modeling
Lo1	√		√						√	√	√	√	√	
Lo2	√		√						√	√	√	√	√	
Lo3									√	√	√			
Lo4			√											
Lo5			√							√	√	√		

Notes

- The research concerns cooperative work, discussion, site visits and presentations.
- Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.

10- Student Assessment Method

a. Assessment methods and their relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√	√	√	
Lo2	√	√	√	√				√	√	√	
Lo3									√	√	
Lo4	√	√	√	√							
Lo5									√	√	

b. Schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions	Week 5, 15	
Presentations	Week 5, 15	
Researches and reports	Week 5,15	
Sheets/ sketches	Week 14	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	



c. Grading system			
Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Sheets/ sketches		10 marks	
Researches and reports			
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total			(100marks)

11-List of references:

d. Course notes
e. Required books

- Lecture notes and handouts.
- Szokolay.Steven, Introduction to architectural science, the basis of sustainable design, Architectural Press, Oxford, 2004
- Fathy. Hassan, Natural Energy and Vernacular Architecture, Principles and Examples regarding Hot Arid Climates, United Nations University Press,1986
- Olgyay, V., Design with Climate, Van Nostrand Reinhold, New York, 1992.
- Building Services Design for Energy Efficient Buildings, Paul&Savvas&Maria&, Routledge, 2021

f. Recommended books

- Allen, Edward, How buildings work-the natural order of architecture, Oxford University Press, third edition, 2005
- Watson, D. (Ed.), The Energy Design Handbook, Chapter 1, The American Institute of Architects Press, Washington, DC
- Szokolay, S. V., Thermal Design of Buildings, RAIA Education Division, Canberra, Australia, 1987.

d. Periodicals, Web sites, etc

- [Climate Consultant | Society of Building Science Educators \(sbse.org\)](http://sbse.org)
- EnergyPlus
- [Home | World Weather Information Service \(wmo. int\)](http://wmo.int)

12- Facilities required for teaching and learning:

- Whiteboard + coloured pens
- Data show for presentation
- Site visits
- Google Classroom
- E-Learning
- References in the library

13-Requirements for Disable facilities:

- Extra assignments
- Online extra teaching hours

Course instructor	Dr Nadia Ahmed
program Coordinator	Dr Nadia Ahmed
Head of the Department	Dr Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code:	Course Name
ARCH 208	Three-Dimensional Design

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation as NARS 2018:	2023-2024

B-Basic Information

Title	Three-Dimensional Studio
Code	ARCH 208
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical lab	3 Hrs.
Total	4 Hrs.
Prerequisite	ARCH 202
Instructor name/Email	Dr. Nadia Ahmed Nadya.ahmed@sva.edu.eg

C- Professional Information

1- Course core:

Basic concepts and fundamentals of visualization, thinking, and design of simple forms in three dimensions. Presentation and communication skills using simple three-dimensional modeling exercises in manual and digital format. Workshop skills are introduced and applied. Sessions in design studio, computer lab and workshop.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of 3D Concepts.
- oC2 Studying the computer applications in developing a digital computer model of buildings
- oC3 Construct accurate 3D building models.
- oC4 Studying how to Create animations and walkthroughs of the building.
- oC5 Understanding how to Present the project digitally.
- oC6 Studying 3D modeling, rendering, animation, as well as presentation (increased use of IT or web based reference material, changes in content as a result of new research in the field).

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the design process
- O2 Interpret in the analysis process within the simulation methods.
- O3 Develop the skills of using new technologies in the design, presentation and the implementation process.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O2
oC2	O2, O3
oC3	O1, O2
oC4	O1
oC5	O1, O3
oC6	O2, O3

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify the specific orders that transform the 2 d drawings into 3 d drawings

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Produce professional technical 3 d modeling's using computer-aided drawings' techniques.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo3 Work efficiently in the lab.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.

Lo.27 Work efficiently as an individual and share in team works

Lo.29 Use creative, innovative and flexible thinking.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.20
3	Lo3	Lo.27&lo.29

8- Course Content/ relation of contents to los of the course

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical lab hr.	LOs
1	Introduction: Introduction of 3D environment/ 3D Coordinating systems/3D viewing	1	0	3	Lo1
2	Drawing 3d: Drawing with coordinates in 3D/ Ortho & object snap in 3D/ modifying in 3D	1	0	3	Lo1, Lo2, Lo3
3	Solids: Simple Solids - Primitives/Advanced solids/Solid editing	1	0	3	Lo1, Lo2, Lo3
4	Surfaces: Creating & editing surfaces	1	0	3	Lo1, Lo2, Lo3
5	Meshes: Create simple meshes & Advanced meshes/Editing meshes	1	0	3	Lo1, Lo2, Lo3
6	Coordinating systems: W.C.S-U.C.S. & Dynamic U.C. S	1	0	3	Lo1, Lo2, Lo3
7	3D Operation: 3D Move, 3D Rotate, 3D arrays, 3D Mirror	1	0	3	Lo1, Lo2, Lo3
8	Midterm	1hr			Lo1, Lo2, Lo3
9	User Interface	1	0	3	Lo1, Lo2, Lo3
10	Modeling: Stack & Basic Modifiers /Shapes & Editable Spline /Spline-Based Modifiers	1	0	3	Lo1, Lo2, Lo3
11	Lighting (Vray): Standard Lights (Direct, Omni, Spot) Vray Lights (Vary Light, Vray IES, Vray Sun)	1	0	3	Lo1, Lo2, Lo3
12	Materials: Vray Material & Vray Light	1	0	3	Lo1, Lo2, Lo3



	Material /Bitmap /UVW Map Modifier /Map Scaler Modifier				
13	Rendering (Vray) and Camera Animation	1	0	3	Lo1, Lo2, Lo3
14	Course Project	1	0	3	Lo1, Lo2, Lo3
15	Final Submission	1	0	3	Lo1, Lo2, Lo3
16	Final exam			2hrs	Lo1, Lo2, Lo3
	Total hours	14	0	42	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods										
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	presentation	Discussion	modeling	
Lo1	√	√	√			√				√	
Lo2	√	√	√			√		√		√	
Lo3		√	√			√	√	√		√	

Notes:

- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment method

g. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√	√					√
Lo2	√	√	√	√	√	√				√	√
Lo3				√	√	√				√	√

h. Time schedule of assessment

Presentations	Weekly
Practical modelling project	Weekly
Attendance	Week (14, 15)
Mid-term exam	weekly
final exam	Week (8)
	Week (16)

i. Grading system

quizzes	(10) marks	(25) marks	(40) marks
Lab practical modelling sheets/project	(10) marks		
Attendance	(5) marks		
Mid-term exam	(15) marks	(60) marks	(60) marks
final exam	(60) marks		
Total		(100) marks	

11- List of references:

e. Course notes

f. Required books

- Lecture notes and hand outs

- Kelly L. Murdock's 'Autodesk 3ds Max 2015 Complete Reference Guide', 2014
- Brian L, Smith '3ds Max Design Architectural Visualization: For Intermediate Users' 1st Edition
- The Making of Things: Modeling Processes and Effects in Architecture, Frank&Angela&el., Routledge, 2021.
- The Art of City Sketching: A Field Manual, Michael C. Abrams,



g. Recommended books
h. Periodicals, Web sites, etc

Routledge, 2021.
- Elisângela Vilar, Ernesto Filgueiras, Virtual and Augmented Reality for Architecture and Design, 2022
- SVA library books
- Electronic Pub. URL: www.autodesk.com, www. www.photoshop.com/

12-Facilities required for teaching and learning:

1. White board + colored pens
2. Data show for presentation
3. Lab for computer fitted by 3 d architectural programs
4. Google Class Room
5. E-Learning
6. References in library

13-Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	Dr. Nadia Ahmed
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:	Course Name
ARCH 305	Shade, Shadow & Perspective 2
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009 -2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Shade, shadow & perspective 2
Code	ARCH 305
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Practical/Studio	5 Hrs.
Total	6 Hrs.
Prerequisite	ARCH 220
Instructor name/Email	Dr. sherihan adel dr.sherihan.adel@gmail.com

C- Professional Information

1- Course core:

The course focuses on shade and shadows theories to use this theories in design concept drawing in plans and elevations, develop imaginative skills in the design process , imagining a three-dimensional of building and develop hand drawing skills .

2- Course Learning Objectives: oC

- oC1 The course aims to enhance the students' skills of imagining a three-dimensional form through studying fundamental basics of drawing perspective.
- oC2 Conducting the study of drawing shade and shadows theories.
- oC3 Applying shade & shadow it on points, lines, two dimensional shapes, three dimensional, and simple architectural forms.
- oC4 Enables students to draw perspectives, shade and shadow of simple architectural forms and elements.
- oC5 Introducing presentation and communication skills using simple three dimensional modeling exercises in manual and digital format.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O7, O9
oC2	O1, O7, O9
oC3	O7
oC4	O3, O8
oC5	O1, O7, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Identify the various aspects of merging the shadow in the architectural drawings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Produce 2d drawings (plans, elevations, layouts) while applying the shadow.

Lo3 Draw particular and free hand perspectives while merging images of places and times.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo4 Display imagination and creativity.

Lo5 Work in stressful environment and within constraints

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.18 Conduct techniques and methods of investigation

Lo.24 Generate working drawings and workshop drawings matching to the designs.

Lo.29 Use creative, innovative and flexible thinking.

Lo.30 Acquire entrepreneurial and leadership skills to anticipate and respond to new situations.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.24
3	Lo3	Lo.18
4	Lo4	Lo.29
5	Lo5	Lo.30

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	Studio hours	Los
1	- Course introduction and its objectives	1	0	5	Lo1
2	Point shade	1	0	5	Lo1, Lo2, Lo4, Lo5
3	Lines Shadow	1	0	5	Lo1, Lo2, Lo4, Lo5
4	Basic shape shading (part 1)	1	0	5	Lo1, Lo2, Lo4, Lo5
5	Quiz 1	1	0	5	Lo1, Lo2, Lo4, Lo5
6	Basic shape shading (part 2)	1	0	5	Lo1, Lo2, Lo4, Lo5
7	Basic shape shading (part 3)	1	0	5	Lo1, Lo2, Lo4, Lo5
8	Midterm exam				
9	Shade in plan & elevation (part 1)	1	0	5	Lo1, Lo2, Lo4, Lo5
10	Shade in plan & elevation (part 2)	1	0	5	Lo1, Lo2, Lo4, Lo5
11	Perspective 1	1	0	5	Lo1, Lo2, Lo3, Lo4, Lo5
12	Perspective 2	1	0	5	Lo1, Lo2, Lo3, Lo4, Lo5
13	- Quiz II	1	0	5	Lo1, Lo2, Lo3, Lo4,



					Lo5
14	Perspective 3	1	0	5	Lo1, Lo2,Lo3, Lo4, Lo5
15	Perspective 4	1	0	5	Lo1, Lo2, .Lo3, Lo4, Lo5
16	Final exam				Lo1, Lo2, .Lo3, Lo4, Lo5
Total hours		14	0	70	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods													
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling	
Lo1	√	√						√			√		√	
Lo2		√						√			√		√	
Lo3		√						√			√		√	
Lo4		√						√					√	
Lo5		√					√	√					√	

Notes

- Site visit concerns the free hand sckeches.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√						√	√
Lo2	√	√	√	√						√	√
Lo3	√	√	√	√						√	√
Lo4	√	√	√	√							√
Lo5	√	√	√	√							√

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (1, 2)	Week (5) Week (13)
Discussions		weekly
Presentations		weekly
Sheets and Sketches		weekly
Practical modelling		Week (11,12,13,14,15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system

Quizzes	Quiz (1) Quiz (2)	(5) marks (5) marks	(60) marks
Discussions	(5) %	(25) marks	
Sheets and Sketches	0		
Researches and reports	(10) %		
the Projects	(30) %		
Practical modeling	(15) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	



11- List of references:

a. Course notes

– Lecture notes and handouts.

b. Required books

- Jessica & Jack, 2012, "Perspectives & Sketching for Designers".
- Joseph Damelio , 2008 , perspective drawing hand book .
- E.l.koller , 2014 , light , shade & shadow .
- Gatherine v.holmes , 2011 , shading techniques.
- Craig Attebery, The Complete Guide to Perspective Drawing From One-Point to Six-Point, Routledge Taylor&Francis Group, 2018.
- Tim Fisher, "drawing masterclass Perspective", search press, 2019.

c. Recommended books

– SVA library books

d. Periodicals, Web sites, etc

none

12- Facilities required for teaching and learning:

- References in library
- Appropriate teaching design studios including presentation board, data show
- Google classroom
- E- learning Moodle

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Sherihan Adel
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

A- Basic Information

Course Specification

Course Code: CVEE 355	Course Name Reinforced Concrete Design 2
<u>A- Affiliation</u>	
Relevant program:	Civil Engineering program & Architecture And design program
Department offering the program:	Civil Engineering department & Architecture And design department
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Reinforced Concrete Design 2
Code	CVEE 355
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	CVEE 354
Instructor name/Email	

C- Professional Information

1- Course core:

Design of solid slabs (one-way and two-way solid slabs), Design of Hollow block slabs (one-way and two-way slabs), Design of paneled beam slabs, design of flat slabs, detailing of reinforcing steel.

2- Course Learning Objectives: (oc)

- Oc1 Understand the concept of load transfer on slabs.
- Oc2 Compute the loads acting on slabs using load distribution.
- Oc3 Develop safe design for solid slab design.
- Oc4 Develop safe design for Hollow Block slab.
- Oc5 Develop a safe design for the paneled beam slab.
- Oc6 Develop a safe design for the Arch slab.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify and compute the design loads on reinforced concrete solid slabs.
- Lo2 Estimate the Behavior of punching shear-reinforced concrete in flat slabs.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Design of reinforced concrete Hollow block slabs (one-way and two-way slabs).
- Lo4 Design of paneled beam slabs and design of flat slabs.
- Lo5 Plan, design, construct, operate, control and carry out maintenance of all types of systems.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Draw reinforcement details for reinforced concrete on all slabs.

4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1	Identify, formulate basic science and mathematics.
LO.3	Assess and evaluate findings.
LO.16	Apply engineering design processes to produce cost-effective solutions that meet specified needs.
LO.22	Produce designs that meet building users' requirements.
LO.32	Use presentations to Transform design concepts into buildings and integrate plans into overall planning

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.3
3	Lo3	LO.16
4	Lo4	LO.16
5	Lo5	LO.22
6	Lo6	LO.32

6- Course Content and they're to the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction	2	2	0	Lo1
2	Load distribution on slab	2	2	0	Lo1
3	One-way Solid slab design	2	2	0	Lo1,Lo5
4	Two-way Solid slab design	2	2	0	Lo1, Lo2
5	One-way hollow block slab design.	2	2	0	Lo2, Lo5
6	two-way hollow block slab design	2	2	0	Lo2, Lo5
7	Quiz (1)	2	2	0	Lo1, Lo2
8	Mid-term exam	Mid-term exam			Lo1, Lo2, Lo5
9	Introduction to Flat slab design	2	2	0	Lo3, Lo5
10	Design of Flat slab with drop panel	2	2	0	Lo3, Lo5
11	Design of flat slab with column head	2	2	0	Lo4, Lo6
12	Design of paneled beam slab	2	2	0	Lo3, Lo5
13	Design of arch slab	2	2	0	Lo3 Lo5
14	Revision for all course content	2	2	0	Lo4, Lo5
15	Quiz (2)	2	2	0	Lo3, Lo4
16	Final exam	Final exam			Lo3, Lo6
Total hours		28	28	0	

7- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials: sheets/sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√		√	√							√	
Lo2	√	√		√	√							√	
Lo3	√	√		√	√								
Lo4	√	√		√	√								
Lo5	√	√		√	√								
Lo6	√	√		√	√								

Notes

- The research concerns the cooperative work, the discussion, the site visit, and the presentations.
- The Tutorials concern brain storming and the problem-solving.
- Online lectures are used as hybrid learning, but in the case of totally online learning all the used teaching and learning methods will be online.

8- Student assessment Method

a- Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	Quizzes	Midterm exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√			
Lo2	√	√	√	√				√			
Lo3	√	√	√	√							
Lo4	√	√	√	√							
Lo5	√	√	√	√							
Lo6	√	√	√	√							
b- Schedule of assessment											
Quizzes			Quiz (1)			Week (14)					
			Quiz (2)			Week (15)					
Discussions						Weekly					
Sheets and Sketches						Week (7-10-11-13)					
Attendance						Weekly					
Mid-term exam						Week (8)					
final exam						Week (16)					
c- Grading system											
Quizzes			Quiz (1)			(5) marks					
			Quiz (2)			(5) marks					
Discussions			(40) %			(25) marks					
Sketches			(60) %								
Attendance						(5) marks					
Mid-term exam						(20) marks					
final exam						(40) marks					
Total						(100) marks					

9- List of references:

a- CourseNotes

Lecture notes and handouts.

b- required books

Design of Reinforced Concrete Structure - Volume 2 - Prof. Mashhour Ghoneim & Prof. Mahmoud El-Mihilmy.

c- Recommended books

Egyptian Code design for reinforced concrete2020.

d- periodicals, Web sites, etc.

none

10- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google Classroom
- E-learning

11- Requirements for Disable facilities:

- Online teaching hours if it is needed
- Extra assignments

Course Instructor	
program coordinator	Civil Engineering
Head of the Department	Dr. Ashraf Abdel Khaliq Mostafa
Date:	2023-2024



Course Specification

A- Basic Information

Course Code:	Course Name
CVEE 352	Soil mechanics and foundation
<u>A- Affiliation</u>	
Relevant program:	Civil Engineering program & Architecture And design program
Department offering the program:	Civil Engineering department & Architecture And design department
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Soil mechanics and foundation
Code	CVEE 352
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	2 Hrs.
Total	4 Hrs.
Prerequisite	-
Instructor name/Email	

C- Professional Information

1- Course Core

A study of this course will be enabling the student to know the fundamentals of soil mechanics and its physical and mechanical properties and its application in the foundation design. This course includes introduction and definitions, index properties of soil, classification of soil, internal and external stresses in soil, permeability of soil, consolidation, compaction, shear strength, earth pressure, bearing capacity of soil, design of foundation.

2- Course Learning Objectives: (oc)

- oc1 Introducing and defining soil mechanics.
- oc2 Classifying types of soil and referring to their index properties.
- Oc3 Pointing to the internal and external stresses in the soil.
- Oc4 Study the strength and the earth pressure.
- Oc5 Applications on Bearing capacity problems.
- Oc6 Developing the skills of the student to design foundations.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify definitions of soil mechanics.
- Lo2 Classify the index properties and classification of soil.
- Lo3 Solve engineering problems concerning internal and external stresses in soil and shear strength.
- Lo4 Solve Bearing capacity problems.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Use standards and codes to solve problems

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Use talent in applying design of foundation.



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.13 Solve complex engineering problems.
- LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.
- LO.29 Use creative, innovative and flexible thinking.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1 & LO.2
3	Lo3	LO.2 & LO.13
4	Lo4	LO.13
5	Lo5	LO.17
6	Lo6	LO.29

6- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction	2	2	0	Lo1
2	definitions of soil mechanics.	2	2	0	Lo1, Lo2
3	the index properties of soil.	2	2	0	Lo1, Lo2
4	classification of soil.	2	2	0	Lo1, Lo5
5	Soil compaction.	2	2	0	Lo1, Lo5
6	shear strength.	2	2	0	Lo1, Lo3, Lo4
7	shear strength.	2	2	0	Lo1, Lo3, Lo4
8	Mid-term exam	1			Lo1, Lo2, Lo3, Lo4, Lo5
9	earth pressure	2	2	0	Lo1, Lo2, Lo3, Lo4
10	earth pressure	2	2	0	Lo1, Lo2, Lo3, Lo4
11	Bearing capacity of soil	2	2	0	Lo1, Lo2, Lo3, Lo4
12	Bearing `capacity of soil	2	2	0	Lo1, Lo2, Lo5, Lo6
13	design of foundation.	2	2	0	Lo1, Lo2, Lo5, Lo6
14	design of foundation.	2	2	0	Lo1, Lo2, Lo5, Lo6
15	Revision.	2	2	0	Lo1: Lo6
16	Final exam	2			Lo1: Lo6
Total hours		28	28	0	

7- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods												
	Online / face-to-face lectures	Tutorials: sheets/sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√		√	√				√			√	
Lo2	√	√		√	√				√			√	
Lo3	√	√		√	√							√	
Lo4	√	√		√	√							√	
Lo5		√		√									
Lo6		√		√									

Notes: Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.

8- Student assessment Method

a- Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	Quizzes	Midterm exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√				√	√		
Lo2	√	√	√	√				√	√		
Lo3	√	√	√	√				√			
Lo4	√	√	√	√				√			
Lo5	√	√	√	√							
Lo6	√	√	√	√							

b- Schedule of assessment		
Quizzes	Quiz (1)	Week (6)
	Quiz (2)	Week (13)
Discussions	Every week - any student	
Sheets and Sketches	Week (7-10-13-15)	
Researches and reports	Week (13)	
Attendance	Weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	

c- Grading system			
Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	bonus	(10) marks	
Sheets and Sketches	(5) marks		
Researches and reports	(5) marks		
Attendance	(5) marks		
Mid-term exam	(15) marks		
final exam	(60) marks		
Total	(100) marks		

11- List of references:

- | | |
|--------------------------------|--|
| a- Course notes | Lecture notes |
| b- Rquired books | Soil mechanics (Dr/ Amr Radwan) |
| c- Recommended books | الكود المصري لميكانيكا التربه و الاساسات |
| d- Periodicals, Web sites, etc | www.caterpillar.com |

12- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- E- learning

13- Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments
-

Course Instructor:	
program Coordinator	Civil Engineering
Head of the Department	Dr. Ashraf Abdel khalik Mostafa
Date:	2023-2024



Fourth level courses

First semester (Fall)

No.	Cod	Course Name	Instructor
1	ARCH 403*	Architecture design 4	Ass.Prof. Hanaa Mousa
2	ARCH 345*	Working drawing 1	Ass. Prof. Ahmed Hanafi
3	ARCH 407*	Urban design and landscape	Dr. Fahima El-Shahed
4	ARCH 344	Acoustics and illumination	Prof. Osama Abdo
5	ARCH 303	Geographical information system	Prof. Reham Hafiz
6	ARCH 316	Advanced computer – aid architectural design	Dr. Fahima El-Shahed
7	ARCH 425	Technical installation	Prof. Osama Abdo
8	CVEE353	Structural steel design	Dr. Ashraf Abd El-Khalik



Course Specification

Course Code: ARCH 403	Course Name DESIGN 4
---------------------------------	--------------------------------

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	DESIGN4	
Code	ARCH 403	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs.
Lectures	1 Hrs.	
Practical/Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 402	
Instructor name/Email	Ass.Prof. Hanaa Mousa	

C- Professional Information

1- Course core:

The course represents a studio on smart buildings and high-tech architecture. Expanding on the 1970's theme of High-Tech architecture, this studio aims at redefining the role of cutting edge technology in design- both process and product. Digital technology has revolutionized the way we conceptualized, visualize, present and are eventually able to construct our buildings. Issues such as virtual architecture and smart buildings will be explored with regards to their viability and role in the future of architecture.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of architectural design and its principles.
- oC2 Studying the different stages of architectural design; project studies, site analysis, design concept, etc.
- oC3 Studying how to think spatially by using Three-dimensional models.
- oC4 Studying how to integrate a proper structure system with architectural design.
- oC5 Applying acquired knowledge in designing selected project.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O6 Develop students' professional skills and the ability to self- and continuous learning.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O6, O9
oC2	O2, O3
oC3	O1, O6
oC4	O1, O9
oC5	O2, O3, O1

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the principles of designing smart buildings and high-tech architecture. and the role of visualization in the designing process .

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Conduct researches and investigation using various techniques and methods of collecting and analyzing data.
- Lo3 create design concept that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability
- Lo4 develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work efficiently in design application, researches and modeling.
- Lo6 Display creativity in the design and in solving the project problems and constraints.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.18 Conduct techniques and methods of investigation.
- Lo.16 Apply engineering design processes to produce cost-effective solutions that meet specified needs.
- Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.
- Lo.27 Work efficiently as an individual and share in team works.
- Lo.29 Use creative, innovative and flexible thinking.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.18
3	Lo3	Lo.16
4	Lo4	Lo.20
5	Lo5	Lo.27
6	Lo6	Lo.29

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	Studio hr.	Los
1	- Course introduction and it is objectives - Define of the project site	1	0	7	Lo1
2	- The design process stages: - How to make the project studies The site analysis	1	0	7	Lo1, Lo2, Lo5



3	- Project studies and site analysis submission and discussion.	1	0	7	Lo1, Lo2, Lo5
4	- The design concept and zoning studies.	1	0	7	Lo1, lo3,Lo5 Lo6
5	- Concept development & Ground floor plan.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
6	- Ground floor plan development & first floor plan	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
7	- Final plans	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
8	Midterm exam				Lo1, lo3,Lo5, Lo5 Lo6
9	- Elevations & Sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
10	- Final elevations & sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
11	- Layout & Perspective/Isometric	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
12	- semifinal project submission	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
13	- How to present the final project	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
14	- Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
15	- Final Submission & discussion	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
16	Final exam				Lo1, lo3,Lo5, Lo5 Lo6
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√			√	√	√	√	√	√
Lo2		√								√			
Lo3		√	√	√	√								√
Lo4		√	√	√	√								
Lo5		√	√				√						
Lo6		√	√				√						

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course Los	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2									√		
Lo3	√	√	√	√	√						√
Lo4	√	√	√	√	√						
Lo5	√	√	√	√	√						
Lo6	√	√	√	√	√						



b- Time schedule of assessment		
Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions	Every week for any student	
Presentations and Movies	Every week for any student	
Sheets and Sketches	Weekly	
Researches and reports	Week (2, 3)	
the Projects	Semi Final	Week (14)
	Final	Week (15)
Practical modelling	Week (5, 6, 13)	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	
Notes:		
<ul style="list-style-type: none"> • Submission must be a periodical technical presentation. • Final submission is A1 paper and technical presentation. • The discussion and students' participants are very essential. • The evaluations are internal periodical assessments. • Student grades are available and posted in the class. 		

c- Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(20) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modeling	(15) %		
Attendance	(5) marks		
Mid-term exam	(20) marks		
final exam	(40) marks		
Total			(100) marks

11- List of references:

a- Course notes	- Student have to take written not based on the instructor's lecture
b- Required books	<ul style="list-style-type: none"> - ERNST NEUFERT, Architects Data, Esn Professional Books, London, 1992 - Jtart ,2012, “ World Architecture 3 Hotel Building “ - Sibylle Kramer , 2014 “ Colleges & Univrsities Educational Spaces “ - Ching, F., “Architecture – Form, Space and Order “,-2nd Ed. International Thomson Publishing Inc., New York, 1996. - Steele, J.,2001, “Architecture Today”, 2nd Ed., Phaeton Press Limited, London, UK. - Jencks, C., “Architecture 2000 and Beyond”, John Wiley & Sons Ltd, UK, 2000. - Paul, Laseau, 2012,“Graphic Thinking of Architects and Designers”, Reinhold Co., NY, USA, - David Fannon, Michelle Laboy, Peter Wiederspahn, The Architecture of Persistence: Designing for Future Use, 2022
c- Recommended books	<ul style="list-style-type: none"> • Jtart , " World Architecture 3 Hotel Building " , 2012 • Sibylle Kramer , " Colleges & Universities Educational Spaces " , 2014
d- Periodicals, Web sites, etc	<ul style="list-style-type: none"> • Architectural record, Published monthly by the McGraw – Hill companies • Al – Bena Magazine, Published monthly by Medina Publishing Inc., Kingdom of Saudi Arabia. • Electronic Pub. URL: www.greatbuildings.com


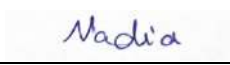
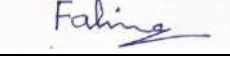


12- Facilities required for teaching and learning:

1. Design Studios fitted by white board + colored pens, Data show for presentation
2. Site visits
3. Google Classroom
4. E-Learning
5. References in library

13- Requirements for disabled facilities:

1. Extra assignments
2. Online extra teaching hours

Course Instructor	Assoc. Prof. Hanaa Mousa	
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 345	Working Drawings (I)

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Working Drawings (I)	
Code	ARCH 345	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs.
Lectures	2 Hrs.	
Studio	4 Hrs.	
Total	6 Hrs.	
Prerequisite	ARCH 330	
Instructor name/Email	Ass. Prof. Ahmed Hanafy	

C- Professional Information

1- Course core:

The course aims to introduce the basics of detailed execution drawings. Exercises on the preparation of detailed location and assembly drawings including detailed sections, detailed space drawings and assembly drawings for the coordination between different professions, in addition to signs, symbols and information systems. It entails the preparation of small-scale orthographic projections (plans, elevations, sections) generally referred to as the general drawings of the construction documents set. In addition, the site plan with its landscaping, are also dealt with. It also introduces students to the proper methods of the preparation and production of architectural working drawings.

2- Course Learning Objectives: oC

- oC1 introducing the basics of Working Drawings vocabularies and drafting symbols.
- oC2 Studying the roles of Working Drawings (plans – elevations – section- layout).
- oC3 Applying the knowledge acquired to prepare the preliminary drawing for multi floors building including plans, sections and elevations.
- oC4 Studying Concrete Stairs construction systems and Elevators through studying its roles.
- oC5 Studying Concrete Stairs drawings (sections – details)

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the construction design process
- O2 Interpret in the supervision process in the sites

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O1, O2
oC3	O1, O2
oC4	O1
oC5	O1



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify vocabularies, drafting symbols, and the initial drawings related in the role the working drawings.
- Lo2 Integrate structure system, building material, and construction elements into the working drawings

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Conduct physical and multimedia modeling
- Lo4 Produce professional drawings can be used as implement documents in the site.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.10 Identify structural design, construction, technology and engineering problems associated with building designs
- Lo.18 Conduct techniques and methods of investigation.
- Lo.22 Produce designs that meet building users' requirements

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.10
3	Lo3	Lo.18
4	Lo4	Lo.22

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	Studio hr.	LOs
1	Introduction, course overview	2	0	4	Lo1
2	Working drawing process and materials.	2	0	4	Lo1
3	Selected Working Projects	2	0	4	Lo1
4	Basic rules for plans projections	2	0	4	Lo1, Lo2, Lo4
5	Basic rules for plans projections	2	0	4	Lo3
6	Final project plans (Ground floor - Typical)	2	0	4	Lo1, Lo2, Lo4
7	Basic rules and operational Elevations Elevations drawing standards Examples of Elevations interfaces	2	0	4	Lo1, Lo2, Lo4
8	Midterm				Lo1, Lo2, Lo4
9	Basic rules for drawing Sections Standards for drawing executive Section	2	0	4	Lo1, Lo2, Lo4
10	Basics of Stairs Plan Concrete	2	0	4	Lo3
11	Basics of Stairs Section and Details Of Stairs	2	0	4	Lo1, Lo2, Lo4
12	Rules for drawing the layout executive	2	0	4	Lo3
13	Semi Final Project and Portfolio submission.	2	0	4	Lo1, Lo2, Lo3, Lo4
14	Final Submission & discussion	2	0	4	Lo1, Lo2, Lo4
15	Final revision	2	0	4	Lo1
16	Final exam				Lo1, Lo2, Lo4
Total hours		28	0	56	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOS	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√				√	√	√	√	√	√	√
Lo2		√	√	√	√								
Lo3									√				√
Lo4		√					√						

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√						
Lo3								√			√
Lo4	√	√	√	√	√						

b. Time schedule of assessment

Quizzes/ Class works	Every week for any student
Discussions	Every week for any student
Presentations	Week (13,14)
Sheets and Sketches	Weekly
Researches and reports	Week (10,12)
The Projects	Semi Final Final
Practical modelling	Week (13)
Attendance	Week (14)
Mid-term exam	Week (5, 13)
final exam	weekly
	Week (8)
	Week (15)

c. Grading system

Reports	(2)	(5) marks	(60) marks
Classwork	(10) marks	(30) marks	
Project (Semi-final)	(5) marks		
Project (Final)	(15) marks		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

11- List of references:

- | | |
|---|---|
| <p>e- Course notes</p> <p>f- Required books</p> <p>g- Recommended books</p> | <p>Lecture presentations, handouts by Prof. Dr. Ahmed Hanafi, S.E.</p> <ul style="list-style-type: none"> ▪ Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York. ▪ Francis D.K Ching , " Building Construction Illustrated 5 ed " , 2014 <p style="text-align: right;">- الرسومات التنفيذية أ.د محمد عبد الله
- التصميمات التنفيذية د هشام حسن، 2010</p> |
|---|---|



التصميمات التنفيذية د مجدي تمام
- المنشأة المعمارية الجزء الثاني م/ عبد اللطيف أبو العطا البقري
- أحمد القطان , " مبادئ التصميمات التنفيذية " , 2014

- Working Drawings Handbook Keith Styles and Andrew Bechard
- Architects Guide
- Materials for Architects and Builders
- Ayodeji Emmanuel Oke, Clinton Aigbavboa, Seyi S. Stephen, Wellington Didibhuku Thwala , 2022, Sustainable Construction in the Era of the Fourth Industrial Revolution (Routledge Research Collections for Construction in Developing Countries)
- Jannice Käll , 2023, Posthuman Property and Law: Commodification and Control through Information, Smart Spaces and Artificial Intelligence (Space, Materiality and the Normative)
- Samson Jerold Samuel Chelladurai, Suresh Mayilswamy, Arun Seeralan Balakrishnan, S. Gnanasekaran , 2021, Green Materials and Advanced Manufacturing Technology: Concepts and Applications (Green Engineering and Technology)

h- Periodicals, Web sites, etc.

<http://products.construction.com/> - Sweets Construction.
All Building Construction Sites
All Architectural Sites




12- Facilities required for teaching and learning:

- Lecture hall/ studio
- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning model
- References in library
- Catalogs and Samples for students
- Computer + media players

13-Requirements for Disable facilities:

Teaching and learning methods for students with limited CGPA include:

- Extra lectures and tutorials.
- Extra homework.
- Extra assessment methods.

Course Instructor:	Ass. Prof. Ahmed Hanafy	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code: ARCH 407	Course Name Urban Design and Landscape
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Urban Design and Landscape	
Code	ARCH 407	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs.
Lectures	1 Hrs.	
Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 318	
Instructor name/Email	Dr. Fahima El Shahed Fahima.elshahed@gmail.com	

C- Professional Information

1- Course core:

Introduce main aspects of urban design and landscape: theories of urban design, study & analysis of visual elements. Urban form, grain, texture, and fabric. The phenomenon of perception. Space and path visual analysis. Study & analysis of historical urban space, piazzas and similar spaces. Form and space generation in landscape architecture. Element of landscape architecture.

2- Course Learning Objectives: oC

- oC1 Differentiate between the urban design and its area of work through the practical field of urban planning, urban design and architecture.
- oC2 Demonstrate the socio- cultural- economic aspects in the society; culture, heritage, values, meaning, and symbols, and study its effects on the design decision of any urban theory.
- oC3 Assist in developing skills and techniques in the field of urban design and landscape.
- oC4 Distinguish the skills of the research tools, and methodologies; data gathering, analysis, and documentation.
- oC5 Manage the determination of the problems, and create tools to solve the problems in the field of urban design, urban conservation and preservation.
- oC6 Analyzing the urban realms by using the different methods as reports and supplementary material which may be included.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O8
oC2	O2, O3, O8
oC3	O1, O6, O9
oC4	O5
oC5	O2, O4
oC6	O6, O7

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Display the cognitive map of the urban design projects.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Conduct researches, investigations and analysis for the patterns and the traditions that have shaped and sustained cultures and the way that they can inform the shape of the place.

Lo3 Create urban design concepts that meet the culture of the society achieving the principles of sustainability.

Lo4 Use auto-Cad program to Integrate community design parameters into projects.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo5 Work efficiently in design application, researches and modeling.

6- Program competencies served by the course:

Upon the completion of the Program the student should be able to:

Lo.1 Identify, formulate basic science and mathematics.

Lo.18 Conduct techniques and methods of investigation.

Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.

Lo.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.

Lo.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program competencies

	Course (LOs)	program competencies
1	Lo1	Lo.1
2	Lo2	Lo.18
3	Lo3	Lo.20 &Lo.21
4	Lo4	Lo.20
5	Lo5	Lo.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	- Course introduction and its objectives. - Explanation of assignment 1.	1	0	7	Lo1
2	- Concepts of urban design and landscape. - research discussion	1	0	7	Lo1, Lo2, Lo5
3	- Urban design theories - History of landscape - research discussion	1	0	7	Lo1, Lo2, Lo5
4	- Visual form elements (image of the city) & evaluation of visual form elements - Main elements of landscape	1	0	7	Lo1, Lo2, Lo4, Lo5
5	- Visual perception	1	0	6	Lo1, Lo2, Lo5



	- Factors influencing the design and site planning - Quiz 1			1	
6	- Town scape (Gulden Collin) - Principles of landscape - Final feedback of Assignment I	1	0	7	Lo1, Lo2, Lo4, Lo5
7	- Classification of Urban Space - General considerations for landscape. - Final delivery and discussion of Assignment I.	1	0	7	Lo1, Lo2, Lo4, Lo5
8	- Midterm exam	2	6	0	Lo1, Lo2, Lo5
9	- Classification of public spaces and design of green areas - Explanation of Assignment II	1	0	7	Lo1, Lo3, Lo4, Lo5
10	- Urban Design Methods and Techniques - Design and planning of sites	1	0	7	Lo1, Lo3, Lo4, Lo5
11	- General considerations for landscaping - Classification of planets	1	0	7	Lo1, Lo3, Lo4, Lo5
12	- Urban Design Objectives for Street Planning and Design	1	0	7	Lo1, Lo3, Lo4, Lo5
13	- Surveying of Urban Design Projects - A working vocabulary of Urban Form - Air Quality and Acoustic Considerations for Urban Design - Quiz II	1	0	7	Lo1, Lo3, Lo4, Lo5
14	- Sustainable urban design as a part of sustainable development - Patterns and landscaping systems - Final feedback of Assignment II	1	0	7	Lo1, Lo3, Lo4, Lo5
15	- Final delivery and discussion of Assignment II	1	0	7	Lo1, Lo3, Lo4, Lo5
16	Final exam				Lo1, Lo2, Lo3, Lo5
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√				√	√	√	√	√	√	√
Lo2	√	√	√	√	√			√	√	√			
Lo3		√	√	√	√								
Lo4		√	√								√		
Lo5		√	√						√	√		√	√

Notes

- The site visit, Presentations and Movies, self- learning and the Cooperative work raises in the research and Project.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.



10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√				√		
Lo3	√	√	√	√	√						
Lo4				√	√					√	
Lo5	√	√	√	√	√			√	√		√

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3) Week (7,13)
the Projects	Semi Final Final	Week (8,14) Week (5, 13)
Practical modelling		weekly
Attendance		Week (8)
Mid-term exam		Week (16)
final exam		

c. Grading system

Quizzes	Quiz (1) Quiz (2)	(5) marks (5) marks	(60) marks
Discussions	(20) %	(25) marks	
Sheets and Sketches	(10) %		
Researches and reports	(20) %		
the Projects	(40) %		
Practical modeling	(10) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

Notes:

- Submission must be a periodical technical presentation.
- Final submission is A3 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- Only group work is allowed.

11- List of references:

a- Course notes

- Student have to take written not based on the instructor's lecture

b- Required books

- Watson et al, Time Saver Standards for Urban Design, 2003
- Morris, A.E., History of Urban Form
- Trancik, Finding Lost Space, Chapter 4.
- Lynch, Kevin, The Image of the City.
- Cullen, Gordon, Townscape.
- Robinette, G. Plants & people and environmental quality, U.S Dept. of Interior, 1972.
- Gorge, A. B. and R. W. Cresswell. City Landscape. European Campaign for urban renaissance, 1983.
- Landscape Architecture an Introduction, Robert Holden & Jamie Liversedge.
- Mumford, Lewis, The City in History, 1961



c- Recommended books

- Maki, Fukihiro, Investigations in Collective Form, 1964
- Moughtin, Cliff, Urban Design: Street and Square, 2003
- Moughtin, Cliff et al, Urban Design: Ornament and Decoration, 1993
- Kostof, Spiro, The Design of Cities,
- Brolin, Brent, "Architecture in Context. Fitting New Buildings with Old", Van Nostrand Reinhold Company, N.Y. USA. (1980).
- Kyungll Lee&Yoon , " Landscape Architecture Competition Annual 8 (Public Space / Urban Developing Plan / Park & Forest / Waterfront) ", 2016
- Carmona,M., et.al:Public Urban Spaces The Dimension of urban Design , 2 edition 23 July 2010
- Philip D. Plowright, Making Architecture Through Being Human- A Handbook of Design Ideas, 2020
- Juan Luis Burke, Architecture and Urbanism in Viceregal Mexico: Puebla de los Angeles, Sixteenth to Eighteenth Centuries (Routledge Research in Architectural History) , 2021

d- Periodicals, Web sites, etc

- Carmona, Matthew and Steve Tiesdel, Urban Design Reader, Architectural Press is an imprint of Elsevier, 2007.
- Alexander, C A , "New Theory of Urban Design, New York, Oxford University Press, 1987
- Dobbins, M., "Urban Design & People", John Willy and Sons, 2009.
- Gosling, David, "Architectural of Urban Design Profile", London. AD. Pub. Ltd. (1984)
- Hillier ,Bill, Space is the machine: a configurationally theory of architecture, U.K., Press Syndicate of the University of Cambridge electronic edd. (2007).
- Lynch, Kevin, "Good City Form", MIT Press, Harcourt. Brase and World (1981).
- Roger L. Trancik, "Finding Lost Space, Theories of Urban Design", (1966).
- Norberg-Schulz, Christian, Genius Loci: Toward a Phonology of architecture, London, Accedy Press, 1980.
- www.rudi.net
- www.scribd.com
- www.balagh.com
- www.urbandesign.org
- www.census.gov/geo/www/
- www.tpoint.net/neighbor/tre.html

12- Facilities required for teaching and learning:

- Design Studios prepared with White board + colored pens- Data show for presentation
- Site visits
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Fahima El-Shahed	
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code: ARCH 344	Course Name Acoustics & Illumination
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Acoustic & Illumination
Code	ARCH 344
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 210
Instructor name/Email	Dr. Osama Abdou

C- Professional Information

1- Course core:

Introduction to illumination and lighting, both day- and artificial lighting: light quality, types of lamps and lumen input method for calculation. Sound propagation in buildings reverberation time, acoustic requirements for auditoriums and noise control, providing students with full calculation methods aided by practical examples. Familiarizing students with three basic architectural sciences; Day lighting, artificial lighting and Acoustics. Behavior of sound waves, sound absorption, sound reflections, sound isolation. Computer Simulation programs that aid artificial lighting design.

2- Course Learning Objectives: oC

- By the end of course overall aims should be achieved as follows:
- oC1 Studying the principles of designing artificial and natural lighting manually and by using computer programs.
 - oC2 Studying the aspects of noise control in auditoriums.
 - oC3 Developing the student knowledge about sound waves and sound propagation in the space.
 - O4 Solving problems related to the physical requirements (sound and light) of human being while designing the voids of any building.

3- Program objectives served by the course:

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems especially the disable society.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O9 Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.
- O11 Provide students with the skills to conduct scientific research



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O3, O6
oC2	O3, O6
oC3	O3, O6
OC4	O4, O9, O11

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the sound behavior in the void and the methods of its control.
- Lo2 Differentiate between the main aspects of designing natural and artificial lighting.
- Lo3 Solve problems concerning natural and artificial lighting, sound and noise control.
- Lo4 Analyze and investigate the appropriate materials can be used to keep the voids environmentally sustainable.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Create environmental control designs for sound and lighting process in the voids.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.2 Simulate, analyze and interpret data.
- Lo.4 Use statistical analyses and objective engineering judgment to draw conclusions.
- Lo.11 Display adequate knowledge of industries, organizations, regulations and procedures involved into projects.
- Lo.16 Apply engineering design processes to produce cost-effective solutions that meet specified needs.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1&lo.2
2	Lo2	Lo.1&lo.2
3	Lo3	Lo.4
4	Lo4	Lo.11
5	Lo5	Lo.16

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hours	Los
1	Acoustics definitions	2	0	0	Lo1
2	Sound waves	2	0	0	Lo1
3	Reverberation time	2	0	0	Lo1
4	- Acoustical defects	2	0	0	Lo1
5	- Noise criteria room isolation - Quiz I	2	0	0	Lo1
6	- Noise criteria room isolation	2	0	0	Lo1, Lo3
7	Divide students into research groups and select research topics	2	0	0	Lo1, Lo4
8	Midterm exam				Lo1, Lo4
9	Control the design elements for audio comfort	2	0	0	Lo1, lo5
10	The different between natural and industrial	2	0	0	Lo2



	lighting and natural				
11	- Control the elements of architecture design	2	0	0	Lo2, Lo3, Lo4, Lo5
12	- Control the elements of architecture design	2	0	0	Lo1,Lo2, Lo3, Lo4, Lo5
13	- Advanced Acoustics - Quiz II	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
14	- Semifinal Project. - Final Feedback of the project.	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
15	- Final Submission & discussion	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
16	Final exam				Lo1, Lo2, Lo3, Lo4, Lo5
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√				√	√	√	√		√	
Lo2	√	√	√				√	√	√	√		√	
Lo3	√	√	√	√	√								
Lo4	√		√						√	√		√	
Lo5		√	√					√					

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.

Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

14- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid - term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√		
Lo2	√	√	√	√	√			√	√		
Lo3	√	√	√	√	√						
Lo4	√	√	√		√			√	√		
Lo5	√	√	√	√	√						

15- Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13) Every week for any student
Discussions		Weekly
Researches		Weekly
Sheets and Sketches		Weekly
the Projects	Semi Final Final	Week (14) Week (15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)



16- Grading system

Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(20) %	(25) marks	
Sheets and Sketches	(20) %		
the Projects	(30) %		
researches	(30) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

Notes:

- Submission must be a periodical technical presentation.
- Final submission is A3 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- group work is allowed.

11- List of references:

a. Course notes

- Student have to take written not based on the instructor's lecture
- Research handouts.

b. Required books

1. الصوتيات المعمارية – النظرية والتطبيق مكتبة الانجلو المصرية 2003
2. gan M.David “ Architectural acoustics “ 1998
3. Physics for Architects , Yehuda Salu, Howard University, 2003
4. Raj Patel, Architectural Acoustics- A guide to integrated thinking, 2020

c. Recommended books

- Architectural Acoustics, Eagan, M. David, McGraw Hill Book Company, 1988
- b- Interior Lighting For Environmental Designers, James L. Nuckolls, 1980

d. Periodicals, Web sites, etc.

- None.

12- Facilities required for teaching and learning:

- Lecture hall
- White board + colored pens
- Data show for presentation
- Site visits
- Google Classroom
- E-Learning
- References in library

13- Requirements for disabled facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor	Dr. Osama Abdou	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 303	Geographical information system (GIS)
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date -of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Geographic information system
Code	ARCH 303
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
lab	3 Hrs.
Total	4 Hrs.
Prerequisite	ARCH 301
Instructor name/Email	Dr. Reham Hafez Reham_hafez@hotmail.com

C- Professional Information

1- Course core:

GIS is a integrated system has a powerful set of capabilities that enable users to benefit from location-based analytics. The main functions of ArcGIS are store, analysis, and display geospatial data A working GIS integrates five key components: hardware, software, data, people, and methods

2- Course Learning Objectives: oC

- oC1 The course aims to introduce the capabilities of GIS in the fields of planning, and to provide the tools
- oC2 Cover basic GIS concepts such as map characteristics and projects, spatial data models, relational databases, and spatial analysis
- oC3 Prepare the student to manage data efficiently..
- oC4 Data analysis and representation.
- oC5 Operating designs, quantities and specifications GIS projects.
- oC6 Mapping and visualization
- oC7 Real-time decisions and monitoring

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Recognize the current engineering technologies as related to architectural engineering
- O3 Recognize the significance of urban spaces and the interaction between human behavior, built environment and natural environment;
- O5 Identify physical modeling, multi-dimensional visualization, multimedia applications, and computer aided design;
- O7 Explain methodologies of solving engineering problems, data collection and interpretation
- O9 Create systematic and methodic approaches in dealing with new and advancing technology;



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O2
oC2	O2, O9
oC3	O5, O9
oC4	O2, O3, O7
oC5	O2, O3, O5
oC6	O2, O3, O5
oC7	O1, O2, O3, O7, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Define GIS and its capabilities in the fields of planning.
- Lo2 Analyze data gained by the satellites for certain locations
- Lo3 Explore sources of data, data quality and database management.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Produce accurate maps for GIS projects.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work efficiently with the GIS program.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- Lo.1 Identify, formulate basic science and mathematics.
- Lo.2 Simulate, analyze and interpret data.
- Lo.20 Use contemporary tools to implement engineering design drawings, and presentations.
- Lo.27 Work efficiently as an individual and share in team works

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	Lo.1
2	Lo2	Lo.2
3	Lo3	Lo.1&lo.2
4	Lo4	Lo.20
5	Lo5	Lo.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hr.	Los
1	Fundamentals of Geographic Information Systems	1	0	3	Lo1
2	- Types and sources of data	1	0	3	Lo1
3	- Building Geo-data base	1	0	3	Lo2, Lo3, Lo5
4	- Entering and Editing spatial and attribute data (1)	1	0	3	Lo4,Lo5
5	- Entering and Editing spatial and attribute data (2) - Quiz I	1	0	3	Lo1, Lo2, Lo3, Lo4
6	- Displaying Data (Labels & Sympology)	1	0	3	Lo1
7	- Spatial Queries & Selections	1	0	3	Lo1, Lo2, Lo5
8	Midterm exam				Lo1, Lo2, Lo3, Lo4, Lo5
9	- Data Quality Control	1	0	3	Lo3, Lo4, Lo5
10	- Geoprocessing and Spatial Data	1	0	3	Lo3, Lo4, Lo5



	Analysis (1)				
11	- Geoprocessing and Spatial Data Analysis (2) - Quiz II	1	0	3	Lo1, Lo2, Lo5
12	- Output & Layout in ArcMap (1)	1	0	3	Lo3, Lo4, Lo5
13	- Output & Layout in ArcMap (2)	1	0	3	Lo3, Lo4, Lo5
14	- Discussion GIS project	1	0	3	Lo1, Lo2
15	- Discussion GIS project	1	0	3	Lo1, Lo2
16	Final exam				Lo1, Lo2, Lo3
Total hours		14	0	42	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	✓	✓	✓			✓			✓	✓	✓	✓	
Lo2	✓	✓	✓			✓			✓	✓	✓	✓	✓
Lo3		✓	✓			✓			✓	✓	✓		
Lo4		✓	✓			✓			✓	✓	✓		
Lo5		✓	✓			✓			✓	✓	✓		

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	✓	✓	✓	✓	✓			✓	✓	✓	
Lo2	✓	✓	✓	✓	✓			✓	✓	✓	✓
Lo3	✓	✓	✓	✓	✓					✓	
Lo4				✓	✓					✓	
Lo5				✓	✓					✓	

b. Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (11)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3) Week (14)
the Projects	Semi Final Final	Week (15) Week (5, 13)
Practical modelling		weekly
Attendance		Week (8)
Mid-term exam		Week (16)
final exam		

c. Grading system

Quizzes	Quiz (1) Quiz (2)	(5) marks (5) marks	(60) marks
Discussions	Set as a bonus	(25) marks	
Sheets and Sketches	(30) %		
Researches and reports	(30) %		
the Projects	(30) %		
Practical modelling	(10) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	



Note:

- Submission must be a periodical technical presentation.
- Final submission is A1 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- Only group work is allowed.
- Mid- term can be a laboratory exam

11- List of references:

a- Course notes

- Student have to take written not based on the instructor's lecture

b- Required books

- Introductory Geographic Information Systems , , John R. Jensen· Ryan R. Jensen , 2013
- Geographic Information Systems, Spatial Modeling and Policy Evaluation, Manfred M Fischer· Peter Nijkamp,2012

c- Recommended books

- Kyungll Lee&Yoon ,”(Public Space / Urban Developing Plan / Park & Forest / Waterfront)”,2016
- Donald L. Elliott, A Better Way to Zone: Ten Principles to Create More Liveable Cities, 2008

d- Periodicals, Web sites, etc

- <https://www.esri.com/>
- <https://www.usgs.gov/faqs/what-geographic-information-system->
- www.googleearth.com

12- Facilities required for teaching and learning:

- Computer Lab
- White board + colored pens
- Data show for presentation
- Site visits
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Pro. Reham Hafez	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code: ARCH 316	Course Name Advanced Computer-Aided Architectural Design
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation as NARS 2018:	2023-2024

B-Basic Information

Title	Advanced Computer-Aided Architectural Design
Code	ARCH 316
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Tutorial	0 Hrs.
Lab	3 Hrs.
Total	4 Hrs.
Prerequisite	ARCH 202
Instructor name/Email	Dr. Fahima El-Shahed Fahema.elshahed@sva.edu.eg

C- Professional Information

1- Course core:

The course expands on representational techniques. Focuses on the application and use of these techniques in the presentation and representation of design concepts and drawing compositions. Introduces color drawing techniques using mixed media of hand drawing and computer generated drawings and illustrations, photomontage and collage.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of 3D Concepts.
- oC2 Studying the computer applications in developing a digital computer model of buildings
- oC3 Studying how to Create animations and walkthroughs of the building.
- oC4 Understanding how to Present the project digitally.
- oC5 Studying 3D modeling, rendering, animation, as well as presentation (increased use of IT or web based reference material, changes in content as a result of new research in the field).

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the design process
- O2 Interpret in the analysis process within the simulation methods.
- O3 Develop the skills of using new technologies in the design, presentation and the implementation process.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O2
oC2	O2, O3
oC4	O1
oC5	O1, O3
oC6	O2, O3



5- Learning outcomes of the course (LOs)

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the methodologies of creating and managing the 3D models.
- Lo2 Integrate different forms, motives, materials, colors, or ideas to reach several models for the design.
- Lo3 Perform assessment for the best design by using simulation of the models.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Create or redesign a process of a component or a system and carry out specialized architectural designs.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Construct accurate 3D building models.

6- Program LOs served by the course:

- LO.1 Identify, formulate basic science and mathematics.
- LO.9 State the relation between the building and the factors affecting its design, as; the environment, the people needs, scale required and the culture.
- LO.11 Display adequate knowledge of industries, organizations, regulations and procedures involved into projects
- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

Course (LOs)	program LOs
Lo1	LO.1
Lo2	LO.9
Lo3	LO.1&LO.9
Lo4	LO.11
Lo5	LO.32

8- Course Content/ relation of contents to los of the course

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hr.	LOs
1	Brief Understanding about BIM	1	0	3	Lo1
2	Brief Understanding about BIM	1	0	3	Lo1
3	Basic Modeling Categories 01	1	0	3	Lo1, Lo2
4	Basic Modeling Categories 02	1	0	3	Lo2, Lo3
5	Ramps and Generic Models	1	0	3	Lo1, Lo2, Lo3
6	Roof by footprint, Roof by extrusion, Ceiling, Railings and Rooms	1	0	3	Lo1, Lo2, Lo3
7	Conceptual Masses Part 01	1	0	3	Lo1, Lo2, Lo3
8	Midterm	1hr			Lo1, Lo2, Lo3
9	Conceptual Masses 02	1	0	3	Lo1, Lo2, Lo3
10	Door & Window Families	1	0	3	Lo1, Lo2, Lo3
11	Louver Parametric Family	1	0	3	Lo1, Lo2, Lo3,
12	Architectural Presentation and Render	1	0	3	Lo1, Lo2, Lo3, Lo4
13	Lighting Fixture Family Discussion	1	0	3	Lo1, Lo2, Lo3, Lo4
14	Course Project	1	0	3	Lo1, Lo2, Lo3, Lo4
15	Final Submission	1	0	3	Lo1, Lo2, Lo3, Lo4
16	Final exam	2hrs			Lo1, Lo2, Lo3
Total hours		14	0	42	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods									
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	presentation	Discussion	modeling
Lo1	✓	✓	✓			✓				✓
Lo2	✓	✓	✓	✓	✓	✓				✓
Lo3	✓	✓	✓	✓	✓	✓		✓		✓
Lo4		✓	✓	✓	✓	✓		✓		✓
Lo5		✓	✓	✓		✓		✓		✓

Notes:

- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	✓	✓	✓	✓	✓	✓					✓
Lo2	✓	✓	✓	✓	✓	✓					✓
Lo3	✓	✓	✓	✓	✓	✓			✓		✓
Lo4	✓	✓		✓	✓	✓			✓		✓
Lo5	✓	✓		✓	✓	✓			✓		✓

b. Time schedule of assessment

Classwork / Homework	Every week for any student
Discussions	Every week for any student
Presentations	Week (14,15)
Sheets and Sketches	Weekly
Researches and reports	Week (2, 3)
The Projects	Semi Final Week (14) Final Week (15)
Practical modelling	Week (5, 13)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Classwork / Homework	(5) %	(25) marks	(40) marks
Project (Semi-final)	(5) %		
Project (Final)	(10) %		
Attendance	(5) marks		
Mid-term exam		(15) marks	
final exam		(60) marks	(60) marks
Total		(100) marks	

- Note: Mid- term can be a laboratory exam



11- List of references:

- d. **Course notes**
- e. **Required books**
 - Lecture notes and hand outs
 - Kelly L. Murdock's 'Autodesk 3ds Max 2015 Complete Reference Guide', 2014
 - Brian L, Smith '3ds Max Design Architectural Visualization: For Intermediate Users' 1st Edition
- f. **Recommended books**
 - SVA library books
- g. **Periodicals, Web sites, etc**
 - Balkan Architect - <https://www.youtube.com/channel/UCapzEjUWyyv7H4GtPQrgybTQ>
 - BIM Guide - [http://bim.pu.go.id/assets/files/BIM_Handbook_A_Guide_to_Building Information Modeling for Owners Managers Designers Engineers and Contractors Second Edition.pdf](http://bim.pu.go.id/assets/files/BIM_Handbook_A_Guide_to_Building_Information_Modeling_for_Owners_Managers_Designers_Engineers_and_Contractors_Second_Edition.pdf)

12- Facilities required for teaching and learning:

- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning
- References in library
- Computer Laboratory

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	Dr. Fahima El-Shahed	
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code: ARCH 425	Course Name Technical installation
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Technical installation
Code	ARCH 425
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 406 & ARCH 320
Instructor name/Email	Prof. Osama Abdou

C- Professional Information

1- Course core:

The course aims to providing students with new techniques used in advanced technological systems in buildings such as alarm systems, firefighting systems, communication systems, air conditioning systems, and electronic control systems. Basic concepts of illustrated material and technical installations are addressed with its influence on contemporary architecture and applications.

2- Course Learning Objectives: oC

- oC1 By the end of course overall aims should be achieved as follows:
preparing working drawing documents of Technical installation for architectural designs
- oC2 Conducting project construction of high technology working details.
- oC3 Merging infra-structure work, the electrical appliances, and safety appliances inside the building.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O5. Preparing the students to conduct professional drawings related to the standards and the legislations.
- O9 Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.
- O11 Provide students with the skills to conduct scientific research

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O9, O11
oC2	O1, O5, O9
oC3	O1, O5, O9



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Classify drafting symbols; the scale of the initial drawings related in the role the Technical installation

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Integrate infra-structure elements, electrical and safety insulation into the working drawings

Lo3 Conduct physical and multimedia modeling

Lo4 Produce professional designs and drawings can be used as implement documents in the site.

Lo5 Produce researches on Technical installation.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo6 Shows neatness in the drawings.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.

LO.18 Conduct techniques and methods of investigation.

LO.22 Produce designs that meet building users' requirements.

LO.26 Prepare design reports, project briefs and documents

LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.17
3	Lo3	LO.18
4	Lo4	LO.22
5	Lo5	LO.26
6	Lo6	LO.32

8- Course Content

Week No.	Topic	Lecture hr.	Studio hr.	Lab hr.	Los
1	- Types of health devices	2	0	0	Lo1
2	- The method of distributing health devices within the architectural space	2	0	0	Lo1, Lo2, Lo4, Lo6
3	- Types of sewage equipment and pipes in the building	2	0	0	Lo1, Lo2, Lo4, Lo6
4	- Sewerage systems inside the building + modeling	2	0	0	Lo3
5	- Water feeding works in buildings - Quiz I	2	0	0	Lo1, Lo2, Lo4, Lo6
6	- water pipe testing	2	0	0	Lo1, Lo2, Lo4, Lo6
7	- Feeding health devices with water	2	0	0	Lo1, Lo2, Lo4, Lo6
8	Midterm exam				Lo1, Lo2, Lo4, Lo6
9	- Electricity and accessories	2	0	0	Lo1, Lo2, Lo4, Lo6
10	- Air conditioning systems First: types of air conditioning	2	0	0	Lo1, Lo2, Lo4, Lo6
11	-Air conditioning systems First: types of air conditioning	2	0	0	Lo1, Lo2, Lo4, Lo6



12	- Control the elements of architecture design	2	0	0	Lo1, Lo2, Lo4, Lo6
13	- Advanced technical + modeling - Quiz II	2	0	0	Lo3
14	- Semifinal Project. - Final Feedback of the project.	2	0	0	Lo5
15	- Final Submission & discussion	2	0	0	Lo5
16	Final exam				Lo1, Lo2, Lo4, Lo6
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√				√		√	√	√	√	√
Lo2	√	√	√	√	√			√	√		√	√	
Lo3													√
Lo4		√					√						
Lo5									√				
Lo6		√											

Notes: -The research concerns the cooperative work, the discussion, the site visit and the presentations.
 • The project concerns the brain storming and the problem solving.
 • Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√			√		√	
Lo3									√		√
Lo4	√	√	√	√	√						
Lo5									√		
Lo6	√	√	√	√	√						

b. Time schedule of assessment

Quizzes	Week (5,13)
Discussions	Every week for any student
Presentations	Weekly
Sheets and Sketches	Weekly
Researches and reports	Week (14,15)
The Projects	Week (13)
Practical modelling	Week (14)
Attendance	Week (4, 13)
Mid-term exam	weekly
final exam	Week (8) Week (15)

c. Grading system

Quizzes	(10) marks	(60) marks
Classwork	(10) marks	
researches	(5) marks	
Project	(10) marks	
Attendance	(5) marks	
Mid-term exam	(20) marks	(40) marks
final exam		
Total		(100) marks



Note:

- Submission must be a periodical technical presentation.
- Final submission is A1 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- group work is allowed in the researches.

11- List of references:

- a. **Course notes** – Student have to take written not based on the instructor's lecture
- b. **Required books**
5. الكود المصرى لاسس تصميم وشروط التنفيذ لهندسة التركيبات الصحية للمباني، 2017، وزارة الاسكان والمرافق والمجتمعات العمرانية.
6. محمد صادق العدوي، 2003، هندسة التركيبات الصحية للهندسة المعمارية والهندسة المدنية، المكتبة المصرية للطباعة والنشر والتوزيع
- c. **Recommended books**
- Hu Yanli & Yuan , " High - Architecture Lights 7 ed " , 2014
 - Hu Yanli & Yuan , " High - Architecture Lights 8 ed " , 2014
- d. **Periodicals, Web sites, etc.** – None.

12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Data show for presentation
- Site visits
- Google Classroom
- E-Learning
- References in library

13- Requirements for disabled facilities:

- Extra assignments
- Online extra teaching hours

Course coordinator	Dr. Osama Abdou	<i>Osama</i>
program Coordinator	Dr. Nadia Ahmed	<i>Nadia</i>
Head of the Department	Dr. Fahima El-Shahed	<i>Fahima</i>
Date	2023-2024	



Course Specification

Course Code:	Course Name
CVEE 353	Steel structure design
A- Affiliation	
Department offering the program:	Architecture and design department & Civil Engineering department
Relevant program:	Architecture and design program & Civil Engineering program
Department offering the course:	Civil Engineering department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Steel structure design
Code	CVEE 353
Credit Hours	3h
Lectures	2h
Tutorial	2h
Total	4h
Prerequisite	CVEE 351
Instructor name/Email	Dr. Ashraf Abdel Khaliq Mostafa

C- Professional Information

1- Course core:

This course is recommended for seniors in the Architectural engineering program who are interested in learning the design of steel structures. The objectives of this are to learn the behavior and design of structural steel components (members and connections in two-dimensional (2D) truss and frame structures) and to gain an educational and comprehensive experience in the design of simple steel structures.

2- Course Learning Objectives: (oc)

- oc 1 Presenting the steel structural system and design.
- oc 2 Studying General layout and types of trusses.
- oc 3 Studying steel members and trusses Loads, and Design Codes.
- oc 4 Studying the behavior and design of structural steel components.
- oc 5 Traces of steel structure in civil engineering
- oc 6 Solving problems of steel structure.
- oc 7 Knowing the modern techniques in steel structural.

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify and compute the design loads on a typical steel building.
- Lo2 Identify the different failure modes of steel tension and compression members and beams, and compute their design strengths.
- Lo3 Select the most suitable section shape and size for tension and compression members and beams according to specific design criteria
- Lo4 Identify the different failure modes of bolted and welded connections, and determine their design strengths.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Apply relevant AISC provisions after analyzing data to ensure safety and serviceability of structural steel elements.
- Lo6 Design bolted and welded connections for tension and comp. members and beams.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.5 Apply engineering fundamentals, basic science and mathematics
- LO.22 Produce designs that meet building users' requirements.

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1&LO.2
2	Lo2	LO.1&LO.2
3	Lo3	LO.1&LO.2
4	Lo4	LO.1&LO.2
5	Lo5	LO.5
6	Lo6	LO.22

6- Course Content and the relation between the course contents and the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction Steel structure design.	2	2	0	Lo1 , Lo2
2	General layout and types of trusses	2	2	0	Lo1 , Lo3
3	Application on General layout .	2	2	0	Lo5
4	Introduction to Engineering Design, Loads, and Design Codes.	2	2	0	Lo2, Lo4 ,Lo5
5	Analysis and Design of Tension Members.	2	2	0	Lo2 , Lo6
6	Analysis and Design of Tension Members	2	2	0	Lo1, Lo2 ,Lo3
7	Quiz (1)	2	2	0	Lo3 , Lo5
8	Mid-term exam	1			Lo5
9	Analysis and Design of Axially-Loaded Compression Members	2	2	0	Lo2 ,Lo6
10	Analysis and Design of Axially-Loaded Compression Members	2	2	0	Lo2, Lo3 ,Lo6
11	Design Bolted connection	2	2	0	Lo5 ,Lo6
12	Design welded connection	2	2	0	Lo5 ,Lo6
13	Design of Hz. And vertical bracing.	2	2	0	Lo3 ,Lo6
14	Analysis and Design of Beam-Columns	2	2	0	Lo2, Lo3, Lo4, Lo5 ,Lo6
15	Quiz (2)	2	2	0	Lo3
16	Final exam	2			Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
Total hours		28	28	0	

7- The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods													
	On line / face to face	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discoverin	Site visit	Reports/ researches	Cooperati ve work	presentati on	Discussio n	modelling	
Lo1	√	√		√	√			√				√		
Lo2	√	√		√	√		√			√		√		
Lo3	√	√						√				√		
Lo4	√	√		√				√				√		
Lo5	√	√			√		√							
Lo6		√		√								√		

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The Tutorials concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.



8- Student assessment method

a- Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modelling
Lo1		√						√			
Lo2	√	√		√				√			
Lo3	√		√								
Lo4	√	√	√					√			
Lo5	√		√								
Lo6		√	√	√				√			

b- Time schedule of assessment		
Quizzes	Quiz (1) Quiz (2)	Week (7) Week (15)
Discussions		Weekly
Sheets and Sketches/ reports		Week (7-10-13-15)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system			
quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Discussions	(40) %	(10) marks	
Sheets and Sketches/ reports	(60) %		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

9- List of references:

- a- Course notes
- b- Required books
- c- Recommended books
- d- Periodicals, Web sites, etc

- Lecture notes
- Stanley, W. Crawley & Robert, M. Dillon (1993), **Steel Buildings, Analysis and Design**, 4th Edition, John Wiley & Sons, Inc.
 - Russell C. Hibbeler (1995), **Structural Analysis**, 3rd Edition, Prentice Hall International, Inc.
 - Edwin, H. Gaylord, Jr. , Charles, N. Gaylord & James, E. Stall Meyer (1992), **Design of Steel Structures**, 3rd Edition, McGraw-Hill, Inc.
 - Egyptian Code for Steel Construction.

<https://www.prof-eng.net/2018/10/Egyptian-Code-for-Steel-Construction.html> - Target1

10- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- E- learning

11- Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments

Course Instructor	Dr. Ashraf Abdel Khaliq Mostafa	
program Coordinator	Civil Engineering	
Head of the Department	Dr. Ashraf Abdel Khaliq Mostafa	
Date:	2023-2024	



Fourth level courses

Second semester (Spring)

No.	Cod	Course Name	Instructor
1	ARCH 404*	Architecture design 5	
2	ARCH 406*	Working drawing 2	Ass. Prof. Ahmed Hanafi
3	ARCH 420*	Urban and regional planning	Dr. Fahima El-Shahed
4	ARCH 315	Modern and contemporary foundations of art and architecture	Dr. Helmy El-Tayar
5	ARCH 324 **	Advanced Representation	Dr. Fahima El-Shahed
6	BASE401	Communication skills	Dr. Amera Marye
7	BASE404	Negotiation skills	Dr. Amera Marye
8	BASE 309	Human Rights	Dr. Abdul-Aziz Ramadan



Course Specification

Course Code: ARCH 404	Course Name DESIGN 5
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	DESIGN5	
Code	ARCH 404	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs.
Lectures	1 Hrs.	
Practical/Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 403 & ARCH 316	
Instructor name/Email		

C- Professional Information

1- Course core:

The course represents a studio on smart buildings and high-tech architecture. Expanding on the 1970's theme of High-Tech architecture, this studio aims at redefining the role of cutting edge technology in design- both process and product. Digital technology has revolutionized the way we conceptualized, visualize, present and are eventually able to construct our buildings. Issues such as virtual architecture and smart buildings will be explored with regards to their viability and role in the future of architecture.

2- Course Learning Objectives: oC

- oC1 Introducing the main aspects of designing smart buildings.
- oC2 Studying the different stages of architectural design; project studies, site analysis, design concept, etc.
- oC3 Studying how to think spatially by using Three-dimensional models.
- oC4 Studying how to integrate a proper structure system with architectural design.
- oC5 Apply knowledge acquired to design a selected project.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O6 Develop students' professional skills and the ability to self- and continuous learning.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O6, O9
oC2	O2, O3
oC3	O1, O6
oC4	O1, O9
oC5	O2, O3, O1

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the principles of designing smart buildings and high-tech architecture. And the role of visualization in the designing process.

Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Conduct researches and investigation using various techniques and methods of collecting and analyzing data.
- Lo3 create design concept that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability
- Lo4 develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software

b. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work efficiently in design application, researches and modeling.
- Lo6 Display creativity in the design and in solving the project problems and constraints.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.18 Conduct techniques and methods of investigation.
- LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- LO.22 Produce designs that meet building users' requirements.
- LO.27 Work efficiently as an individual and share in team works.
- LO.29 Use creative, innovative and flexible thinking.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.18
3	Lo3	LO.21
4	Lo4	LO.22
5	Lo5	LO.27
6	Lo6	LO.29

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Studio hrs.	Los
1	- Course introduction and its objectives - Define of the project site	1	0	7	Lo1
2	- The design process stages: - How to make the project studies The site analysis	1	0	7	Lo1, Lo2, Lo5
3	- Project studies and site analysis submission and discussion.	1	0	7	Lo1, Lo2, Lo5
4	- The design concept and zoning studies.	1	0	7	Lo1, Lo3, Lo5 Lo6



5	- Concept development & Ground floor plan.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
6	- Ground floor plan development & first floor plan	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
7	- Final plans	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
8	Midterm exam				Lo1, lo3,Lo5, Lo5 Lo6
9	- Elevations & Sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
10	- Final elevations & sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
11	- Layout & Perspective/Isometric	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
12	- semifinal project submission	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
13	- How to present the final project	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
14	- Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
15	- Final Submission & discussion	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
16	Final exam				Lo1, lo3,Lo5, Lo5 Lo6
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√			√	√	√	√	√	√
Lo2		√								√			
Lo3		√	√	√	√								√
Lo4		√	√	√	√								
Lo5		√	√				√						
Lo6		√	√				√						

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a- Assessment method and its relation to the Los of the course											
Course Los	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2									√		
Lo3	√	√	√	√	√						√
Lo4	√	√	√	√	√						
Lo5	√	√	√	√	√						
Lo6	√	√	√	√	√						



b- Time schedule of assessment		
Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions	Every week for any student	
Presentations and Movies	Every week for any student	
Sheets and Sketches	Weekly	
Researches and reports	Week (2, 3)	
the Projects	Semi Final	Week (14)
	Final	Week (15)
Practical modelling	Week (5, 6, 13)	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	
Notes:		
<ul style="list-style-type: none"> • Submission must be a periodical technical presentation. • Final submission is A1 paper and technical presentation. • The discussion and students' participants are very essential. • The evaluations are internal periodical assessments. • Student grades are available and posted in the class. 		

c- Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(20) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modeling	(15) %		
Attendance	(5) marks		
Mid-term exam	(20) marks		
final exam	(40) marks		
Total	(100) marks		

11- List of references:

<p>a- Course notes</p> <p>b- Required books</p>	<p>– Student have to take written not based on the instructor's lecture</p> <ul style="list-style-type: none"> - ERNST NEUFERT, Architects Data, Esn Professional Books, London, 1992 - Jtart ,2012, “ World Architecture 3 Hotel Building “ - Sibylle Kramer , 2014 “ Colleges & Univrsities Educational Spaces “ - Ching, F., “Architecture – Form, Space and Order “,-2nd Ed. International Thomson Publishing Inc., New York, 1996. - Steele, J.,2001, “Architecture Today”, 2nd Ed., Phaeton Press Limited, London, UK. - Jencks, C., “Architecture 2000 and Beyond”, John Wiley & Sons Ltd, UK, 2000. - Paul, Laseau, 2012,“Graphic Thinking of Architects and Designers”, Reinhold Co., NY, USA, - Paul, Laseau, 2012,“Graphic Thinking of Architects and Designers”, Reinhold Co., NY, USA, - David Fannon, Michelle Laboy, Peter Wiederspahn , 2022, The Architecture of Persistence: Designing for Future Use - O.V. Gnana Swathika, K. Karthikeyan, Sanjeevikumar Padmanaban , 2022, Smart Buildings Digitalization: IoT and Energy Efficient Smart Buildings Architecture and Applications
<p>c- Recommended books</p> <p>d- Periodicals, Web sites, etc.</p>	<ul style="list-style-type: none"> • Jtart , " World Architecture 3 Hotel Building " , 2012 – Sibylle Kramer , " Colleges & Universities Educational Spaces " , 2014 • Architectural record, Published monthly by the McGraw – Hill companies • Al – Bena Magazine, Published monthly by Medina Publishing Inc., Kingdom of Saudi Arabia. <p>– Electronic Pub. URL: www.greatbuildings.com</p>



12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Site visits
5. Google Classroom
6. E-Learning
7. References in library

13- Requirements for disabled facilities:

1. Extra assignments
2. Online extra teaching hours

Course Instructor	
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: ARCH 406	Course Name Working Drawings (II)
---------------------------------	---

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B- Basic Information

Title	Working Drawings (II)	
Code	ARCH 406	
Credit Hours	3 Cr. Hrs.	Note: 1 credit hr. for the studio= 3 effective hrs.
Lectures	2 Hrs.	
studio	4 Hrs.	
Total	6 Hrs.	
Prerequisite	ARCH 345, ARCH 320	
Instructor name/Email	Prof. Dr. Ahmed Hanafy	

C- Professional Information

1- Course core:

The course aims to preparing the student to complete a drawing document sets of a preliminary design project and to apply previous courses knowledge gained from with an emphasis on methods of constructions and high technology working details and materials to produce a whole set of drawings including electrical and plumbing drawings. Partial detailed wall sections which elaborate on the structural and constructional connections of the building are discussed. Door and window types are introduced along with door and window schedules. Room finish and interior finish schedules are also addressed.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of working drawing vocabularies and drafting symbolism.
- oC2 Examining different structural Systems such as (Columns& beams, Hollow Blocks, Flat slabs, Waffle slabs, Panel beams, Frames) through studying their role.
- oC3 Studying Partial detailed wall sections.
- oC4 Apply knowledge acquired to prepare (public sewage network - drainage and feeding network for water-rain network)
- oC5 Apply knowledge acquired to prepare (lighting network - socket network - light current network)

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the construction design process
- O2 Interpret in the supervision process in the sites



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O1, O2
oC3	O1, O2
oC4	O1
oC5	O1

5- Learning outcomes of the course (LOs)

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Classify drafting symbols, the scale of the initial drawings related in the role the working drawings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Integrate structure system, building material, infra-structure elements into the working drawings

Lo3 Conduct physical and multimedia modeling

Lo4 Produce professional drawings well classified that can be used as implement documents in the site.

Lo5 Produce researches on fine working details.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo6 Shows neatness in the drawings.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.14 Apply engineering fundamentals, basic science and mathematics

LO.18 Conduct techniques and methods of investigation.

LO.22 Produce designs that meet building users' requirements

LO.26 Prepare design reports. project briefs and documents.

LO.29 Use creative, innovative and flexible thinking

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.14
3	Lo3	LO.18
4	Lo4	LO.22
5	Lo5	LO.26
6	Lo6	LO.29

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	studio hr.	LOs
1	Introduction, course overview	2	0	4	Lo1
2	Structural drawings (axis-columns).	2	0	4	Lo1, Lo2, Lo4, Lo6
3	Structural drawings (foundations-rules-beams).	2	0	4	Lo1, Lo2, Lo4, Lo6
4	Structural drawings (roofs-slab-beams). (wall cross section)	2	0	4	Lo3
5	Sanitation drawings (public sewage network) + Quiz	2	0	4	Lo1, Lo2, Lo4, Lo6



6	Sanitation drawings (public sewage network)	2	0	4	Lo1, Lo2, Lo4, Lo6
7	Sanitation drawings (cashing and feed floor plan)	2	0	4	Lo1, Lo2, Lo4, Lo6
8	Midterm				Lo1, Lo2, Lo4, Lo6
9	Sanitation drawing (rain drain)	2	0	4	Lo1, Lo2, Lo4, Lo6
10	Electrical drawings (lighting).	2	0	4	Lo1, Lo2, Lo4, Lo6
11	Electrical drawings (socket).	2	0	4	Lo1, Lo2, Lo4, Lo6
12	Electrical drawings (light current).	2	0	4	Lo1, Lo2, Lo4, Lo6
13	Modeling + quiz	2	0	4	Lo3
14	Research discussion	2	0	4	Lo5
15	Research discussion	2	0	4	Lo5
16	Final exam				Lo1, Lo2, Lo4, Lo6
Total hours		28	0	56	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods													
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling	
Lo1	√	√	√				√		√	√	√	√	√	
Lo2	√	√	√	√	√			√	√		√	√		
Lo3													√	
Lo4		√					√							
Lo5									√					
Lo6		√												

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1	√	√	√	√	√			√	√	√	√	
Lo2	√	√	√	√	√			√		√		
Lo3									√		√	
Lo4	√	√	√	√	√						√	
Lo5								√				
Lo6	√	√	√	√	√							

b. Time schedule of assessment

Quizzes		Week (5,13)
Discusses		Every week for any student
Presentations		Weekly
Sheets and Sketches		Weekly
Researches and reports		Week (14,15)
The Projects	Semi Final	Week (13)
	Final	Week (14)
Practical modelling		Week (4, 13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (15)



c. Grading system		
Quizzes	(10) marks	(60) marks
Classwork	(10) marks	
researches	(5) marks	
Project	(10) marks	
Attendance	(5) marks	
Mid-term exam	(20) marks	
final exam	(40) marks	(100) marks
Total	(100) marks	

11- List of references:**a. Course notes****b. Required books**

Lecture presentations, handouts by Prof. Dr. Ahmed Hanafi, S.E.

- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
- Ayodeji Emmanuel Oke, Clinton Aigbaybo, Seyi S. Stephen, Wellington Didibhuku Thwala , 2022, Sustainable Construction in the Era of the Fourth Industrial Revolution (Routledge Research Collections for Construction in Developing Countries)
- Jannice Käll , 2023, Posthuman Property and Law: Commodification and Control through Information, Smart Spaces and Artificial Intelligence (Space, Materiality and the Normative)
- Samson Jerold Samuel Chelladurai, Suresh Mayilswamy, Arun Seeralan Balakrishnan, S. Gnanasekaran , 2021, Green Materials and Advanced Manufacturing Technology: Concepts and Applications (Green Engineering and Technology)

c. Recommended books

- الرسومات التنفيذية ا.م. د/ احمد حنفي (دار الكتب و الوثائق المصرية رقم الإيداع 7992/2016)
- الرسومات التنفيذية ا.د محمد عبد الله
- التصميمات التنفيذية د هشام حسن
- التصميمات التنفيذية د مجدي تمام
- المنشأة المعمارية الجزء الثاني م/ عبد اللطيف أبو العطا البقري

- 1- Working Drawings Handbook Keith Styles and Andrew Bechard
- 2- Architects Guide

d. Periodicals, Web sites, etc.

- Materials for Architects and Builders
- http://products.construction.com/ - Sweets Construction.
- All Building Construction Sites
- All Architectural Sites

12- Facilities required for teaching and learning:

1. drawing studio
2. White board + colored pens
3. Data show for presentation
4. Google Class Room
5. E-Learning model
6. References in library
7. Catalogs and Samples for students
8. Computer + media players

13-Requirements for Disable facilities:

Teaching and learning methods for students with limited CGPA include:

- Extra lectures and tutorials..
- Extra assessment methods.

Course instructor:	Ass. Prof. Ahmed Hanafy
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code: ARCH 420	Course Name Urban & Regional Planning
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009/2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Urban & Regional Planning	
Code	ARCH 420	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs.
Lectures	1 Hrs.	
Practical/Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 407	
Instructor name/Email	Dr. Fahima El Shahed Fahima.elshahed@gmail.com Dr. Reham Hafez Reham_hafez@hotmail.com	

C- Professional Information

1- Course core:

Coverage of socioeconomic and ecological aspects related to regional and urban planning. It discusses many approaches for regional, urban, and sustainable planning. It explains core issues that have an impact on how the gap in housing units and services is calculated. It also clarifies the distinctions between the definitions of slums and informal settlements, as well as the approaches to slum management. Additionally, it looks at how the city is currently performing, how to do a SWOT analysis, and how to use GIS to combine the city's vision, alternatives, and strategy.

2- Course Learning Objectives: oC

- oC1 Understanding the relationship between regional and local (city/village) planning and their respective roles.
- oC2 Understanding the relationship between the urban and administrative components of the city.
- oC3 How to use GIS in analyses of the current state of the city.
- oC4 How to set a SWOT analysis for each sector to determine the city vision and its goals.
- oC5 Understanding the difference between slums and informal areas, and methods of dealing with each other.
- oC6 Understanding the steps of preparation the strategic plan starting from data collection till how to choose the proposed alternative to development.

3- Program objectives served by the course:

- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O3, O8
oC3	O4, O7
oC4	O2, O8, O9
oC5	O4, O8
oC6	O2, O4, O5, O9

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the scale, problems, and methodologies of solving problems of the urban and regional planning projects.
- Lo2 Integrate sustainable aspects in the project concept

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Conduct physical and multimedia modeling (GIS modelings)
- Lo4 Produce urban design l drawings with various scales.
- Lo5 Produce researches and GIS analysis to identify the categories of urban design and the investigate site problems.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Shows creativity in producing urban concepts

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.3 Assess and evaluate findings.
- LO.18 Conduct techniques and methods of investigation.
- LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- LO.26 Prepare design reports. Project briefs and documents.
- LO.29 Use creative, innovative and flexible thinking.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.3
3	Lo3	LO.18
4	Lo4	LO.21
5	Lo5	LO.26
6	Lo6	LO.29

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	studio hr.	Los
1	- . Introduction of Course	1	0	7	Lo1
2	- Concepts of urban planning and city components. - Explanation of the project	1	0	7	Lo1. Lo2, Lo3, Lo5
3	- Introduction to the Reginald Planning.	1	0	7	Lo1. Lo2, Lo3, Lo5
4	- The Housing Problems and Development of Housing Polices.	1	0	7	Lo1. Lo2, Lo3, Lo5
5	- The current situation of the city and its analysis and Strategy - Policy (methodology for preparing strategic plans for sustainable cities) - Quiz I	1	0	7	Lo1. Lo2, Lo3, Lo5



6	- Services (educational, health, recreation ...etc.) "Levels, and Basis of Distribution". - Calculate the urban indicators & identification cards of indicators.	1	0	7	Lo1. Lo2, Lo3, Lo5
7	- Definition of slum Areas.	1	0	7	Lo1. Lo2, Lo3, Lo5
Midterm exam					Lo1. Lo2
8	- How to Prepare the future services program	1	0	4	Lo1. Lo2, Lo3, Lo4, Lo6
9	- Policies for dealing with slum areas (1)	1	0	7	Lo1. Lo2, Lo3, Lo4, Lo6
10	- Policies for dealing with slum areas (2)	1	0	7	Lo1. Lo2, Lo3, Lo4, Lo6
11	- Planning of new urban communities.				Lo1. Lo2, Lo3, Lo4, Lo6
12	- Policies for dealing with unsafe areas	1	0	7	Lo1. Lo2, Lo3, Lo4, Lo6
13	- Calculate the deficit in Housing Units and Services - Quiz II.	1	0	7	Lo1. Lo3
14	- Sustainability & Sustainable cities - Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1. Lo2, Lo3, Lo4, Lo6
15	- Revision + Final Submission & discussion	1	0	7	Lo1. Lo2, Lo3, Lo4, Lo6
Final exam					Lo1. Lo2, Lo4, Lo6
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√					√	√	√	√	√	√
Lo2	√	√	√	√	√			√	√	√	√	√	√
Lo3			√							√			√
Lo4		√	√							√			
Lo5			√						√	√			
Lo6			√	√	√					√			√

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving and the cooperative work.
- On line lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

d- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√			√	√	√	√
Lo3					√						√
Lo4	√	√	√	√	√						
Lo5					√				√		
Lo6	√	√	√	√	√						√

e- Time schedule of assessment

Quizzes	Quiz (1) Quiz (2)	Week (5) Week (13)
Discussions		Weekly
Presentations and Movies		Weekly
Sheets and Sketches		Weekly
Researches and reports		Weekly
the Projects	Semi Final	Week (14)
Practical modelling	Final	Week (15)
Attendance		Weekly
Mid-term exam		weekly
final exam		Week (8) Week (16)



f- Grading system

Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(15) %	(25) marks	
Researches and reports	(15) %		
the Projects	(40) %		
Practical modeling (GIS models))	(30) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

Notes:

- Submission must be a periodical technical presentation.
 - Final submission is A2 paper and technical presentation.
 - The student has to report his own work through the current academic course.
 - The report should be printed report and soft copy.
 - The discussion and students' participants are very essential.
 - The evaluations are internal periodical assessments.
 - Student grades are available and posted in the class.
- Only group work is allowed.

11- List of references:

a. Course notes

- Student have to take written not based on the instructor's lecture

b. Required books

- 1- الوكيل، شفق (2006) - "التخطيط العمراني: مبادئ - اسس - تطبيقات (الجزء الاول)" - إيكوبا - القاهرة.
 - 2- علام، أحمد خالد - على، سمير سعد - الديناري، مصطفى (1998) - "التخطيط الإقليمي" - مكتبة الأنجلو المصرية - الطبعة الأولى - القاهرة.
 - 3- علام، أحمد خالد (1998) - "تخطيط المدن" - مكتبة الأنجلو المصرية - الطبعة الأولى - القاهرة.
 - 4- خير، صفوت (2000) - "التنمية والتخطيط الإقليمي" - منشورات وزارة الثقافة - دمشق.
 - 5- الصقار، فؤاد محمد (1969) - "التخطيط الإقليمي" - منشأة المعارف - الإسكندرية.
 - 6- دليل عمل إعداد المخططات الاستراتيجية للمدن المصرية (2015) - الهيئة العامة للتخطيط العمراني - وزارة الإسكان والمرافق والمجمعات العمرانية - جمهورية مصر العربية.
 - 7- دليل تخطيط مراكز الأحياء والمجاورات السكنية (2005) - الطبعة الأولى - وزارة الشؤون البلدية والقروية - الرياض - المملكة العربية السعودية.
 - 8- الشاهد، فهيمة (1990) - "الإزالة وإعادة التوسيع بين النظرية والتطبيق" - رسالة ماجستير غير منشورة - قسم الهندسة المعمارية - كلية الهندسة - جامعة القاهرة.
 - 9- نور الله، كمال (1968) - "بحث ميداني عن الجمهورية العربية السورية" - منشورات إدارة التنمية الإقليمية.
 - 10- قانون التخطيط العمراني رقم 3 لسنة 1982
 - 11- قانون البناء الموحد رقم 119 لسنة 2008
 - 12- EurActiv (2004). "Sustainable Development: Introduction." Retrieved on: 2009-02-24
 - 13- International Institute for Sustainable Development (2009). "What is Sustainable Development?" Retrieved on: 2009-02-18
 - 14- Vahap Tecim and Sezer Bozkus Kahyaoglu , 2023, Artificial Intelligence Perspective for Smart Cities (Internal Audit and IT Audit)
 - 15- Jinjin Yan, Sisi Zlatanova , 2023, Seamless 3D Navigation in Indoor and Outdoor Spaces
 - 16- Andrea Kahn, Carol J. Burns , 2021, Site Matters 2nd Edition
 - 17- Strategies for Uncertainty Through Planning and Design
 - 18- Debra Flanders Cushing; Evonne Miller , 2020, Creating Great Places: Evidence-based Urban Design for Health and Wellbeing
 - 19- Rodrigo Pérez de Arce , 2018, City of Play
 - 20- An Architectural and Urban History of Recreation and Leisure
 - 21- Phillip James Tabb , 2017, Serene Urbanism: A biophilic theory and practice of sustainable place making.
- c. Recommended books**
- None.
- d. Periodicals, Web sites, etc.**
- www.unhabitat.org
 - www.unescwa.org
 - www.gopp.eg.org



12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Data show for presentation
- Site visits
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course instructor	Dr. Fahima El-Shahed Prof. Rehem Hafez
Program coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code:	Course Name
ARCH 315	Modern & contemporary Foundations & Theories of Art and architects

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	Modern & contemporary Foundations & Theories of Art and architects
Code	ARCH 315
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	---
Instructor name/Email	Dr. Helmy El Tayar

C- Professional Information

1- Course core:

An introduction to the development of twentieth-century architecture in the western tradition, including its social, technological, and conceptual aspects. Including a chronological survey of the history of architectural thoughts and theories from the 19th century to the mid-20th century. Roots of the Modern Movement in architecture from the Chicago School in America to Art Nouveau, Futurism, De Stijl, Expressionism, etc. in Europe. The module will discuss the social, economic, political and cultural influences which helped shape architecture of the 20th century. Special emphasis is placed upon studying individual architects, buildings, and theoretical writings.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of values of the aesthetic theories in architecture regarding functionality and form, In addition to linking them with the historical and contemporary architectural output.
- oC2 Understanding of various architectural trends from a conceptual and philosophical point of view.
- oC3 Using the different principles and criterion of aesthetics and formation to develop philosophical architecture concepts.
- oC4 Focusing on analyzing the intellectual trends that have affected contemporary global architecture.
- oC5 Focusing on the features and principles of each of these schools (Chicago School in America to Art Nouveau, Futurism, De Stijl, Expressionism, etc. in Europe) , the most important works and architectural ideas, their writing and theories.

3- Program objectives served by the course:

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O10 Develop analysis skills through simulation methods.
- O11 Provide students with the skills to conduct scientific research



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O6, O10, O11
oC2	O6, O10, O11
oC3	O6
oC4	O10
oC5	O6, O10, O11

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Differentiate between architectural styles and movements.
- Lo2 Display The main features of the 20th century affected the global era.
- Lo3 Investigate the aspects of the modernity and the contemporary architecture.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Conduct researches on pioneers of, architecture and architectural trends.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Involve in the researches and the presentations as an effective member.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.5 Display 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.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO.18 Conduct techniques and methods of investigation.
- LO.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.5
3	Lo3	LO.8
4	Lo4	LO.18
5	Lo5	LO.27

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction to the 20 th century architecture in the western tradition	2	0	0	Lo1, Lo2
2	Roots of the Modern Movement in architecture and Architecture in late of 19 th century	2	0	0	Lo1, Lo2
3	Roots of the Modern Movement in architecture and Architecture in late of 19 th century (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
4	Chicago School in America, Art Nouveau, Futurism, De Stijl, Expressionism	2	0	0	Lo1, Lo2
5	Chicago School in America, Art Nouveau, Futurism, De Stijl, Expressionism (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5



6	Bau-house in the 20th century	2	0	0	Lo1, Lo2
7	Bau-house in the 20th century (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
8	Mid-term exam				Lo1 Lo2, Lo3
9	Architecture pioneers: Frank Louie wright	2	0	0	Lo1, Lo2
10	Architecture pioneers: Frank Louie wright (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
11	Architecture pioneers: Louis Sullivan	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
12	Architecture pioneers: Louis Sullivan (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
13	Architecture pioneers: Le Corbusier	2	0	0	Lo1, Lo2
14	Architecture pioneers: Le Corbusier (research presentation)	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
15	The main features of the 20 th century affected the global era	2	0	0	Lo1 Lo2, Lo3, Lo4, Lo5
16	Final exam				Lo1 Lo2. Lo3
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√								√	√	√	√	
Lo2	√								√	√	√	√	
Lo3	√								√	√	√	√	
Lo4	√								√	√			
Lo5	√								√	√	√		

Notes

- Presentations and the Cooperative work raises in the research.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

g- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1		√	√					√	√	√	
Lo2		√	√					√	√	√	
Lo3		√	√					√	√	√	
Lo4									√		
Lo5									√	√	

h- Time schedule of assessment

Discussions	Every week for any student
Researches and presentations	Week (3, 5, 7, 10,12, 14)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)



i- Grading system			
presentations	10 marks	(20) marks	(40)marks
Researches and reports	10 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

Note: discussions are assessed as a bonus

11- List of references:

- a. Course notes
- b. Required books
 - Lecture presentations, handouts by El Tayar, H.I.
 - Grabow, S., & Spreckelmeyer, K., (2014), "The Architecture of use: Aesthetics and Function in Architectural Design", Routledge, London, UK.
 - Wilsey, J., Function in Architectural Design, Italy
- c. Recommended books
 - Smith, Thomas, Architecture Gothic and Renaissance, PDF Book World.
 - www.rudi.net
 - www.scribd.com
 - www.balaqh.com
- d. Periodicals, Web sites, etc
 - www.urbandesign.org
 - www.census.gov/geo/www/
 - www.tpoint.net/neighbor/tre.html

12- Facilities required for teaching and learning:

- Lecture room
- White board + colored pens
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Helmy El-Tayar
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: ARCH 324	Course Name Advanced Representation
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design department
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Advanced Representation
Code	ARCH 324
Credit Hours	2 Cr. Hrs.
Lectures	1 Hrs.
Lab	3 Hrs.
Total	4 Hrs.
Prerequisite	ARCH 201
Instructor name/Email	Dr. Fahima El-Shahed Fahema.elshahed@sva.edu.eg

C- Professional Information

1- Course core:

The course expands on representational techniques. Focuses on the application and use of these techniques in the presentation and representation of design concepts and drawing compositions. Introduces color drawing techniques using mixed media of hand drawing and computer-generated drawings and illustrations, photomontage and collage

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of 3D Concepts.
- oC2 Studying the computer applications in developing a digital computer model of buildings
- oC3 Construct accurate 3D building models.
- oC4 Studying how to Create animations and walkthroughs of the building.
- oC5 Understanding how to Present the project digitally.
- oC6 Studying 3D modeling, rendering, animation, as well as presentation (increased use of IT or web based reference material, changes in content as a result of new research in the field).

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the design process
- O2 Interpret in the analysis process within the simulation methods.
- O3 Develop the skills of using new technologies in the design, presentation and the implementation process.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O2
oC2	O2, O3
oC3	O1, O2
oC4	O1
oC5	O1, O3
oC6	O2, O3



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the techniques of presentations by using computer applications.
- Lo2 Explain the techniques of creating animations.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Merge the materials in the models to simulate the real buildings.
- Lo4 Use and merge the environmental image of the place and the day lighting to give sense of place and time for the models.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Conduct accurate 3D building models and animation.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.3 Assess and evaluate findings
- LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements
- LO.23 Produce environmental, conservation and rehabilitation designs
- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.1&LO.3
3	Lo3	LO.17
4	Lo4	LO.23
5	Lo5	LO.32

8- Course Content/ relation of contents to los of the course

Week No.	Topic	Lecture hr.	Tutorial hr.	Lab hrs.	LOs
1	Brief Understanding about BIM	1	0	3	Lo1
2	Brief Understanding about BIM	1	0	3	Lo1
3	Basic Modeling Categories 01	1	0	3	Lo1, Lo2
4	Basic Modeling Categories 02	1	0	3	Lo2, Lo3
5	Ramps and Generic Models	1	0	3	Lo1, Lo2, Lo3
6	Roof by footprint, Roof by extrusion, Ceiling, Railings and Rooms	1	0	3	Lo1, Lo2, Lo3
7	Conceptual Masses Part 01	1	0	3	Lo1, Lo2, Lo3
8	Midterm	1hr			Lo1, Lo2, Lo3
9	Conceptual Masses 02	1	0	3	Lo1, Lo2, Lo3
10	Door & Window Families	1	0	3	Lo1, Lo2, Lo3
11	Louver Parametric Family				Lo1, Lo2, Lo3,
12	Architectural Presentation and Render	1	0	3	Lo1, Lo2, Lo3, Lo4
13	Lighting Fixture Family Discussion	1	0	3	Lo1, Lo2, Lo3, Lo4
14	Semi- final submission for the Project	1	0	3	Lo1, Lo2, Lo3, Lo4
15	Final Submission	1	0	3	Lo1, Lo2, Lo3, Lo4
16	Final exam	2hrs			Lo1, Lo2, Lo3
Total hours		14	0	42	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods										
	On line / face to face lecture	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	presentation	Discussion	modeling	
Lo1	✓	✓	✓			✓				✓	
Lo2	✓	✓	✓	✓	✓	✓				✓	
Lo3	✓	✓	✓	✓	✓	✓		✓		✓	
Lo4		✓	✓	✓	✓	✓		✓		✓	
Lo5		✓	✓	✓		✓		✓		✓	

Notes:

- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	✓	✓	✓	✓	✓	✓					✓
Lo2	✓	✓	✓	✓	✓	✓					✓
Lo3	✓	✓	✓	✓	✓	✓				✓	✓
Lo4	✓	✓		✓	✓	✓				✓	✓
Lo5	✓	✓		✓	✓	✓				✓	✓

b. Time schedule of assessment

Presentations	Weekly
Sheets and Sketches	Weekly
The Project	Semi Final Final Week (14) Week (15)
Practical modelling	Weekly
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Lab work / Homework (Sheets and Sketches)	(5) marks	(25) marks	(40) marks
Project (Semi-final)	(5) marks		
Project (Final)	(10) marks		
Attendance	(5) marks		
Mid-term exam		(15) marks	
final exam		(60) marks	(60) marks
Total		(100) marks	

– Note: Mid- term can be a laboratory exam.

11- List of references:

a. Course notes	-Lecture presentation and handouts.
b. Required books	none
c. Recommended books	none
	- Balkan Architect -
	https://www.youtube.com/channel/UCapzEjUWyv7H4GtPQrgybTQ
d. Periodicals, Web sites, etc	- BIM Guide -
	http://bim.pu.go.id/assets/files/BIM_Handbook_A_Guide_to_Building_Information_Modeling_for_Owners_Managers_Designers_Engineers_and_Contractors_Second_Edition.pdf



12- Facilities required for teaching and learning:

- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning
- References in library
- Computer Laboratory

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor:	Dr. Fahima El-Shahed
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code: BASE 401	Course Name Communication Skills
A- Affiliation	
Relevant program:	Architectural and desig program Electrical Power Engineering program Civil Engineering program
Department offering the program:	Architectural and desig program Electrical Power Engineering program Civil Engineering program
Department offering the course:	Basic Science program
Date of program operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Communication Skills
Code	BASE 401
Credit Hours	3
Lectures	2
Tutorial	2
Total	4
Prerequisite	none
Instructor name/Email	Amira.marei@sva.edu.eg

C- Professional Information

1- Course core:

Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids and Ethics of the engineering proficiency with emphasis on each departmental ethical and professional Licensure topic.

2- Course Learning Objectives:

- 1 Understand and apply communication theory
- 2 Critically think about communication processes and messages
- 3 Write effectively for a variety of contexts and audiences
- 4 Interact skillfully and ethically
- 5 Develop and deliver professional presentations.
- 6 Engage in scholarly inquiry and social scientific research.
- 7 Recognize the effects of diversity, access, and power on communication.

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identifies the basic skills to produce negotiation in form of effective persuasive writing with a focus on organization, content, analysis of readings, and critical thinking.
- Lo2 evaluates the Basics of Scientific Research, Problem Meaning, How to choose a problem, and a research plane

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Practise efficiently ccommunication skills as: presentations, discussions, writings

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 The student can express his opinion in a flexible way.



4-Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.3 Assess and evaluate findings.
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences..
- LO.31 Practice self-learning and other learning strategies.

5-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.3
3	Lo3	LO.28
4	Lo4	LO.31

6- Contents

Topic	Lecture hrs.	Tutorial hrs.	lab hrs.	LOS
1- Introduction to Communication Skills	2	2	0	Lo1
2- Communication with oneself	2	2	0	Lo1, Lo3, Lo4
3- Methods of communication with oneself	2	2	0	Lo1,Lo2, Lo3, Lo4
4- Reception Skills	2	2	0	Lo1,Lo2
5- Reading Skills	2	2	0	Lo1,Lo2, Lo3, Lo4
6- Distractions in reading	2	2	0	Lo1,Lo3, Lo4
7- Reading attributes	2	2	0	Lo3, Lo4
8- midterm				Lo1, Lo3, Lo4
9- Transmitter skills	2	2	0	Lo1,Lo2
10- Writing Skills	2	2	0	Lo1,Lo2, Lo3, Lo4
11- Non-verbal communication	2	2	0	Lo1,Lo2
12- Discussion and persuasion skills	2	2	0	Lo1,Lo2, Lo3, Lo4
13- Distractions in discussion and persuasion skills	2	2	0	Lo1,Lo2
14- Communication in the work environment	2	2	0	Lo1,Lo2, Lo3, Lo4
15- Revision	2	2	0	Lo1,Lo2, Lo3, Lo4
16- Final Exam		3		Lo1, Lo3, Lo4
total	28	28	0	

7-The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interavtive lectures	Presentatio ns and Media	Discussions	Sheets and Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modelling	Cooperative work
Lo1	√	√	√						√		√
Lo2	√	√	√						√		√
Lo3	√	√	√						√		√
Lo4	√	√	√						√		√

Notes

- The research concerns the cooperative work, the discussion, and the presentations.
- Online lectures are used as hybrid learning, but in the use of totally online learning, all the used teaching and learning methods will be online.



8- Student assessment method									
a-Assessment method and its relation to the Los of the course									
Course ILos	Tools of assessment								
	Quizzes/ exams	Presentations	Discussions	Sheets	Site visits	lab	research	Modelling	Cooperative work
Lo1	√	√	√				√		√
Lo2		√	√				√		√
Lo3	√	√	√				√		√
Lo4	√	√	√				√		√
b- Time schedule of assessment									
Quizzes	Quiz (1)		Week (4)						
	Quiz (2)		Week (8)						
Discussions			Weekly						
Presentations			Weekly						
Researches and reports			Weekly						
Attendance			weekly						
Mid-term exam			Week (8)						
final exam			Week (16)						
c- Grading system									
Quizzes	Quiz (1)		5 marks		50 marks				
	Quiz (2)		5 marks						
Discussions/ presentations	50%		10 marks						
Researches and reports	50%								
Attendance	10 marks								
Mid-term exam	20 marks								
Final exam	50marks								
total	100 marks								

9- List of references:

- | | |
|---|---|
| <p>a- Course notes</p> <p>b- Required books</p> <p>c- Recommended books</p> <p>d- Periodicals, Web sites, etc</p> | <p>Lecture notes and handouts</p> <ul style="list-style-type: none"> • • • Hargie, Owen, Ed. <i>The handbook of communication skills.</i> Psychology Press, 1997. <p>Crucial Conversations: Tools for Talking When Stakes Are High by Kerry Patterson, Joseph Grenny, Ron McMillan, and Al Switzler.</p> <p>Communication Skills Training: A Practical Guide to Improving Your Social Intelligence, Presentation, Persuasion, and Public Speaking by Ian Tuhovsky.</p> <p>No periodicals are needed.</p> <p>Sites https://teambuilding.com/blog/communication-books.</p> |
|---|---|

10-Facilities required for teaching and learning:

Lecturer notes, Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Google classroom, E-learning Moodle

Course Instructor:	Dr. Amara Marey
(Head of the Department)	Dr. Amara Marey
Date:	2023/2024



Course Specification

Course Code: Base 404	Course Name Negotiation Skills
A- Affiliation	
Relevant program:	Architecture and design program Electrical Power Engineering program Civil Engineering program
Department offering the program:	Architecture and design program Electrical Power Engineering program Civil Engineering program
Department offering the course:	Basic Sciences
Date of program operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Negotiation Skills
Code	Base 404
Credit Hours	3 c.hr.
Lectures	2 hr.
Tutorial	2 hr.
Total	4 hr.
Prerequisite	none
Instructor name/Email	Amira.marei@sva.edu.eg

C- Professional Information

1- Course core:

This course aims to develop the critical thinking of students, their negotiation skills, presentation skills, public speaking skills, leadership skills, and self-evaluation.

2- Course Learning Objectives:

- 1 Create the systematic framework for understanding negotiation
- 2 Heighten the student awareness of his strengths and weaknesses as a negotiator
- 3 Learn how to expand the size of the pie by creating value in negotiations
- 4 Gain problem-solving techniques for distributing value and strengthening relationships
- 5 Ascertain how to choose the right process to craft deals that last.

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identifies the basic skills to produce negotiation in form of effective persuasive writing with a focus on organization, content, analysis of readings, and critical thinking.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 use and integrate sources, library, and online references in researches.
- Lo3 Practise negotiation skills as: expanding the size of the pie by creating value in negotiations, Gain problem-solving techniques for distributing value and strengthening relationships.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Height light the strengths and the weaknesses of the negotiator.
- Lo5 The student can express his opinion in a flexible way.



4-Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.13 Solve complex engineering problems
- LO19 Plan, supervise and monitor implementation of engineering projects.
- LO.27 Work efficiently as an individual and share in team works
- LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences

5-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.19
3	Lo3	LO.13
4	Lo4	LO.27
5	Lo5	LO.28

6- Contents

Topic	Lecture hours	Tutorial hours	lab hours	LOS
1- Negotiation Skills	2	2	0	Lo1, Lo5
2- General overview	2	2	0	Lo1, Lo2, Lo5
3- What do business teams negotiate?	2	2	0	Lo1,Lo2 Lo3,
4- Stages of negotiation	2	2	0	Lo1,Lo2 Lo3, Lo4, Lo5
5- Preparation and planning	2	2	0	Lo1, Lo4
6- Negotiation strategies	2	2	0	Lo1, Lo4
7- Planning the negotiation process	2	2	0	Lo1, Lo4
8- midterm				
9- The importance of negotiation science	2	2	0	Lo1, Lo2
10- Characteristics and skills of a successful negotiator	2	2	0	Lo1,Lo2 Lo3, Lo4, Lo5
11- Collective negotiations in the field of work	2	2	0	Lo1, Lo3, Lo4, Lo5
12- The impact of cultural differences on the negotiation process	2	2	0	Lo1, Lo2, Lo3, Lo4, Lo5
13- Salary negotiation skills	2	2	0	Lo1,Lo2, Lo3, Lo4, Lo5
14- Essential Salary Negotiation Tips	2	2	0	Lo1, Lo2,Lo3, Lo4, Lo5
15- Revision	2	2	0	Lo1, Lo3, Lo4, Lo5
16- Final Exam				Lo1, Lo3, Lo4, Lo5
total	28	28	0	

7-The Teaching and Learning Methods and their relation to the Los of the course

Course learning Outcomes (LOs)	Teaching and Learning Methods										
	Interavctive lectures	Presentations and Movies	Discussions	Sheets and Sketches	Problem solving	Brain storming	Lab	Site visits	Researches	Modelling	Cooperative work
Lo1	√	√	√						√		√
Lo2	√	√	√						√		√
Lo3	√	√	√								√
Lo4	√	√	√						√		√
Lo5	√	√	√								√

Notes

- The research concerns the cooperative work, the discussion, and the presentations.
- Online lectures are used as hybrid learning, but in the use of totally online learning, all the used teaching and learning methods will be online.



8- Student assessment method

a-Assessment method and its relation to the Los of the course

Course I/Los	Tools of assessment							
	Quizzes/ exams	Presentations and Movies	Discussions	Sheets	Site visits	lab	Modelling	Cooperative work
Lo1	√	√	√					√
Lo2		√						√
Lo3	√	√	√					√
Lo4	√	√	√					√
Lo5	√	√	√					√

b- Time schedule of assessment

Quizzes	Quiz (1)	Week (4)
	Quiz (2)	Week (8)
Discussions		Weekly
Presentations		Weekly
Researches and reports		Weekly
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c- Grading system

Quizzes	Quiz (1)	5 marks	50marks
	Quiz (2)	5 marks	
Discussions/ presentations	50%	10 marks	
Researches and reports	50%		
Attendance	10 marks		
Mid-term exam	20 marks		
Final exam	50marks		
total	100 marks		

9- List of references:

a- Course notes

b- Required books

Lecture notes and handouts

- Gammie, Bob, Elizabeth Gammie, and Erica Cargill. "Personal skills development in the accounting curriculum." *Accounting Education* 11.1 (2002): 63-78..

c- Recommended books

Rebel Talent: Why It Pays to Break the Rules at Work and in Life, by Francesca Gino

d- Periodicals, Web sites, etc

No periodicals are needed.

Sites. <https://www.pon.harvard.edu/daily/negotiation-training-daily/negotiation-books-a-negotiation-reading-list/>

10- Facilities required for teaching and learning:

Lectur hall, Library- Internet - Data show - E-Learning Moodle

11- Requirements for Disable facilities:

- Make penifit from the admission hours for the course instructor and his assisstent in practicing negotiations with the disables.
- Lectures presented in the E-learning Moodle

Course Instructor:	Dr. Amera Marye
(Head of the Department)	Dr. Amera Marye
Date:	2023/2024



Course Specification

Course Code: BASE 309	Course Name Human Rights
A- Affiliation	
Relevant program:	-
Department offering the program:	Architecture Engineering and design
Department offering the course:	Basic Science
Date of program operation:	2008 -2009
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	Human Rights
Code	BASE 309
Credit Hours	0 Cr. Hrs.
Lectures	- Hrs.
Tutorial	2 Hrs.
Total	2 Hrs.
Prerequisite	---
Instructor name/Email	Dr. Abdul-Aziz Ramadan

C- Professional Information

1.Course core:

The course aims to identify the nature and concepts of human rights, the origin, sources, types of human rights and their applications in the engineering field and their relationship to the ethics and duties of the profession as well as the international institutional framework to deal with human rights issues and mechanisms for the protection of these rights at the international and national levels. It also addresses the definition of non-governmental organizations working in the field of human rights.

2. Course Learning Objectives: oC

oC1	Understanding the main topics and feature of human rights concerning the engineers and the clients.
oC2	Focusing on analyzing and presenting the international institutional framework to deal with human rights issues.
oC3	Addressing the role of the non-governmental organizations in the field of protecting human rights.

3. Program objectives served by the course:

O1	Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve the goals of sustainable development 2030.
O6	Developing students' professional skills and the ability to self- and continuous learning.
O8	Students gain experiences in effective communication with the surrounding community.
O11	Provide students with the skills to conduct scientific research

4. The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1,O6, O8, O11
oC2	O1,O6,O11
oC3	O1,O6,O11



5. Learning outcomes of the course (LOs):

a.Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Analyze frame work of the various organizations in protecting the human rights.

Lo2 Address and analyze the case studies concerning the self-learning.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo3 Conduct researches to identify and display the following:

- The concept of the human rights.
- The international organizations and the non-governmental organizations in the field of human rights.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo4 Present research issues and share teams while conducting research's

6. Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.2 Simulate, analyze and interpret data.

LO.5 Display 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.

LO.12 State the role of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.

LO.28 Communicate effectively, graphically, verbally and in writing with a range of audiences.

6-The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1&LO.2
2	Lo2	LO.1&LO.2
3	Lo3	LO.5&LO.12
4	Lo4	LO.28

7. Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hr.	LOs
1	Introducing to the concept of human rights (from its inception to the present time.)	0	2	0	Lo1, Lo2
2	Types of human rights as stated in the Egyptian constitution 1971.	0	2	0	Lo1, Lo2, Lo3, Lo4
3	Human rights in light of the provisions of Islamic law	0	2	0	Lo1, Lo2, Lo3, Lo4
4	Human rights as stated on both Holly Quran and in the prophet Mohamed Sunna. (Research as case studies)	0	2	0	Lo1, Lo2, Lo3, Lo4
5	Egyptian human rights during the eras of modern Egypt (one hundred years).	0	2	0	Lo1, Lo2, Lo3, Lo4
6	The changes of human rights since early age of Egyptian kingdom till now. (Research as case studies)	0	2	0	Lo1, Lo2, Lo3, Lo4
7	Human rights in Egyptian law.	0	2	0	Lo1, Lo2, Lo3, Lo4
8	Mid-term exam				Lo1, Lo2
9	Statements of human rights as specified in various countries in the world.	0	2	0	Lo1, Lo2, Lo3, Lo4
10	Case study of human rights in various countries in the world (Research)	0	2	0	Lo1, Lo2, Lo3, Lo4
11	Human rights between the individual	0	2	0	Lo1, Lo2, Lo3,



	and society and between state sovereignty and international protection. (Research)				Lo4
12	The conflict between nations sovereignty and international society in relation to human rights concept. (Research)	0	2	0	Lo1, Lo2, Lo3, Lo4
13	The loss of Egyptian human rights between inherited family traditions and some ugly society habits. (Research) (Research)	0	2	0	Lo1, Lo2, Lo3, Lo4
14	Factors influencing the loss of the Egyptian citizen human rights (family old beliefs, ignorance of environmental rules by society and hardship of competent authorities). (Research)	0	2	0	Lo1, Lo2, Lo3, Lo4
15	the sodden abrupt changes of western nations policy towards the mean and Arab countries, and relation to human rights. (Research)	0	2	0	Lo1, Lo2, Lo3, Lo4
16	Final exam				Lo1, Lo2
Total hours		0	28	0	

8. The Teaching and Learning Methods and their relation to the Los of the course

program competencies Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1		√							√	√		√	
Lo2		√							√	√		√	
Lo3		√							√	√			
Lo4		√							√	√	√		

Notes: Presentations, and the Cooperative work raise in the research.

- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

9. Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	quizes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/ researches	presentation	modeling
Lo1		√	√					√	√	√		
Lo2		√	√					√	√	√		
Lo3									√	√		
Lo4									√	√	√	

b. Time schedule of assessment

Discussions	Every week for any student
Presentations	Every week
Researches	Week (4, 6, 10, 12,13,14,15)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Presentations	10 marks	20 marks	(40) marks
Researches and reports	10 marks		
Attendance		5 marks	
Mid-term exam		15 marks	
final exam		60 marks	
Total		100 marks	

Remarks:

- bonus marks are used to let students involve into discussions
- Cooperative work is assessed while assessing the research presentation
- self- learning is assessed within the discussions and the written exams.



10. List of references:

a- Course notes	-	Lecture presentations, handouts by Dr. Abdul-Aziz Ramadan.
b- Required books	-	Lindsnaes, Lindholm and Yigen, (eds). National human rights institutions: articles and working papers: input into the discussions on the establishment and development of the functions of national human rights institutions. Copenhagen, Danish Centre for Human Rights, 2000. - International Council on Human Rights Policy. Performance and legitimacy; national human rights institutions. Soix, Switzerland, 2000.
c- Recommended books	NONE	
d- Periodicals, Web sites, etc	NONE	

1' Facilities required for teaching and learning:

1. class room
2. Data show-white board
3. E-Learning platform
4. References in library

1: Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours

Course coordinator: Dr. Abdul-Aziz Ramadan

Head of the Department: Dr. Amera Marye

Date: 2023-2024



Fifth level courses

First semester (Fall)

No.	Cod	Course Name	Instructor
1	ARCH 490*	Senior project 1	Prof. Hany Serag Aldeen, Ass. Prof. Hossam Bahgat Dr. Fahima El Shahed Dr. Rania Khalifa
2	ARCH 405*	Architecture design 6	Ass. Prof. Hossam Bahgat Dr. Rania Khalifa
3	ARCH 422*	Working drawing 3	Ass. Prof. Ahmed Hanafi
4	ARCH 414*	Housing	Dr. Fahima El-Shahed Prof. Reham Hafiz
5	ARCH 332 #	Design for conservation	Ass. Prof. Hanaa Mousa
6	BASE 307	Contracts, Bids & Liabilities	Dr. Naser Mohamed



Course Specification

Course Code: ARCH 490	Course Name Senior Project I
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation as NARS 2018:	2023-2024

B-Basic Information

Title	Senior Project I		
Code	ARCH 490		
Credit Hours	3 Cr. Hrs.	Note: 1 practical credit hr. represent 3 effective hrs.	
Lectures	1 Hrs.		
Practical	lab		2 Hrs.
	Studio		7 Hrs.
Total	10 Hrs.		
Prerequisite	ARCH 404		
Instructor name/Email	Prof. Dr. Haney Serag Aldeen, Dr. Fahima El Shahed Ass. Prof. Hossam Bahgat Dr. Rania Khalifa		

C- Professional Information

1- Course core:

Topics are selected by students from a set define by advisors and according to their area of interest. Project brief analysis and research. Preparation of space and functional programs.

2- Course Learning Objectives: oC

- oC1 Interpreting the student into the contemporary problems concerning the architecture development in the country.
- oC2 The student has to search and make data analysis for the chosen site, and the projects that resemble the project that will be taken in the site. As to collect all the factors acting on the design process.
- oC3 Developing the research skills for the student.
- oC4 Raising the student's awareness of the methods of solving architecture problems.

3- Program objectives served by the course: O

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O9 Develop analysis skills through simulation methods.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O3
oC2	O5, O9
oC3	O5, O9
oC4	O4



5- Learning outcomes of the course (LOs)

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Analyze the significance of urban spaces and the interaction between human behavior, built environment and natural environment.
- Lo2 Search for Principles of sustainable design, climatic considerations, and energy consumption and efficiency in buildings and their impacts on the environment.
- Lo3 Integrate different forms of knowledge, ideas from other disciplines and manage information retrieval to create new solutions.
- Lo4 Predict possible solutions and design alternatives for the project concerning the research.
- Lo5 Integrate community design parameters into design projects.
- Lo6 Discuss, search and formulate informed opinions appropriate to specific context and circumstances affecting architecture profession and practice.
- Lo7 Analyze the range of patterns and traditions that have shaped and sustained cultures and the way that they can inform design process.
- Lo8 Search for information and engage in life-long self-learning discipline.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- none

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO.11 Display adequate knowledge of industries, organizations, regulations and procedures involved into projects.
- LO.12 State the role of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.

7- The relation between the course learning outcomes and the program LOs

Course (LOs)	program LOs
Lo1	LO.1 & LO.2
Lo2	LO.2
Lo3	LO.8
Lo4	LO.8 & LO.11
Lo5	LO.11
Lo6	LO.12
Lo7	LO.2 & LO.8 & LO.11
Lo8	LO.2 & LO.8 & LO.11

8- Course Content

Week No.	Topic	Lecture hr.	Practical hours		LOs
			lab hr.	Studio hr.	
1	Lec.	1	2	7	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7, Lo8
	Practical hrs.				
2	Lec.	1	2	7	Lo1, Lo3,



	Practical hrs.	Discussing and presenting Site visit analysis				Lo4, Lo5, Lo7
3	Lec.	Site visit aspects of analysis	1	2	7	
	Practical hrs.	Discussing and presenting Site visit analysis				
4	Lec.	project components as criterion of design and their important issues	1	2	7	Lo1, Lo2, Lo3, Lo4
	Practical hrs.	Discussing and presenting the components of the used examples in the research				
5	Lec.	Follow-up of individual research as well as project: site analyzes - project components without spaces	1	2	7	Lo1, Lo2, Lo3, Lo4, Lo6, Lo7, Lo8
	Practical hrs.	Follow-up of individual research as well as project: site analyzes - project components without spaces				
6	Lec.	The importance of the design concept.	1	2	7	Lo2, Lo3, Lo6
	Practical hrs.	Discussing and presenting the concept of varies examples				
7	Lec.	How to transform functional relationships into a design idea.	1	2	7	Lo3, Lo4
	Practical hrs.	Follow-up of individual and group research as well as project: site analysis studies - project components in areas - development (1) initial idea of the functional relationships of the components of the project (zoning) according to climatic and spatial conditions - collective research				
8						
9	Lec.	How to combine sustainability with design	1	2	7	Lo2
	Practical hrs.	Follow-up of individual and group research as well as project: delivery of the initial draft of the research - site analysis studies - development (2) for the initial idea of the functional relations of the components of the project (zoning) according to the conditions of the climatic and spatial location, the program spaces, and the idea of design (layout).				Lo1, Lo3, Lo4
10	Lec.	How to design a landscape	1	2	7	Lo2, Lo3, Lo5, Lo6, Lo7
	Practical hrs.	Follow-up of individual and group research as well as project: Development (3) for the initial idea of the functional relations of the components of the project (zoning) according to the conditions of the climatic and spatial location, the program spaces, and the idea of design (layout)				Lo3, Lo4
11	Lec.	Follow-up research (individual and group) and project: development (4) for the idea of the initial functional relations of the components of the project (zoning), the program spaces, and the idea of design (layout).	1	2	7	Lo3, Lo4, Lo6
	Practical hrs.	Follow-up research (individual and group) and project: development (4) for the idea of the initial functional relations of the components of the project (zoning), the program spaces, and the idea of design (layout).				
12	Lec.	Follow-up research (individual and group) and project: development (4) for the idea of the initial functional relations of the components of the project (zoning), the program spaces, and the idea of design (layout).	1	2	7	Lo3, Lo4, Lo6
	Practical hrs.	Follow-up research (individual and group) and project: development (4) for the idea of the initial functional relations of the components of the project (zoning), the program spaces, and the idea of design (layout).				
13	Lec.	Follow-up research and develop ideas (Final	1	2	7	Lo3, Lo4,



	Practical hrs.	draft).				Lo6
14	Lec.	Submit the final draft of the individual and group research	1	2	7	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7, Lo8
	Practical hrs.	Delivery of the final draft of the site analysis studies, the components of the project, the program in the spaces & the design idea (layout).				
15	Lec.	Final delivery of research (individual and group) and project including: site analysis, project philosophy, Project components with calculations and General location of project components (layout)	1	2	7	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6, Lo7, Lo8
	Practical hrs.	Discussion.				
16		Final exam				-
Total hours			14	28	56	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√							√	√	√	√	√	
Lo2							√	√	√	√			
Lo3	√							√	√	√	√	√	
Lo4	√						√	√	√	√	√	√	
Lo5	√							√	√	√	√	√	
Lo6	√							√	√	√	√	√	
Lo7	√							√	√	√	√	√	
Lo8								√	√	√			

Notes

- Lab hrs. concerns the search for information in the internet.
- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a- Assessment method and its relation to the Los of the course												
Course LOs	Tools of assessment											
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1								√	√	√		
Lo2								√	√	√		
Lo3								√	√	√		
Lo4								√	√	√		
Lo5								√	√	√		
Lo6								√	√	√		
Lo7								√	√	√		
Lo8								√	√	√		

Note:

- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- Submission must be a periodical technical presentation.
- Final submission is A3 paper and technical presentation.
- The report should be printed report and soft copy.



b- Time schedule of assessment

Discussions	Every week for any student
Presentations	Every week for any student
Researches and reports	Every week for any student
Attendance	weekly
final submission	Week (15)

c- Grading system

Periodical Reports	(20) marks	(40) marks
Discussion/	(50) %	
presentation	(50) %	
Attendance	(10) marks	
Semi -final submission for the research	20 marks	
final submission for the research	40 marks	
total	100 marks	

11- List of references:

a- Course notes

b- Required books

- Lecture presentations, handouts.
- Student has to take written notes based on the instructor's lecture.
- Ernst and Peter Neufert, Architects' Data, third addition.
- Architectural standards- Donald Watson Time sever standards for architectural design data-item preview
- Sustainable living: the role of whole life costs and values –Nalanie Mithraratne , Brenda vale& Robert vale
- Sustainable building design book, the 2005 world sustainable building conference in Tokyo ,student session ,23-29 September 2005 ,Tokyo ,Japan
- Can Bilsel and Juliana Maxim ,2022, Architecture and the Housing Question (Routledge Research in Architecture)
- Miles Glendinning , 2021, Mass Housing: Modern Architecture and State Power - A Global History.
- Marie Stender, Claus Bech-Danielson, Aina Landsverk Hagen , 2022, Architectural Anthropology: Exploring Lived Space (Routledge Research in Architecture).

c- Recommended books

d- Periodicals, Web sites, etc

None.






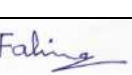
www.unhabitate.org
www.archdialy.com.

12-Facilities required for teaching and learning:

- Lecture hall – lab-studio
- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning model
- References in library
- Internet

13- Requirements for Disable facilities:

1. Extra assignments
2. On line extra teaching hours

Course Instructor:	Prof. Dr. Haney Serag Aldeen, Ass. Prof. Hossam Bahgat Dr. Fahima El Shahed Dr. Rania Khalifa	   
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code: ARCH 405	Course Name Architectural Design 6
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation as NARS 2018:	2023-2024

B-Basic Information

Title	Design 6	
Code	ARCH 405	
Credit Hours	3 Cr. Hrs.	1 credit hr. for the studio represents 3 effective hrs
Lectures	1 Hrs.	
Tutorial	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 404- ARCH 407	
Instructor name/Email	Ass. Prof. Hossam Bahgat Dr. Rania Khalifa	

C- Professional Information

1- Course core:

The course focuses on the architectural design for space and composition. Students are required to think about architectural forms and functions approach, with the stress on imagination and creativity of architecture shapes and its composition. Emphasizing the integration with the surrounding context. One of the main targets is to enhance the students ability to find solutions for the outdoor / indoor connections and buildings rules and regulations. The course also stresses the idea of acquiring the knowledge and information from the graduation research course.

2- Course Learning Objectives: oC

- oC1 Interpret the student into the contemporary problems concerning the architecture development in the country.
- oC2 The student has to search and make data analysis for the chosen site, and the projects that resemble the project that will be taken in the site. As to collect all the factors acting on the design process.
- oC3 Develop the research skills for the student.
- oC4 Raise the student's awareness of the methods of solving architecture problems.

3- Program objectives served by the course: O

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Gain students scientific research skills.
- O9 Develop analysis skills through simulation methods.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O6, O9
oC2	O2, O3
oC3	O1, O6
oC4	O1, O9
oC5	O2, O3, O1



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the role of the building the urban context and the contemporary problems concerning the architecture development in the country.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Conduct researches to investigate the main features of the iconic compositions in the urban realm.
Lo3 create design concept that meets user's needs, particularly special needs, complies with environment, and achieve the principles of sustainability
Lo4 develop, prepare, and present an architectural design project in a variety of contexts, scales, types and degree of complexity by using an appropriate range of media and design-based software

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Work efficiently in design application, researches and modeling.
Lo6 Display creativity in the design and in solving the project problems and constrains.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
LO.18 Conduct techniques and methods of investigation.
LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
LO.22 Produce designs that meet building users' requirements.
LO.27 Work efficiently as an individual and share in team works.
LO.29 Use creative, innovative and flexible thinking.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program competencies
1	Lo1	LO.1
2	Lo2	LO.18
3	Lo3	LO.21
4	Lo4	LO.22
5	Lo5	LO.27
6	Lo6	LO.29

8- Course Content

Week No.	Topic	Lecture hr.	lab hr.	Studio hrs.	Los
1	- Course introduction and its objectives - Define of the project site	1	0	7	Lo1
2	- The design process stages: - How to make the project studies The site analysis	1	0	7	Lo1, Lo2, Lo5
3	- Project studies and site analysis submission and discussion.	1	0	7	Lo1, Lo2, Lo5
4	- The design concept and zoning studies.	1	0	7	Lo1, lo3,Lo5 Lo6
5	- Concept development & Ground floor plan.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
6	- Ground floor plan development & first floor plan	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
7	- Final plans	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
8	Midterm exam				Lo1, lo3,Lo5, Lo5 Lo6
9	- Elevations & Sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
10	- Final elevations & sections	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
11	- Layout & Perspective/Isometric	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6



12	- semifinal project submission	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
13	- How to present the final project	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
14	- Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
15	- Final Submission & discussion	1	0	7	Lo1, lo3,Lo5, Lo5 Lo6
16	Final exam				Lo1, lo3,Lo5, Lo5 Lo6
Total hours		14		98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√			√	√	√	√	√	√
Lo2		√								√			
Lo3		√	√	√	√								√
Lo4		√	√	√	√								
Lo5		√	√				√						
Lo6		√	√				√						

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course Los	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2									√		
Lo3	√	√	√	√	√						√
Lo4	√	√	√	√	√						
Lo5	√	√	√	√	√						
Lo6	√	√	√	√	√						

b. Time schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3)
the Projects	Semi Final	Week (14)
	Final	Week (15)
Practical modelling		Week (5, 6, 13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

Notes:

- Submission must be a periodical technical presentation.
- Final submission is A1 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.



c. Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	(5) %	(25) marks	
Sketches	(20) %		
Researches and reports	(10) %		
the Projects	(50) %		
Practical modeling	(15) %		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

11- List of references:

a. Course notes

Lecture presentations, handouts.

b. Required books

- Ernst and Peter Neufert, Architects' Data, third addition.
- Architectural standards- Donald Watson Time sever standards for architectural design data-item preview
- Sustainable living: the role of whole life costs and values –Nalanie Mithraratne , Brenda vale& Robert vale
- Sustainable building design book, the 2005 world sustainable building conference in Tokyo ,student session ,23-29 September 2005 ,Tokyo ,Japan
- Margaret Fletcher , 2020, Architectural Styles: A Visual Guide.
- David Fannon, Michelle Laboy, Peter Wiederspahn , 2022, The Architecture of Persistence: Designing for Future Use

c. Recommended books

None.

d. Periodicals, Web sites, etc




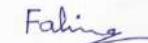
www.unhabitare.org
www.archdialy.com

12- Facilities required for teaching and learning:

- Class rooms
- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning model
- References in library

13-Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructors:	Ass. Prof. Hossam Bahgat Dr. Rania Khalifa	 
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 422	Working Drawings (III)

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Working Drawings (III)
Code	ARCH 422
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Practical/Studio	4 Hrs.
Total	6 Hrs.
Prerequisite	ARCH 406
Instructor name/Email	Ass. Prof. Ahmed Hanafy

C- Professional Information

1- Course core:

The course aims to focus on architectural details. It deals with the proper methods of producing details: their purpose and importance as an important part of the construction document. It emphasizes construction, assemblies, joints and connections between the various construction materials, and the joining of materials especially wood in door and window assemblies. Door Details: Head and Jamb Details. Miscellaneous Details (Fireplace, Closets, etc.). Wood Joints. Window Details (Wood). Window Details (Metal). Stair Details (Wood). Stair Details (R.C. and Steel). Bathroom and Kitchen Elevations. Kitchen Cabinets Details.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of working drawing vocabularies and drafting symbolism.
- oC2 Examining different structural Systems such as (Columns& beams, Hollow Blocks, Flat slabs, Waffle slabs, Panel beams, Frames) through studying their role.
- oC3 Studying Concrete Stairs construction systems and Elevators through studying its roles.
- oC4 Apply knowledge acquired to prepare the preliminary drawing for multi floors building including plans, sections and elevations.
- oC5 Studying various working drawings for some architectural details and drawings for (sanitary - electricity work - HVAC & fire system)

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the construction design process
- O2 Interpret in the supervision process in the sites



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O1, O2
oC3	O1, O2
oC4	O1
oC5	O1

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Classify the scale and purpose of detail drawings related in the role the working drawings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Integrate joints and connections between the various construction materials, and the joining of materials especially wood in door and window assembles. Door Details into the details

Lo3 Conduct physical and multimedia modeling

Lo4 Produce professional drawings well classified that can be used as implement documents in the site.

Lo5 Produce researches on fine working details.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo6 Shows neatness in the drawings.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.9 State the relation between the building and the factors affecting its design, as; the environment, the people needs, scale required and the culture.

LO.14 Apply engineering fundamentals, basic science and mathematics.

LO.18 Conduct techniques and methods of investigation.

LO.22 Produce designs that meet building users' requirements.

LO.25 Integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery

LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.9
2	Lo2	LO.14
3	Lo3	LO.18
4	Lo4	LO.25
5	Lo5	LO.22
6	Lo6	LO.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Define the project	2	0	4	Lo1
2	Executive drawing for plans(using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
3	Executive drawing for plans(using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
4	Executive drawing for elevations(using software)	2	0	4	Lo3
5	Executive drawing for sections(using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
6	Executive drawing for stairs (using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
7	Executive drawing for layout +Quiz 1 (using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
8	Midterm		-		Lo1, Lo2, Lo4, Lo6



9	Executive drawing for details for layout (using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
10	Choose the appropriate structural system (using software) + Quiz 2	2	0	4	Lo1, Lo2, Lo4, Lo6
11	Executive drawings for sanitary works (using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
12	Executive drawings for electricity work (using software)	2	0	4	Lo1, Lo2, Lo4, Lo6
13	Executive drawings for HVAC & fire system (using software)	2	0	4	Lo3
14	Semi-final / Final Feedback	2	0	4	Lo5
15	Final Project / Discussion	2	0	4	Lo5
16	Final exam	2	0	4	Lo1, Lo2, Lo4, Lo6
Total hours		28	0	56	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods													
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling	
Lo1	√	√	√				√		√	√	√	√	√	
Lo2	√	√	√	√	√			√	√		√	√		
Lo3													√	
Lo4		√					√							
Lo5									√					
Lo6		√												

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√	√	√			√	√	√	√
Lo2	√	√	√	√	√			√		√	
Lo3									√		√
Lo4	√	√	√	√	√						
Lo5								√			
Lo6	√	√	√	√	√						

b. Time schedule of assessment

Quizzes		Week (5,13)
Discussions		Every week for any student
Presentations		Weekly
Sheets and Sketches		Weekly
Researches and reports		Week (14,15)
The Projects	Semi Final	Week (13)
	Final	Week (14)
Practical modelling		Week (4, 13)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (15)



c. Grading system			
Quizzes	(10) marks		(60) marks
Classwork	(10) marks	(25) marks	
researches	(5) marks		
Project	(10) marks		
Attendance	(5) marks		
Mid-term exam	(20) marks		
final exam	(40) marks		
Total	(100) marks		

11- List of references:

- a. Course notes
b. Required books

- Lecture presentations, handouts by Prof. Dr. Ahmed Hanafi, S.E.
- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
- Ayodeji Emmanuel Oke, Clinton Aigbavboa, Seyi S. Stephen, Wellington Didibhuku Thwala , 2022, **Sustainable Construction in the Era of the Fourth Industrial Revolution (Routledge Research Collections for Construction in Developing Countries)**
- Jannice Käll , 2023, **Posthuman Property and Law: Commodification and Control through Information, Smart Spaces and Artificial Intelligence (Space, Materiality and the Normative)**
- Samson Jerold Samuel Chelladurai, Suresh Mayilswamy, Arun Seeralan Balakrishnan, S. Gnanasekaran , 2021, **Green Materials and Advanced Manufacturing Technology: Concepts and Applications (Green Engineering and Technology)**

c. Recommended books

- 1- الرسومات التنفيذية ا د محمد عبد الله
- 2- التصميمات التنفيذية د هشام حسين
- 3- التصميمات التنفيذية د مجدى تمام
- 4- المنشأة المعمارية الجزء الثاني م/ عبد اللطيف أبو العطا البقري
- 5- Working Drawings Handbook Keith Styles and Andrew Bechard
- 6- Architects Guide
- 7- Materials for Architects and Builders

d. Periodicals, Web sites, etc.

none

12- Facilities required for teaching and learning:

- Drawing studio
- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning model
- References in library
- Catalogs and Samples for students
- Computer + media players

13- Requirements for Disable facilities:

Teaching and learning methods for students with limited CGPA include:

- Extra lectures and tutorials.
- Extra homework.
- Extra assessment methods.

Course instructor:	Ass. Prof. Ahmed Hanafy	
program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date:	2023-2024	



Course Specification

Course Code: ARCH 414	Course Name Housing
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Housing	
Code	ARCH 414	
Credit Hours	3 Cr. Hrs.	Note: 1 credit hr. for the studio represent 3 effective hrs.
Lectures	1 Hrs.	
Practical/Studio	7 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 407	
Instructor name/Email	Dr. Fahima El Shahed Fahima.elshahed@gmail.com Pro. Reham Hafez Reham_hafez@hotmail.com	

C- Professional Information

1- Course core:

Demonstrate adequate knowledge about theories of planning for residential areas and to train the student to solve planning problems based on theoretical approach. It represents introductory material for understanding housing types (economically- functionally), understanding social dimensions for residential areas, theories for residential and land-use planning, services and roads hierarchy in residential areas.

2- Course Learning Objectives: oC

- oC1 Understanding the theories of designing and planning residential areas in terms of land uses, housing, services, and the sequence of the road network in the residential area
- oC2 Understanding the social, economic and environmental dimensions of residential areas.
- oC3 Familiarity with the basics of classifying housing categories in terms of the needs and requirements of each population group.
- oC4 Understanding the objectives of designing the housing model so that it has flexibility, economy and efficiency, whether in designing or assembling the housing model.
- oC5 The students can solve problems for the planning of residential areas based on theoretical approach.
- oC6 Understanding the principles of sustainability on both aspects (Site Selection - Neighborhood Pattern and Design).
- oC7 Learning how to design the site to meet the needs of all segments of society (design for all) from children, the elderly and people with special needs.
- oC8 How to prepare the project through working groups.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 Gain students scientific research skills.
- O7 Developing students' skills in employing modern computer programs in the process of design, architectural presentation, working drawings, urban planning and the modeling process.
- O8 Students gain experiences in effective communication with the surrounding community.
- O9 Develop analysis skills through simulation methods.



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O5, O7
oC2	O3, O9
oC3	O3, O5, O8
oC4	O2, O3, O7
oC5	O2, O3, O5
oC6	O2, O3, O5
oC7	O1, O2, O3, O7, O8, O9
oC8	O8

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Classify the categories of housing while concerning the factors of this classification.
- Lo2 analyze the range of patterns and traditions that have shaped and sustained cultures and the way that they can inform design process
- Lo3 Solve housing problems/
- Lo4 Integrate Principles of sustainable design, climatic considerations and energy consumption

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Practice research to investigate the various dimensions of housing problem, the approaches policies that could motivate the students to solve real problem.
- Lo6 Design housing projects of various scales and of various categories.
- Lo7 Conduct physical and multimedia modeling
- Lo8 Use auto-Cad program to Integrate community design parameters into housing projects.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo9 Collaborate effectively within multidisciplinary team and communicate effectively in conducting tasks.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.9 State the relation between the building and the factors affecting its design, as; the environment, the people needs, scale required and the culture.
- LO.13 Solve complex engineering problems.
- LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements.
- LO.22 Produce designs that meet building users' requirements
- LO.26 Prepare design reports. project briefs and documen
- LO.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.2
3	Lo3	LO.13
4	Lo4	LO.9
5	Lo5	LO.17
6	Lo6	LO.12
7	Lo7	LO.22
8	Lo8	LO.26
9	Lo9	LO.27



8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Studio hrs.	Los
1	- Course introduction and its objectives - Define of the project site	1	0	7	Lo1
2	- The importance of housing study - Classification of pattern and models	1	0	7	Lo1, Lo2, Lo5, Lo9
3	- Housing classes: classifications, needs, standards of housing distribution - Classification of housing projects.	1	0	7	Lo1, Lo2, Lo5, Lo9
4	- Principles of design standards and classifications of housing units. - Service standards and site analysis.	1	0	7	Lo1, Lo2, Lo5, Lo9
5	- Principles of land division. - Goals of housing planning projects. - Quiz I	1	0	7	Lo1, Lo2, Lo7
6	- Sustainability in residential areas	1	0	7	Lo4
7	- Housing and services program.	1	0	7	Lo4
8	Midterm exam				Lo1, Lo2, Lo4, Lo9
9	- Fundamental of planning residential areas (1)	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
10	- Fundamental of planning residential areas (2)	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
11	- Physical accessibility in housing for people with special needs	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
12	- Pedestrian paths and parking spaces. - Quiz II.	1	0	7	Lo1, Lo3, Lo6, Lo7, Lo8, Lo9
13	- Evaluation of Alternatives	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
14	- How to draw a network of car roads and parking lots - Semifinal Project. - Final Feedback of the project.	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
15	- Final Submission & discussion	1	0	7	Lo1, Lo3, Lo6, Lo8, Lo9
16	Final exam				Lo1, Lo2, Lo3, Lo4, Lo6, Lo9
Total hours		14	0	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√	√	√	√	√			√	√	√	√	√	√
Lo2	√	√	√	√	√				√	√		√	
Lo3	√	√	√	√	√					√		√	
Lo4	√	√	√	√	√			√	√	√	√	√	
Lo5									√	√			
Lo6		√	√										
Lo7													√
Lo8		√	√										
Lo9		√	√						√	√	√	√	√

Notes: - The research concerns the cooperative work, the discussion, the site visit and the presentations.

- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.



10- Student assessment Method

a. Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	Quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1	√	√	√					√	√	√	√
Lo2	√	√	√					√	√		
Lo3	√	√	√					√			
Lo4	√	√	√	√	√			√	√	√	
Lo5									√		
Lo6	√	√	√	√	√					√	
Lo7											√
Lo8				√	√					√	
Lo9	√	√	√	√	√			√	√	√	√

b. Time schedule of assessment		
Quizzes	Quiz (1) Quiz (2)	Week (5) Week (12)
Discussions		Every week for any student
Presentations and Movies		Every week for any student
Sheets and Sketches		Weekly
Researches and reports		Week (2, 3, 4)
the Projects	Semi Final Final	Week (14) Week (15)
Practical modelling		Week (5, 12)
Attendance		weekly
Mid-term exam		Week (8)
final exam		Week (16)

c. Grading system			
Quizzes	Quiz (1)	(5) marks	(60) marks
	Quiz (2)	(5) marks	
Discussions	Set for bonus	(25) marks	
Sheets and Sketches	(5) marks		
Researches and reports	(5) marks		
the Projects	(10) marks		
Practical modeling	(5) marks		
Attendance		(5) marks	
Mid-term exam		(20) marks	
final exam		(40) marks	
Total		(100) marks	

- Notes:
- Submission must be a periodical technical presentation.
- Final submission is A1 paper and technical presentation.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.
- Only group work is allowed.



11- List of references:

a. Course notes

- Student have to take written not based on the instructor's lecture

b. Required books

- 1- عبد القادر، نسمة - التوني، سيد (1992) - "في تصميم وتخطيط المناطق السكنية - مدخل وتطبيق" - العربي للنشر والتوزيع - القاهرة.
- 2- الوكيل، شفق (2007) - "التخطيط العمراني: إسكان - الخدمات - الحركة (الجزء الثاني)" - إيكوبا - الطبعة الأولى - القاهرة.
- 3- Ministry of Housing, Utilities and Urban Communities - General Organization for Physical Planning (GOPP) - National Urban Observatory - Korea International Cooperation Agency (KOICA), (2006) Housing in Egypt: Problems, Issues and Suggestions for Solution.
- 4- LEED for Neighbourhood Development Rating System, (2009).
- 5- Jenks. Mike and Dempsey. Nicola., (2005), Future Forms and Design for Sustainable Cities, Architectural Press Publication
- 6- El-Shahed, Fahima (2010), the experience of Arab Republic of Egypt Strategy and implementation of different residential partnerships, Habitat housing conference, Amman.
- 7- Can Bilsel and Juliana Maxim ,2022, Architecture and the Housing Question (Routledge Research in Architecture)
- 8- Miles Glendinning , 2021, Mass Housing: Modern Architecture and State Power - A Global History

c. Recommended books

- None.

d. Periodicals, Web sites, etc

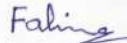
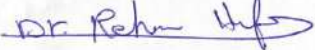


- www.unhabitat.org
- www.unescwa.org
- www.moh.gov.eg
- www.araburban.org
- www.cpas-egypt.com

12- Facilities required for teaching and learning:

- a. Design Studios
- b. White board + colored pens
- c. Data show for presentation
- d. Site visits
- e. Google Class Room
- f. E-Learning
- g. References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Fahima El-Shahed & Prof. Reham Hafez	 
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specification

Course Code:	Course Name
ARCH 332	Design for conservation
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	Design for conservation
Code	ARCH 332
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	-
Total	2 Hrs.
Prerequisite	-
Instructor name/Email	Dr. Hanaa Mousa

C- Professional Information

1- Course core:

The course task is mastering the skills of: gathering, preparing and using historical materials designing within the historical fabric of the city; defining the limits of interference in the monument historical structure, adapting and modernizing objects, practical application of preservation theories, techniques and technologies

2- Course Learning Objectives: oC

- oC1 Introducing the values of historical architecture and heritage realms.
- oC2 Introducing the means of deterioration of the historical and heritage sites
- oC3 Provide students with aspects of conservation and preservation
- oC4 Encourage the student to communicate with contemporary issues and solve problems
- oC5 Encourage the student to communicate effectively with teams to conduct researches and involve in long self learning.

3- Program objectives served by the course:

- O2-. Develop students' abilities to develop strategies to solve societal problems.
- O3- Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O11 Provide students with the skills to conduct scientific research

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O3
oC2	O2, O3, O6
oC3	O2, O3
oC4	O5
oC5	O6, O11



5- Learning outcomes of the course (LOs)

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify various issues for historical and heritage cities, places or realms; as value, means of deterioration and aspects of conservation and preservation,
- Lo2 Analyze the significance of urban spaces and the interaction between human contradictions (behavior and culture) and, built environment and natural environment.
- Lo3 Analyze the range of patterns and traditions that have shaped and sustained cultures and the way that they can inform design process.
- Lo4 Display and identify Principles of sustainable design, climatic considerations, and energy consumption and efficiency in buildings and their impacts on the environment.
- Lo5 Merge different forms of knowledge, and manage information retrieval to create new solutions.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Conduct and present researches on the various style of the identified historical eras of architecture

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

- LO.1 Identify, formulate basic science and mathematics.
- LO.2 Simulate, analyze and interpret data.
- LO.5 Display 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.
- LO.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- LO.8 Interpret adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences in architectural designs.
- LO.18 Conduct techniques and methods of investigation.

7- The relation between the course learning outcomes and the program LOs

Course (LOs)	program LOs
Lo1	LO.1
Lo2	LO.2
Lo3	LO.5
Lo4	LO.6
Lo5	LO.5
Lo6	LO.18

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hr.	LOs
1	Introduction to the value of historical and heritage sites	2	0	0	Lo1
2	the value of historical and heritage sites (Research presentation)	2	0	0	Lo1, Lo2, Lo3, Lo6
3	the means of deterioration of the historical and heritage sites	2	0	0	Lo1, Lo2, Lo3
4	the means of deterioration of the historical and heritage sites (Research presentation)	2	0	0	Lo1, Lo2, Lo3, Lo6
5	the significance of urban spaces and the interaction between human behavior, built environment and natural environment.	2	0	0	Lo1, Lo2, Lo3
6	the significance of urban spaces and	2	0	0	Lo1, Lo2, Lo3, Lo6



	the interaction between human behavior, built environment and natural environment. (Research presentation)				
7	the aspects of conservation and preservation + quiz	2	0	0	Lo1, Lo2, Lo3
8	Midterm exam				Lo1, Lo2, Lo3
9	the aspects of conservation and preservation	2	0	0	Lo1, Lo4, Lo5
10	(Research presentation)	2	0	0	Lo1, Lo4, Lo5, Lo6
11	the aspects of conservation and preservation	2	0	0	Lo1, Lo4, Lo5
12	(Research presentation)	2	0	0	Lo1, Lo4, Lo5, Lo6
13	the aspects of conservation and preservation	2	0	0	Lo1, Lo4, Lo5
14	Revision	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5
15	Final Research presentation & discussion	2	0	0	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
16	Final exam				Lo1, Lo2, Lo3, Lo4, Lo5
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	√							√	√	√	√	√	
Lo2	√								√	√	√	√	
Lo3	√								√	√	√	√	
Lo4	√								√	√	√	√	
Lo5	√								√	√	√	√	
Lo6									√	√	√		

Notes

- The site visit, Presentations, and the Cooperative work raises in the research
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	Quizzes	Mid-term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Cooperative work	Reports/researches	presentation	modeling
Lo1	√	√	√					√	√	√	√	
Lo2	√	√	√					√	√	√	√	
Lo3	√	√	√					√	√	√	√	
Lo4	√	√	√					√	√	√	√	
Lo5	√	√	√					√	√	√	√	
Lo6								√	√	√		



b. Time schedule of assessment

Discussions	Every week for any student
Presentations	Every week
Researches	Week (2, 4, 6,10, 12,14)
Attendance	weekly
Quizzes	Week (7)
Mid-term exam	Week (8)
final exam	Week (16)

c. Grading system

Presentations	5 marks	20 marks	(40) marks
Researches and reports	10 marks		
quizzes	5 marks		
Attendance		5 marks	
Mid-term exam		15 marks	
final exam			60 marks
Total			100 marks

Remarks:

- bonus marks are used to let students involve into discussions
- Cooperative work is assessed while assessing the research presentation
- self- learning is assessed within the discussions and the written exams.

11- List of references:

a. Course notes

b. Required books

d. Lecture presentations, handouts by El Tayar, H.I.

- Grabow, S., & Spreckelmeyer, K., (2014), "The Architecture of use: Aesthetics and Function in Architectural Design", Routledge, London, UK.
- Wilsey, J., (1997), "The Architecture of Ecology", Architectural Design, Italy.
- Sam Griffiths , 2021, Writing the Materialities of the Past: Cities and the Architectural Topography of Historical Imagination (Routledge Research in Architecture).
- Philip D. Plowright , 2020, Making Architecture Through Being Human A Handbook of Design Ideas.
- Juan Luis Burke , 2021, Architecture and Urbanism in Viceregal Mexico: Puebla de los Angeles, Sixteenth to Eighteenth Centuries (Routledge Research in Architectural History)
- Margaret Fletcher , 2020, Architectural Styles: A Visual Guide

c. Recommended books

- Smith, Thomas, Architecture Gothic and Renaissance, Pdf book world
- www.rudi.net
- www.scribd.com
- www.balaqh.com
- www.urbandesign.org
- www.census.gou/geo/www/
- www.tpoint.net/neighbor/tre.html

d. Periodicals, Web sites, etc

12- Facilities required for teaching and learning:

- Lecture room
- Data show-white board
- E-Learning platform
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Hanaa Mousa	
Program Coordinator	Dr. Nadia Ahmed	
Head of the Department	Dr. Fahima El-Shahed	
Date	2023-2024	



Course Specifications

Course Code: BASE 307	Course Name Contracts, Bids & Liabilities
---------------------------------	---

A- Affiliation

Relevant program:	Architecture and design department & Civil Engineering department
Department offering the program:	Architecture and design program & Civil Engineering program
Department offering the course:	Basic science department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Contracts, Bids & Liabilities
Code	BASE 307
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	N/A
Instructor name/Email	Dr. Nasser Mohamed

C- Professional Information

1- Course Core

This course focuses on contract definitions, formation principles of a contract, performance or breach of contracts obligations, termination of agreements, types of construction contracts

2- Course Learning Objectives: (oc)

- oc1** This course presents basic principles of contracts, bids & liabilities.
- oc2** Learn to execute projects considering time, cost & quality .
- oc3** Learn how to monitor and control projects.
- oc4** Learn skills to issuing contracts.
- oc5** Acquire professional knowledge of quantities estimation
- oc6** Applications of basic principles of project management.

3- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1** Identify quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues.
- Lo2** Identify business and management principles relevant to engineering.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3** Assess risks, and take appropriate steps to manage those risks
- Lo4** Implement comprehensive engineering knowledge and understanding and intellectual skills in projects
- Lo5** Prepare and present technical material.
- Lo6** Conduct researches.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo7** Demonstrate basic organizational and project management skills.



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO2. Consider global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline
- LO4 Identify contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- LO12 solve complex engineering problems
- LO13. apply engineering fundamentals, basic science and mathematics
- LO17. 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
- LO18 Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
- LO19. Practice research techniques and methods of investigation
- LO21 monitor implementation of engineering projects

5- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO2
2	Lo2	LO4
3	Lo3	LO18, LO12, LO17.
4	Lo4	LO12, LO13
5	Lo5	LO21,
6	Lo6	LO19.
7	Lo7	LO21,

6- Course Content and they're to the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction to the course and its objectives and learning outcomes	2	0	0	Lo1
2	Contracts definitions – Formatting and types –	2	0	0	Lo1
3	Components of contracts	2	0	0	Lo2, Lo3
4	Bids and Liabilities	2	0	0	Lo2, Lo3
5	Relationship between concerned people in construction projects - stages of project preparation	2	0	0	Lo1, Lo6
6	Tender documents	2	0	0	Lo2
7	Tendering procedures	2	0	0	Lo2
8	Calculations of quantities & (Quiz)	2	0	0	Lo1, Lo2, Lo3, Lo7
9	Mid-term exam		1		Lo1, lo2, lo3, lo7
10	Cost estimate	2	0	0	Lo2
11	Final invoice – Specifications: Types of specifications	2	0	0	Lo2
12	Types of contracts and judgment	2	0	0	Lo4, Lo5
13	Public & Private sectors Partnership	2	0	0	Lo4, Lo5
14	B.O.T projects	2	0	0	Lo1, Lo2, Lo3
15	Claims	2	0	0	Lo2, Lo6
16	Final exam		2		Lo1, Lo7
Total hours		28	0	0	

7-The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ slides	projects	Problem solving	Brain storming	Practical: lab	discoverin g	Site visit	Reports/ researches	Cooperativ e work	presentatio n	Discussion	modeling
Lo1	✓			✓	✓							✓	
Lo2	✓			✓	✓							✓	
Lo3	✓								✓			✓	
Lo4	✓			✓					✓			✓	
Lo5	✓				✓				✓			✓	
Lo6									✓			✓	
Lo7				✓					✓			✓	

Notes:

Online lectures used as hybrid learning , but in case of totally on line learning all the used teaching and learning methods will be on line.



8- Student assessment method

a- Assessment method and its relation to the Los of the course											
Course LOs	Tools of assessment										
	quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1		√	√					√			
Lo2	√	√	√	√				√	√		
Lo3	√		√						√		
Lo4	√	√	√					√	√		
Lo5	√		√						√		
Lo6								√	√		
Lo7		√	√	√				√			

b- Time schedule of assessment

Quizzes	Week (6,14)
Discussions	weekly
Sheets and sketches	Week (7-10-13)
Researches and reports	Week (14)
Attendance	weekly
final submission	Week (16)

c- Grading system

Quizzes	Quiz (1)	(5) marks	(50) marks
	Quiz (2)	(5) marks	
Sheets and Sketches	(15) marks		
Reports	(10) marks		
Discussion/ Attendance	(5) marks		
	(10) marks		
final exam		50	
total		100	

9- List of references:

a- Course notes	Lecturer Notes
b- Required books	N. A
c- Recommended books	N. A
d- Periodicals, Web sites, etc.	N. A

10- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- References in the library

11- Requirements for Disable facilities:

- Extra assignments.

Course Instructor	Dr. Nasser Mohamed	<i>Dr. N. Mohamed</i>
Head of the Department	Dr. Amera Marye	<i>Amera</i>
Date:	2023-2024	



Fifth level courses

Second semester (Spring)

No.	Cod	Course Name	Instructor
1	ARCH 491*	Senior project 2	Prof. Hany Serag Aldeen, Ass. Prof. Hossam Bahgat Dr. Fahima El Shahed Dr. Rania Khalifa
2	ARCH 429*	Working drawing 4	Ass. Prof. Ahmed Hanafi
3	ARCH 401*	Interior design	Dr. Helmy El-Tayar
4	ARCH 390	Internship in architecture	Dr. Ahmed Rafaat
5	ARCH 418	Sustainable architecture	Dr. Nadia Ahmed
6	BASE308	Seminar	Dr. Ahmed Rafaat
7	BASE 402	Feasibility Studies	



Course Specification

Course Code: ARCH 491	Course Name Senior Project 2
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Interior Design	
Code	ARCH 491	
Credit Hours	3 Cr. Hrs.	
Lectures	1	Note: 1 credit hr. for the studio represents 3 effective hrs.
lab	2	
Practical/Studio	7 Hrs.	
Total	10 Hrs.	
Prerequisite	ARCH 490 , 405	
Instructor name/Email	Prof. Haney Serag Aldeen, Ass. Prof. Hossam Bahgat, Dr. Fahima El Shahed Dr. Rania Khalifa	

C- Professional Informatio

1- Course core:

A capstone projects. Topics are selected by students from a set defined by advisors and according to their area of interest. Project brief analysis and research. Preparation of space and functional programmed.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of architectural design and its principles.
- oC2 Studying the different stages of architectural design; project studies, site analysis, design concept, etc.
- oC3 Studying how to think spatially by using Three-dimensional models.
- oC4 Studying how to integrate a proper structure system with architectural design.
- oC5 Apply knowledge acquired to design a selected project.

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O6 Develop students' professional skills and the ability to self- and continuous learning.
- O9 Develop analysis skills through simulation methods.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1, O6, O9
oC2	O2, O3
oC3	O1, O6
oC4	O1, O9
oC5	O2, O3, O1



5-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Name the principles of design including elements of design, process and/ systems related to architectural.
- Lo2 Explain methodologies of solving engineering problems, data collection and interpretation.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Create designs responding to the human needs and matching the sustainability as (environmental, economic, sociable)
- Lo4 Integrate relationship of structure, building material, and construction elements into design process.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Display imagination and creativity in problem solving, and design..
- Lo6 Use computer programs to draw and presents projects.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics
- LO.7 State the factors affecting the engineering projects.
- LO.21 Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements.
- LO.25 Integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery.
- LO.29 Use creative, innovative and flexible thinking.
- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.7
3	Lo3	LO.21
4	Lo4	LO.25
5	Lo5	LO.29
6	Lo6	LO.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	studio hours	Los
1	Presentation about the concept design and how to select the concept design	1	2	7	Lo1, Lo2
2	Sketch the layout with zoning for plans	1	2	7	Lo3, Lo5, Lo6
3	Follow up and discuss the concept of project and sketching	1	2	7	Lo3, Lo5, Lo6
4	development plans	1	2	7	Lo3, Lo4, Lo5, Lo6
5	Follow up the development of the plans + modeling	1	2	7	Lo3, Lo4, Lo5, Lo6
6	Follow up the development of the plans + modeling	1	2	7	Lo3, Lo4, Lo5, Lo6
7	Final plans + model + sections	1	2	7	Lo3, Lo4, Lo5, Lo6
8	Mid-term exam	1	2	7	
9	Follow up Sections + elevations	1	2	7	Lo3, Lo4, Lo5, Lo6
10	Final sections , and elevation	1	2	7	Lo3, Lo4, Lo5, Lo6
11	landscape	1	2	7	Lo3, Lo4, Lo5, Lo6
12	Follow up landscape and layout	1	2	7	Lo3, Lo4, Lo5, Lo6
13	Final layout	1	2	7	Lo3, Lo4, Lo5, Lo6



14	- Pre-Final Project submission	1	2	7	Lo3, Lo4, Lo5, Lo6
15	- Final Project submission & discussion as an internal jury	1	2	7	Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
16	Final exam (in July)				Lo1, Lo2, Lo3, Lo4, Lo5, Lo6
Total hours		14	28	98	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
Lo1		√	√									√	√
Lo2		√	√									√	√
Lo3		√	√	√	√							√	√
Lo3		√	√	√	√							√	√
Lo4		√	√	√	√							√	√
Lo5		√	√									√	√
Lo6		√	√									√	√

- Notes
- The research of senior project 1 is used as a reference for the project.
 - The project concerns the brain storming and the problem solving.
 - Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment												
Lo1			√	√	√		√	√				√	√
Lo2			√	√	√		√	√				√	√
Lo3			√	√	√							√	√
Lo4			√	√	√		√	√				√	√
Lo5			√	√	√		√	√				√	√
Lo6			√	√	√							√	√

b- Time schedule of assessment

Discussions		Every week for any student And finally in the last oral exams
Presentations and Movies		Every week and in the final submission for the project
Sheets and Sketches		Weekly
the Projects	Semi Final Final	Week (14) In July
Practical modelling		Week (5, 6, 7,14, 15)
Attendance		weekly
final exam		In July

c- Grading system

Discussions	(30) marks	(40) marks	(60) marks
sheets			
the Projects	(30) marks		
final exam as oral exam		(40) marks	
Total		(100) marks	

- Note:
- Submission must be a periodical technical presentation.
 - Final submission is A1 paper and technical presentation.
 - The discussion and students' participants are very essential.
 - The evaluations are internal periodical assessments.
 - Student grades are available and posted in the class.



11- List of references:

a- Course notes

b- Required books

c- Recommended books

d- Periodicals, Web sites, etc

- Student have to take written not based on the instructor's revisions
- The research of the student in course senior I represents the main reference for the student.
- Samantha Krukowski , 2022, T-Squared: Theories and Tactics in Architecture and Design.
- David Fannon, Michelle Laboy, Peter Wiederspahn , 2022, The Architecture of Persistence: Designing for Future Use
- O.V. Gnaana Swathika, K. Karthikeyan, Sanjeevikumar Padmanaban , 2022, Smart Buildings Digitalization: IoT and Energy Efficient Smart Buildings Architecture and Applications
- Philip D. Plowright , 2020, Making Architecture Through Being Human A Handbook of Design Ideas.
- Juan Luis Burke , 2021, Architecture and Urbanism in Viceregal Mexico: Puebla de los Angeles, Sixteenth to Eighteenth Centuries (Routledge Research in Architectural History)
- Margaret Fletcher , 2020, Architectural Styles: A Visual Guide.
- Ray Lucas , 2020, Anthropology for Architects: Social Relations and the Built Environment.
- Vahap Tecim and Sezer Bozkus Kahyaoglu , 2023, Artificial Intelligence Perspective for Smart Cities (Internal Audit and IT Audit)
- Jinjin Yan, Sisi Zlatanova , 2023, Seamless 3D Navigation in Indoor and Outdoor Spaces
- Andrea Kahn, Carol J. Burns , 2021, Site Matters 2nd Edition Strategies for Uncertainty Through Planning and Design
- Debra Flanders Cushing; Evonne Miller , 2020, Creating Great Places: Evidence-based Urban Design for Health and Wellbeing
- Rodrigo Pérez de Arce , 2018, City of Play
- An Architectural and Urban History of Recreation and Leisure
- Phillip James Tabb , 2017, Serene Urbanism: A biophilic theory and practice of sustainable placemaking.
- None.

12- Facilities required for teaching and learning:

1. Design Studios
2. White board + colored pens
3. Data show for presentation
4. Google Classroom
5. E-Learning
6. References in library

13- Requirements for disabled facilities:

1. Extra assignments
2. Online extra teaching hours

Course Instructors	Prof. Haney Serag Aldeen, Ass. Prof. Hossam Bahgat, Dr. Fahima El Shahed Dr. Rania Khalifa
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: ARCH 429	Course Name Working Drawings (IV)
---------------------------------	---

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Working Drawings (IV)	
Code	ARCH 429	
Credit Hours	3 Cr. Hrs.	Note; 1 credit hr. for the studio represents 3 effective hrs.
Lectures	2 Hrs.	
lab	0 Hrs.	
Practical/Studio	4 Hrs.	
Total	6 Hrs.	
Prerequisite	ARCH 422	
Instructor name/Email	Prof. Dr. Ahmed Hanafy	

C- Professional Information

1- Course core:

The course aims to Hands on course where the student should apply all the concepts of working drawings to a whole semester project where it could be of assistance to their senior project or other. and also, be able to doing shop drawings.

2- Course Learning Objectives: oC

- oC1 Developing a basic understanding of working drawing vocabularies and drafting symbolism.
- oC2 Studying various working drawings for some architectural details and workshop drawings for different types of floors and raised floors.
- oC3 Studying various working drawings for some architectural details and workshop drawings for different types of false ceiling
- oC4 Studying some workshop drawings details.
- oC5 Studying various working drawings for some architectural details and workshop drawings for wall sections, cladding curtain walls, partitions, bathrooms

3- Program objectives served by the course:

- O1 Develop the creativity and imagination in the construction design process
- O2 Interpret in the supervision process in the sites

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2
oC2	O1, O2
oC3	O1, O2
oC4	O1
oC5	O1



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

Lo1 Classify the scale and purpose of detail drawings related in the role the working drawings.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

Lo2 Integrate joints and connections between the various construction materials, and the joining of materials especially wood in door and window assembles. Door Details into the details

Lo3 Conduct physical and multimedia modeling

Lo4 Produce professional drawings well classified that can be used as implement documents in the site.

Lo5 Produce researches on fine working details.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

Lo6 Shows neatness in the drawings.

6- program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO.1 Identify, formulate basic science and mathematics.

LO.17 Use contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements

LO.18 Conduct techniques and methods of investigation.

LO.25 Integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery.

LO.26 Prepare design reports. project briefs and documents

LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.17
3	Lo3	LO.18
4	Lo4	LO.25
5	Lo5	LO.26
6	Lo6	LO.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Studio hrs	LOs
1	Pre-study review	2	0	4	Lo1
2	Executing drawings for the previous project(plan ,2 sections, Elevations)	2	0	4	Lo2, Lo4, Lo6
3	Types of floors	2	0	4	Lo2, Lo4, Lo6
4	Types of floors	2	0	4	Lo2, Lo4, Lo6
5	Shop drawing (floors)	2	0	4	Lo2, Lo4, Lo6
6	Shop drawing (floors details)	2	0	4	Lo2, Lo4, Lo6
7	Types of ceiling.	2	0	4	Lo1, Lo3, Lo5
8	Midterm				Lo2, Lo4, Lo6
9	Shop drawing (ceiling)	2	0	4	Lo2, Lo4, Lo6
10	Shop drawing (ceiling details)	2	0	4	Lo2, Lo4, Lo6
11	Shop drawing (ceiling details)	2	0	4	Lo2, Lo4, Lo6
12	Research discussion	2	0	4	Lo1, Lo3, Lo5
13	strip section	2	0	4	Lo2, Lo4, Lo6
14	strip section	2	0	4	Lo2, Lo4, Lo6
15	Final Project / Discussion	2	0	4	Lo1, Lo2, Lo4, Lo6
16	Final exam				Lo2, Lo4, Lo6
Total hours		28	0	56	



9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods													
	On line / face to face lectures	sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling	
Lo1	√	√	√				√		√	√	√	√	√	
Lo2	√	√	√	√	√			√	√		√	√		
Lo3													√	
Lo4		√					√							
Lo5									√					
Lo6		√												

Notes

- The research concerns the cooperative work, the discussion, the site visit and the presentations.
- The project concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.

10- Student assessment method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment											
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1	√	√	√	√	√			√	√	√	√	
Lo2	√	√	√	√	√			√		√		
Lo3									√		√	
Lo4	√	√	√	√	√							
Lo5								√				
Lo6	√	√	√	√	√							

b. Time schedule of assessment

Quizzes	Week (5,13)
Discussions	Every week for any student
Presentations	Weekly
Sheets and Sketches	Weekly
Researches and reports	Week (6,12)
The Projects	Semi Final Week (13) Final Week (14)
Practical modelling	Week (6, 12)
Attendance	weekly
Mid-term exam	Week (8)
final exam	Week (15)

c. Grading system

Quizzes	(10) marks	(60) marks
Classwork	(10) marks	
researches	(5) marks	
Project	(10) marks	
Attendance	(5) marks	
Mid-term exam	(20) marks	
final exam	(40) marks	
Total	(100) marks	



11- List of references:

a. Course notes

b. Required books

Lecture presentations, handouts by Prof. Dr. Ahmed Hanafi, S.E.

- Ching, F., (2014), "Building Construction Illustrated", 5th Edition, John Willy & Sons Publishing Inc., New York.
- Ayodeji Emmanuel Oke, Clinton Aigbavboa, Seyi S. Stephen, Wellington Didibhuku Thwala , 2022, Sustainable Construction in the Era of the Fourth Industrial Revolution (Routledge Research Collections for Construction in Developing Countries)
- Jannice Käll , 2023, Posthuman Property and Law: Commodification and Control through Information, Smart Spaces and Artificial Intelligence (Space, Materiality and the Normative)
- Samson Jerold Samuel Chelladurai, Suresh Mayilswamy, Arun Seeralan Balakrishnan, S. Gnanasekaran , 2021, Green Materials and Advanced Manufacturing Technology: Concepts and Applications (Green Engineering and Technology)

c. Recommended books

- 1 الرسومات التنفيذية أ.م. د/ احمد حنفي
دار الكتب والوثائق المصرية رقم الإيداع (7992/2016)
- 2 الرسومات التنفيذية أ.د محمد عبد الله
- 3 التصميمات التنفيذية د هشام حسن
- 4 التصميمات التنفيذية د مجدي تمام
- 5 المنشأة المعمارية الجزء الثاني م/ عبد اللطيف أبو العطا البقري

- 6- Working Drawings Handbook Keith Styles and Andrew Bechard
- 7- Architects Guide
- 8- Materials for Architects and Builders

d. Periodicals, Web sites, etc.

none

12- Facilities required for teaching and learning:

1. Class rooms
2. White board + colored pens
3. Data show for presentation
4. Google Class Room
5. E-Learning model
6. References in library
7. Catalogs and Samples for students
8. Computer + media players

13-Requirements for Disable facilities:

Teaching and learning methods for students with limited CGPA include:

- Extra lectures and tutorials.
- Extra homework.
- Extra assessment methods.

Course instructor:	Prof. Dr. Ahmed Hanafy
program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date:	2023-2024



Course Specification

Course Code:
ARCH 401

Course Name
Interior Design

A- Affiliation

Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of latest edition for the course:	2023-2024

B-Basic Information

Title	Interior Design	
Code	ARCH 401	
Credit Hours	2 Cr. Hrs.	Note; 1 credit hr. for the studio represents 3 effective hrs.
Lectures	1	
Lab	1	
Practical/Studio	6 Hrs.	
Total	8 Hrs.	
Prerequisite	ARCH 302	
Instructor name/Email	Dr. Helmy Al-Tayyar	

C- Professional Information

1- Course core:

The course aims to develop the student's abilities to achieve compatibility in the elements of the interior design of spaces with the architectural concept
Study the foundations of interior design
The development of a comprehensive concept of functional and sensory space components through spaces processing elements
It also aims to develop the cultural and historical background, principles of interior design, design perception, human perception of it, and choice of appropriate materials

2- Course Learning Objectives: oC

- oC1 Developing the comprehensive concept of functional and sensory space components through spaces processing tools and elements.
- oC2 Study the foundations of interior design
- oC3 Developing the student's abilities to achieve compatibility in the elements of the interior design of spaces with the architectural concept.
- oC4 Development of cultural and historical background and principles of interior design

3- Program objectives served by the course:

- O1 Develop students' creative and imaginative skills in the design process.
- O2 Develop students' abilities to develop strategies to solve societal problems
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O5 Preparing the students to conduct professional drawings related to the standards and the legislations.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O9 Preparing the student to deal with the latest materials and systems that can transform the drawings to real contexts fulfilling the needs of the client and the era.
- O11 Provide students with the skills to conduct scientific research



4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O1,O2, O4, O6, O11
oC2	O2, O4, O11
oC3	O1,O2, O4, O5, O6, O9, O11
oC4	O2, O6, O9, O11

5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the various aspects of designing the interior space.
- Lo2 Differentiate between the styles of the interior design.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Conduct researches to search for (paintings, furniture, styles)
- Lo4 Produce designs in various scales that meet building users' requirements and respond to sustainability (manually and by using computer programs).

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Conduct models to scale to present the design concepts

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics
- LO.5 Display 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.
- LO.18 Conduct techniques and methods of investigation.
- LO.22 Produce designs that meet building users' requirements.
- LO.32 Use presentations to Transform design concepts into buildings and integrate plans into overall planning

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.5
3	Lo3	LO.18
4	Lo4	LO.22
5	Lo5	LO.32

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction, course overview, about logical design steps of any architectural project (American university campus in new Cairo–example)- present the Projects program	1	1	6	Lo1, Lo2
2	Pre-final of Research Presentations & discussion	1	1	6	Lo1, Lo2, Lo3
3	Final research discussion with similar projects analysis & starting project ideas & zonings	1	1	6	Lo1, Lo2, Lo3
4	Developing zoning with respect to the function and the furniture	1	1	6	Lo1, Lo2, Lo4
5	Interpreting the style in the concept of the interior design	1	1	6	Lo1, Lo2, Lo4
6	Upgrading the concept	1	1	6	Lo1, Lo2, Lo4



7	Plan and internal elevations to scale 1:50	1	1	6	Lo1, Lo2, Lo4
8	Mid-term exam				Lo1, Lo2, Lo4
9	Plan looking up and sections to scale 1:50	1	1	6	Lo1, Lo2, Lo4
10	Developing section, elevations and 3D	1	1	6	Lo1, Lo2, Lo4, Lo5
11	Developing section, elevations and 3D	1	1	6	Lo1, Lo2, Lo4, Lo5
12	The work shop drawing for chosen void.	1	1	6	Lo1, Lo2, Lo4
13	Revision	1	1	6	Lo1, Lo2
14	Pre-Final Project submission	1	1	6	Lo1, Lo2, Lo4
15	Final Project submission.	1	1	6	Lo1, Lo2, Lo4, Lo5
16	Final exam				
Total hours		14	14	84	

9- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods													
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling	
Lo1		√	√					√	√	√	√	√	√	
Lo2		√						√	√	√	√	√	√	
Lo3		√	√						√	√	√			
Lo4		√	√	√	√						√			
Lo5		√	√								√		√	

Notes: - Presentations, self- learning and the Cooperative work raises in the research and Project.
- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1		√	√	√	√			√	√	√	√
Lo2		√	√	√	√			√	√	√	√
Lo3								√	√	√	
Lo4		√	√	√	√					√	
Lo5										√	√

b. Time schedule of assessment

Presentations
discussion
Sheets and Sketches
Researches and reports
the Projects
Practical modelling
Attendance
Mid-term exam
final exam

Semi Final
Final

Every week for any student

Week 2
Weekly
Week (2, 3)
Week (14)
Week (15)
Week (10, 11)
weekly
Week (8)
Week (16)



c. Grading system			
Sketches	10 marks	(20) marks	(40)marks
Researches and reports	3 marks		
the Project	5 marks		
Practical modeling	2 marks		
Attendance		(5) marks	
Mid-term exam		(15) marks	
final exam		(60) marks	
Total		(100) marks	

11- List of references:

a- Course notes

b- Required books

c- Recommended books

d- Periodicals, Web sites, etc

- Lecture presentations, handouts by El Tayar, H.I.
- 1- Grabow, S., & Spreckelmeyer, K., (2014), "The Architecture of use: Aesthetics and Function in Architectural Design", Routledge, London, UK.
- 2- Wilsey, J., (1997), "The Architecture of Ecology", Architectural Design, Italy.
- Smith, Thomas, Architecture Gothic and Renaissance, Pdf book world
- www.rudi.net
- www.scribd.com
- www.balaqh.com
- www.urbandesign.org
- www.census.gov/geo/www/
- www.tpoint.net/neighbor/tre.html

12- Facilities required for teaching and learning:

- Design Studios
- White board + colored pens
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- On line extra teaching hours

Course Instructor	Dr. Helmy El-Tayar
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code:	Course Name
ARCH 390	Internship in Architecture (field training)
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B-Basic Information

Title	Internship in architecture	
Code	ARCH 390	
Credit Hours	2 Cr. Hrs.	Field training represents approximately (144) effective hr. as (6-8) weeks simultaneously
Lectures	2 Hrs.	
Tutorial	0 Hrs.	
Total	2 Hrs.	
Prerequisite	60 Hours	
Instructor name/Email	Dr. Ahmed Refaat ahmed.refaat@sva.edu.eg	

C- Professional Information

1- Course core:

The course requires a minimum of six to eight weeks of approved professional experience. Students are required to document their works in a formal report submitted to the department by the beginning of the following term.

2- Course Learning Objectives: oC

- oC1 Keep the student in touch to the profession's, code and site problems.
- oC2 Developing the student professional ethics.
- oC3 Educating students the significance of a Bachelor of Engineering degree
- oC4 Developing practical skills.

3- Program objectives served by the course:

- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O4 Training students on projects that adopt a solution to contemporary societal problems.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O8 Students gain experiences in effective communication with the surrounding community.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2, O6
oC2	O3, O8
oC3	O3, O6, O8
oC4	O2, O4



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Explain the main aspects concerning the architect to be well performed in the site or in his official tasks.
- Lo2 Differentiate between the official/ site work and the theoretical studies.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Deal with problems or interruptions with creative thinking.
- Lo4 Practice professional architectural drawings.
- Lo5 Conduct reports and researches.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Collaborate effectively within multidisciplinary team and communicate effectively in Tasks.

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.6 Define standards, quality guidelines, health and safety requirements, environmental issues and risk management principles
- LO.13 Solve complex engineering problems
- LO.20 Use contemporary tools to implement engineering design drawings
- LO.27 Work efficiently as an individual and share in team works.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.6
3	Lo3	LO.13
4	Lo4	LO.20
5	LO5	LO.27

8- Course Content

Note: the course is divided into two parts as first lectures concerning the institute and the second part concerns the field training in side particular field.

a. Lecture contents:

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction to the course and its objectives and learning outcomes	2	0	0	Lo1, Lo2
2	Explain how the training report is fulfillment.	2	0	0	Lo1, Lo2
3	Code of practice.	2	0	0	Lo1, Lo2
4	The value of an architecture degree.	2	0	0	Lo1, Lo2
5	Each Student presents the first draft of their report.	2	0	0	Lo1, Lo2
6	Jobs that can be performed with an architecture degree.	2	0	0	Lo1, Lo2
7	Each Student presents the second draft of their report.	2	0	0	Lo1, Lo2
8	Mid-Term Exam				
9	Code of Architects of the United Kingdom – Part I.	2	0	0	Lo1, Lo2
10	Code of Architects of the United Kingdom – Part II.	2	0	0	Lo1, Lo2
11	Each Student presents the final draft of their report	2	0	0	Lo1, Lo2
12	Each Student presents the final draft of their report.	2	0	0	Lo1, Lo2
13	Standards of professional conduct and	2	0	0	Lo1, Lo2



	practice.				
14	Final feedback of Reports.	2	0	0	Lo1, Lo2
15	Submitted the Final Report & discussions	2	0	0	Lo1, Lo2
16	Final Exam				
Total hours		28	0	0	

The field training concerns 4 tracks that the student has to choose one of them to be his field track

1 st track : work site implementation:		
no	Topics	Los
1	Foundation work	Lo1, Lo2, Lo3
2	The implementation of the Building construction procedures	Lo1, Lo2, Lo3
3	Quantifies and specification tasks	Lo5
4	Field control	Lo1, Lo2, Lo3, Lo6
2 nd track: official interior design work		
no	Topics	Los
1	Interior design projects drawing and presentations	Lo1, Lo2, Lo4
2	Work shop drawings	Lo1, Lo2, Lo4
3	Quantifies and specification tasks	Lo5
3 rd track: official architectural design work		
no	Topics	Los
1	Architectural design projects drawing and presentations	Lo1, Lo2, Lo4
2	Work shop drawings	Lo1, Lo2, Lo4
3	Quantifies and specification tasks	Lo5
4 th track: official planning works		
no	Topics	Los
1	Planning projects and presentations	Lo1, Lo2, Lo4
2	Planning professional reports	Lo1, Lo2, Lo4
3	GIS projects applications	Lo1, Lo2, Lo4

9- The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling
Lo1	✓						✓	✓	✓	✓	✓	✓	
Lo2	✓						✓	✓	✓	✓	✓	✓	
Lo3								✓				✓	
Lo4								✓					
Lo5									✓				
Lo6								✓					

Notes

- Online lectures used as hybrid learning, but in case of totally on line learning all the used teaching and learning methods will be on line.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course											
Course ILOs	Tools of assessment										
	Quizzes	Mid-term exam	Final Report	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/researches	presentation	modeling
Lo1			✓				✓	✓	✓	✓	
Lo2			✓				✓	✓	✓	✓	
Lo3			✓				✓	✓			
Lo4											
Lo5									✓		
Lo6											



b. Time schedule of assessment

Discussions		Every week for any student
Presentations and Movies		Every week for any student
Reports		Weekly
Reports	Semi Final	Week (14)
	Final	Week (15)
Attendance		weekly
final exam		Week (15)

c. Grading system

Final Report	(10) marks
Final Discussion	(50) marks
Training organization assessment	(40) marks
Total	(100) marks

Note:

- Submission must be a periodical technical presentation.
- Final submission is A4 paper.
- The student has to report his own work through the current academic course.
- Printing and electronic versions of the report are required.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted on Google class room

11- List of references:

a. Course notes

- Student have to take written note based on the instructor's lecture

b. Recommended reference

- Kerzner, H. and H.R. Kerzner, Project management: a systems approach to planning, scheduling, and controlling. John Wiley & Sons, 2017.
- Kalpakjian, S., K. Vijai Sekar, and S.R. Schmid, Manufacturing Engineering and technology. Pearson, 2014.
- Nigel J. Smith. "Engineering Project Management", 3rd Edition, Wiley-Blackwell, 2008. Crawford, Lynn. "Developing organizational project management capability: theory and practice." Project Management Journal 37.3 (2006): 74-86.
- Kostof, Spiro. "A history of architecture: settings and rituals." New York: Oxford (1995).

12- Facilities required for teaching and learning:

- White board + colored pens
- Data show for presentation
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor	Dr. Ahmed Refaat
Program Coordinator	Dr. Nadia Ahmed
Head of the Department	Dr. Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: ARCH 418	Course Name Sustainable Architecture
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Architecture and design department
Date of program operation:	2009-2010
Date of approval from the Higher Ministry of Education	27/1/2008
Date	2023-2024

B-Basic Information

Title	Sustainable Architecture
Code	ARC 418
Credit Hours	2 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	ARCH 320
Instructor name/Email	Dr Nadia Ahmed Mohammed Nadya.ahmed@sva.edu.eg

C- Professional Information

1- Course core:

This course intends to integrate sustainable building and planning principles into the form of the making process of architectural design. A survey of the principles of environmentally sensitive design and planning. An analysis of bioclimatic comfort and building metabolism; design with climate; integration of passive heating and cooling systems; water conservation planning; waste systems; and the basis for specifying sustainable building materials.

2- Course Learning Objectives: oC

- oC1 Understanding the concept of sustainability and the motivations for emerging in architecture.
- oC2 Enable students to examine the impacts of climate change on the built environment.
- oC3 Investigating the various architectural trends that adopted the sustainability concept.
- oC4 Work in stressful environments and within constraints, and manage tasks, time and resources effectively.
- oC5 Building student's capabilities in conducting research and investigation using various techniques and methods of collecting and analyzing data

3- Program objectives served by the course:

- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O5 Gain students' scientific research skills.
- O6 Develop students' professional skills and the ability to self- and continuous learning.

4- The relation between the course objectives and the program objectives

Program objectives	Course objectives
O3	oC1, oC2, oC3
O5	oC6
O6	oC4, oC5



5- Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Display the concept of sustainability and the motivations for emerging in architecture
- Lo2 Investigate the various architectural trends that adopted the sustainability concept.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo3 Examine the impacts of climate change on the built environment.
- Lo4 conduct research and investigation using various techniques and methods of collecting and analyzing data

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- none

6- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

- LO.1 Identify, formulate basic science and mathematics.
- LO.5 Display 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.
- LO.16 Apply engineering design processes to produce cost-effective solutions that meet specified needs.
- LO.18 Conduct techniques and methods of investigation.

7- The relation between the course learning outcomes and the program LOs

	Course (LOs)	program LOs
1	Lo1	LO.1
2	Lo2	LO.5
3	Lo3	LO.16
4	Lo4	LO.18

8- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	Los
1	Introduction, course overview, A definition of the subject's content, objectives and educational outputs. Dividing the students into research groups Announcing the research (1): The concept of sustainability and the reasons behind emerging).	2	0	0	Lo1
2	Submission and Discussion of Research 1	2	0	0	Lo1, Lo2, Lo3, Lo4
3	Sustainable and Environmental architecture	2	0	0	Lo2
4	Submission and Discussion of Research 2 on Sustainable and Environmental Architecture	2	0	0	Lo1, Lo2, Lo3, Lo4
5	National and international rating systems of green architecture Quiz 1	2	0	0	Lo1, Lo2, Lo3
6	Submission and Discussion of Research 3 on local and international Green and certified Projects.	2	0	0	Lo1, Lo2, Lo3, Lo4
7	Net zero (Energy- Carbon) architecture	2	0	0	Lo2
8	Midterm Exam (MT)				Lo1, Lo2, Lo3
9	Submission and Discussion of Research 4 On Net zero architecture	2	0	0	Lo1, Lo2, Lo3, Lo4
10	Islamic architecture	2	0	0	Lo1, Lo2, Lo3
11	Submission and Discussion of Research 5 On Islamic architecture	2	0	0	Lo1, Lo2, Lo3, Lo4



12	Vernacular architecture Quiz 2	2	0	0	Lo1, Lo2, Lo3
13	Submission and Discussion of Research 6 on Vernacular architecture.	2	0	0	Lo1, Lo2, Lo3, Lo4
14	Smart/intelligent architecture	2	0	0	Lo1, Lo2, Lo3
15	Submission and Discussion of Research 4 on Smart and regenerative projects	2	0	0	Lo1, Lo2, Lo3, Lo4
16	Final Written Exam (Final)				Lo1, Lo2, Lo3
Total hours		28	0	0	

9- The Teaching and Learning Methods and their relation to the Los of the Course

Course LOs	Teaching and Learning Methods													
	Online / face-to-face lectures	Tutorials: sheets/sketches	projects	Problem-solving	Brainstorming	Practical: lab	discovering	Site visit	Reports/researches	Cooperative work	presentation	Discussion	Modeling	
Lo1	√								√	√	√	√		
Lo2	√								√	√	√	√		
Lo3	√								√	√	√	√		
Lo4	√								√	√	√	√		

Notes

- The research concerns cooperative work, discussion, site visits and presentations.
- Online lectures are used as hybrid learning, but in the case of totally online learning, all the used teaching and learning methods will be online.

10- Student assessment Method

a. Assessment method and its relation to the Los of the course

Course LOs	Tools of assessment										
	Quizzes	Mid-term exam	Final exam	sheets/sketches	projects	Practical: lab	Oral exam	discussions	Reports/researches	presentation	modeling
Lo1	√	√	√					√	√	√	
Lo2	√	√	√					√	√	√	
Lo3	√	√	√					√	√	√	
Lo4									√	√	

b. Schedule of assessment

Quizzes	Quiz (1)	Week (5)
	Quiz (2)	Week (11)
Discussions	Week 2,4,7,10,14	
Presentations and Movies	Week 1,3,5,8,9,11,12,13	
Researches and reports	Week 2,4,7,10,14	
Attendance	weekly	
Mid-term exam	Week (8)	
final exam	Week (16)	

c- Grading system

Quizzes	Quiz (1)	(5) marks	(40) marks
	Quiz (2)	(5) marks	
Researches and reports	(25) %	10 marks	
Attendance	(5) marks		
Mid-term exam	(15) marks		
final exam	(60) marks		
Total	(100 marks)		



11- List of references:

a. Course notes

- Submission must be a periodical technical presentation.
- The discussion and students' participation are very essential.
- The evaluations are internal periodical assessments.
- Student grades are available and posted in the class.

b. Required books

- Ray Lucas , 2020, **Anthropology for Architects: Social Relations and the Built Environment**

- Frank Lloyd Wright: Natural Design, Organic Architecture: Lessons for Building Green | Sustainable Architecture
- Sustainable Construction: Green Building Design and Delivery
- Green Building Illustrated

c. Recommended books

- Strategies for Sustainable Architecture
- Green Building: Guidebook for Sustainable Architecture Book By: Michael Bauer
- Sustainability, Energy and Architecture: Case Studies in Realizing Green Buildings, by Ali Sayigh

d. Periodicals, Web sites, etc.

- [Retrofit - Designing Buildings](#)
- [Net-Zero Architecture and its Global Examples](#)
- [التكيف مع تغير المناخ | الأمم المتحدة](#)

12- Facilities required for teaching and learning:

- Whiteboard + coloured pens
- Data show for presentation
- Site visits
- Google Class Room
- E-Learning
- References in library

13- Requirements for Disable facilities:

- Extra assignments
- Online extra teaching hours

Course Instructor	Dr Nadia Ahmed
program coordinator	Dr Nadia Ahmed
Head of the Department	Dr Fahima El-Shahed
Date	2023-2024



Course Specification

Course Code: Base 308	Course Name Seminar
A- Affiliation	
Relevant program:	Architecture and design program
Department offering the program:	Architecture and design program
Department offering the course:	Basic Science department
Date of program operation:	2008-2009
Date of approval from the Higher Ministry of education	27/1/2012
Date of course operation	2023-2024

B-Basic Information

Title	Seminar
Code	Base 308
Credit Hours	0 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	0 Hrs.
Total	2 Hrs.
Prerequisite	-----
Instructor name/Email	Dr. Ahmed Refaat ahmed.refaat@sva.edu.eg

C- Professional Information

1- Course core:

The course coverage Engineering Topics conducted on a Weekly or Monthly Basis discussions with speakers from Industry and professors from the different Departments.

2- Course Learning Objectives: oC

- oC1 Understand the design diverse aspects of development.
- oC2 The student can contribute with the latest business models concerning architectural design.

3- Program objectives served by the course:

- O2 Develop students' abilities to develop strategies to solve societal problems.
- O3 Raising students' awareness of the importance of preserving the built environment in its social, economic and environmental aspects to achieve sustainable development goals 2030.
- O6 Developing students' professional skills and the ability to self- and continuous learning.
- O8 Students gain experiences in effective communication with the surrounding community.

4- The relation between the course objectives and the program objectives

Course objectives	Program objectives
oC1	O2, O6
oC2	O3, O8

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Detect the design diverse aspects of development and the latest business models concerning architectural design.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo2 Utilize contemporary technologies, codes of practice and standards, quality guidelines.
- Lo3 Practice research techniques and methods of investigation.

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo4 Collaborate effectively within multidisciplinary team and communicate effectively in conducting physical and multimedia modeling.
- Lo5 Communicate effectively – verbally and in writing – with a range of audiences.



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO2.	Consider global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline.
LO3.	Detect the principles and contexts of sustainable design and development.
LO5.	Identify consideration of other trades requirements.
LO18.	Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
LO19.	Practice research techniques and methods of investigation
LO28.	Work efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
LO29.	Communicate to convey ideas verbally, numerically, graphically, and using symbols effectively.

5- The relation between the course learning outcomes and the program competencies

	Course (LOs)	program LOs
1	Lo1	LO2, LO3, LO5
2	Lo2	LO18
3	Lo3	LO19
4	Lo4	LO28
5	Lo5	LO29

5- Course Content

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	Introduction to the course and its objectives and learning outcomes	0	2	0	Lo1
2	Introduce the design diverse aspects of development	0	2	0	Lo1, Lo3
3	Research 1 st draft discussion	0	2	0	Lo2, Lo4
4	Research 2 nd draft discussion	0	2	0	Lo1, Lo3
5	Research 3 rd draft discussion	0	2	0	Lo2, Lo4
6	Research 4 th draft discussion	0	2	0	Lo2, Lo4
7	Research 5 th draft discussion	0	2	0	Lo1, Lo2, Lo5
8					
9	Learning Skills	0	2	0	Lo1, Lo3
10	Contemporary design terms and concepts	0	2	0	Lo1, Lo3
11	Research 1 st draft discussion	0	2	0	Lo2, Lo4
12	Research 2 nd draft discussion	0	2	0	Lo2, Lo4
13	Business model dashboard	0	2	0	Lo1, Lo3
14	Final feedback of Researches.	0	2	0	Lo1, Lo4
15	Submitted Final Researches & Discussions.	0	2	0	Lo1, Lo5
16					
Total hours		0	28	0	

6- The Teaching and Learning Methods and their relation to the Los of the course

Course ILOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	Modeling
Lo1		√							√		√	√	
Lo2		√							√		√		
Lo3		√							√			√	
Lo4		√							√	√			
Lo5		√							√	√	√		

Notes

- Online lectures used as hybrid learning, but in case of totally on-line learning all the used teaching and learning methods will be on line.



7- Student assessment Method

a- Assessment method and its relation to the Los of the course

Course ILOs	Tools of assessment										
	Quizzes	Mid-term exam	Final Report	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling
Lo1			√					√	√	√	
Lo2			√						√	√	
Lo3			√					√	√		
Lo4			√						√		
Lo5			√				√		√	√	

Notes:

- Submission must be a periodical technical presentation.
- Final submission is A4 paper.
- The student has to report his own work through the current academic course.
- Printing and electronic versions of the report are required.
- The discussion and students' participants are very essential.
- The evaluations are internal periodical assessments.

Student grades are available and posted in the class.

b- Time schedule of assessment

Discussions	Every week for any student
Presentations and Movies	Every week for any student
Research	Weekly
Research	Semi Final Week (13)
Attendance	Final Week (14) weekly

c- Grading system

Attendance & Participation	(20) marks
Report Final Discussion	(30) marks
Report Final Submission	(50) marks
Total	(100) marks

8- List of references:

a- Course notes

- Student have to take written note based on the instructor's lecture
- Adaptive Environments Center (AEC). 1989. A CONSUMER'S GUIDE TO HOME ADAPTATION. Boston: Author.
- BARRIER-FREE AND BEAUTIFUL HOUSE PLANS. Volume 1. 200?. Des Moines, IA: FMR Home Portfolio.
- Bringa, O. R., Christophersen, J., Nordang, A. & Ronnevig, T. 2004. BUILDING FOR ALL: GUIDE BOOK ON UNIVERSAL DESIGN OF BUILDINGS AND OUTDOOR SPACES. The National Office of Building Center for Universal Design. 1998. PROCEEDINGS: DESIGNING FOR THE 21ST CENTURY I: INTERNATIONAL UNIVERSAL DESIGN CONFERENCE. Raleigh, NC: NCSU School of Design.
- Dobkin, I. & Peterson, M. J. 2000. UNIVERSAL INTERIORS BY DESIGN: GRACIOUS SPACES. New York: McGraw-Hill.
- Home Planners, LLC. 2000. PRODUCTS AND PLANS FOR UNIVERSAL HOMES. Tucson, AZ: Hanley-Wood LLC.
- International Code Council/American National Standards Institute. 2003. VOL-UNTARY STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ICC/ANSI A117.1-2003).
- Leibrock, C. & Terry, J. E. 1999. BEAUTIFUL UNIVERSAL DESIGN: A VISUAL GUIDE. New York: Wiley.
- Levine, D. (Ed.) 2003. UNIVERSAL DESIGN NEW YORK 2. Buffalo: Center for Inclusive Design and Environmental Access, State University at Buffalo, NY
- Mueller, J. 1998. CASE STUDIES IN UNIVERSAL DESIGN. Raleigh, NC: Center for Universal Design (available at CUD).
- National Office of Building Technology (Norway). 2005. BUILDING FOR EVERYONE: UNDERSTANDING UNIVERSAL DESIGN OF BUILDINGS AND OUTDOOR SPACES.
- Adaptive Environments Center (AEC). 1989. A CONSUMER'S GUIDE TO

b- Recommended reference



HOME ADAPTATION. Boston: Author.

- BARRIER-FREE AND BEAUTIFUL HOUSE PLANS. Volume 1. 200?. Des Moines, IA: FMR Home Portfolio.
- Bringa, O. R., Christophersen, J., Nordang, A. & Ronnevig, T. 2004. BUILDING FOR ALL: GUIDE BOOK ON UNIVERSAL DESIGN OF BUILDINGS AND OUTDOOR SPACES. The National Office of Building
- Center for Universal Design. 1998. PROCEEDINGS: DESIGNING FOR THE 21ST CENTURY I: INTERNATIONAL UNIVERSAL DESIGN CONFERENCE. Raleigh, NC: NCSU School of Design.
- Dobkin, I. & Peterson, M. J. 2000. UNIVERSAL INTERIORS BY DESIGN: GRACIOUS SPACES. New York: McGraw-Hill.
- Home Planners, LLC. 2000. PRODUCTS AND PLANS FOR UNIVERSAL HOMES. Tucson, AZ: Hanley-Wood LLC.
- International Code Council/American National Standards Institute. 2003. VOL-UNTARY STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ICC/ANSI A117.1-2003).
- Leibrock, C. & Terry, J. E. 1999. BEAUTIFUL UNIVERSAL DESIGN: A VISUAL GUIDE. New York: Wiley.
- Levine, D. (Ed.) 2003. UNIVERSAL DESIGN NEW YORK 2. Buffalo: Center for Inclusive Design and Environmental Access, State University at Buffalo, NY
- Mueller, J. 1998. CASE STUDIES IN UNIVERSAL DESIGN. Raleigh, NC: Center for Universal Design (available at CUD).
- National Office of Building Technology (Norway). 2005. BUILDING FOR EVERYONE: UNDERSTANDING UNIVERSAL DESIGN OF BUILDINGS AND OUTDOOR SPACES.

9- Facilities required for teaching and learning:

1. Data show for presentation
2. Google Class Room
3. E-Learning
4. References in library

10- Requirements for Disable facilities:

1. Extra assignments
2. Online extra teaching hours

Course coordinator	Dr. Ahmed Refaat
Head of the Department	Dr. Amera Marye
Date	2023/2024



Course Specification

Course Code: BASE 402	Course Name Feasibility Studies
---------------------------------	---

A- Affiliation

Relevant program:	Architecture and design department & Civil Engineering department
Department offering the program:	Architecture and design program & Civil Engineering program
Department offering the course:	Basic science department
Date of department operation:	2009-2008
Date of approval from the Higher Ministry of education	27/1/2008
Date of course operation	2023-2024

B- Basic Information

Title	Feasibility Studies
Code	BASE 402
Credit Hours	3 Cr. Hrs.
Lectures	2 Hrs.
Tutorial	4 Hrs.
Total	4 Hrs.
Prerequisite	N/A
Instructor name/Email	-

C- Professional Information

1- Course Core

This course introduces students to the meaning, importance, and effects of feasibility study also deals with the analysis of decision problems under uncertainty, partial information, risk and competition. It Considers the analytic hierarchy process outranking procedures and multi-attributes utility theory.

2- Course Learning Objectives: (oc)

- oc1 Illustrate importance of feasibility studies for projects.
- oc2 Definition of feasibility study and historical development of interest.
- oc3 Preliminary feasibility studies and their components.
- oc4 Identify the most important financing aspects in the feasibility study: sources of financing, how to calculate their cost, and criteria for choosing the best sources.
- oc5 Making feasibility study evaluation for projects.
- oc6 Illustrate Feasibility study evaluation methods.

3-Learning outcomes of the course (LOs):

a. Cognitive Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo1 Identify the nature of the project, its components and forms.
- Lo2 Illustrate preliminary feasibility studies and their components.
- Lo3 Study the effects of environmental feasibility studies.
- Lo4 Classify the Impact of social feasibility study on mega projects.

b. Psychomotor Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo5 Utilize feasibility study evaluation methods to making feasibility reports

c. Affective Domains (LOs):

Upon the completion of the course the student should be able to:

- Lo6 Develop cash flow diagrams for projects and studying its effects on the feasibility of projects.



4- Program LOs served by the course:

Upon the completion of the Program the student should be able to:

LO2.	Consider global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline
LO4	Identify contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
LO12	solve complex engineering problems
LO13.	apply engineering fundamentals, basic science and mathematics
LO17.	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
LO19.	Practice research techniques and methods of investigation
LO21	monitor implementation of engineering projects

5- The relation between the course learning outcomes and the program competencies

	Course (LOs)	program LOs
1	Lo1	LO2, LO4, LO19,
2	Lo2	LO4, LO19,
3	Lo3	LO19,
4	Lo4	LO19,
5	Lo5	LO12, LO17
6	Lo6	LO21

6- Course Content and they're to the course LOs

Week No.	Topic	Lecture hr.	Tutorial hr.	Practical hours	LOs
1	The importance of feasibility studies for projects.	2	0	0	Lo1
2	Definition of feasibility study and historical development of interest.	2	0	0	Lo2, Lo3
3	The nature of the project, its components and forms.	2	0	0	Lo2, Lo3
4	Preliminary feasibility studies and their components.	2	0	0	Lo1, Lo6
5	Environmental feasibility studies + Quiz (1)	2	0	0	Lo2 Lo1 : Lo3
6	Environmental feasibility studies.	2	0	0	Lo2
7	Making cash flow diagram for construction projects	2	0	0	Lo6
8	Mid-term exam	1			Lo1, Lo2, Lo4, Lo6
9	A social feasibility study design criterion.	2	0	0	Lo2
10	The most important financing aspects in the feasibility study: sources of financing, how to calculate their cost, and criteria for choosing the best sources.	2	0	0	Lo2
11	The most important financing aspects in the feasibility study: preparing financial statements, financial obligations on the project, and financial incentives for projects	2	0	0	Lo4, Lo5
12	Technical and engineering feasibility of the project	2	0	0	Lo4, Lo5
13	Feasibility study evaluation methods. + Quiz (2)	2	0	0	Lo3 Lo4 : Lo6
14	Feasibility study evaluation methods.	2	0	0	Lo2
15	Revision	2	0	0	Lo1: Lo6
16	Final exam	2			Lo1: Lo6
Total hours		28	0	0	



7-The Teaching and Learning Methods and their relation to the Los of the course

Course LOs	Teaching and Learning Methods												
	On line / face to face lectures	Tutorials: sheets/ sketches	projects	Problem solving	Brain storming	Practical: lab	discovering	Site visit	Reports/ researches	Cooperative work	presentation	Discussion	modeling
Lo1	√	√	√	√					√	√	√		
Lo2	√	√	√	√	√				√		√	√	√
Lo3	√	√	√	√	√				√		√	√	
Lo4	√	√	√	√					√	√			
Lo5	√	√	√	√	√				√		√	√	√
Lo6	√		√							√			

Notes:

- The research concerns the cooperative work, the discussion, and the presentations.
- The Tutorials concerns the brain storming and the problem solving.
- Online lectures used as hybrid learning, but in case of totally online learning all the used teaching and learning methods will be on line.

8- Student assessment method

a- Assessment method and its relation to the Los of the course												
Course LOs	Tools of assessment											
	quizzes	Mid -term exam	Final exam	sheets/ sketches	projects	Practical: lab	Oral exam	discussions	Reports/ researches	presentation	modeling	
Lo1	√	√	√	√	√				√			
Lo2	√	√	√	√	√			√	√	√		√
Lo3	√		√	√	√			√	√	√		
Lo4	√	√	√	√	√				√			
Lo5	√		√	√	√			√	√	√		√
Lo6	√	√	√		√							

b- Time schedule of assessment

Quizzes Week (5,13)
Discussions weekly
Sheets and sketches Week (7-10-13- 15)
Researches and reports Week (14)
Attendance weekly
Mid- term exam Week (8)
final submission Week (16)

c- Grading system

Quizzes	Quiz (1)	(5) marks	(30) marks
	Quiz (2)	(5) marks	
Sheets and Sketches	5 marks	(15) marks	
Reports	5 marks		
Discussion/	5 marks		
Attendance		(5) marks	
Mid- term exam			20 marks
final exam			50 marks
total			100 marks

9- List of references:

- a- Course notes Lecture notes and handouts.
- b- Required books Project evaluation and feasibility analysis by Kevin baker.
Financial feasibility studies for property development theory and practice TIMHAVARD.
- c- Recommended books
 - - Feasibility study, project management, professional pm wiring note book
- d- Periodicals, Web sites, etc
 - https://www.researchgate.net/publication/341134813_A_PRACTICAL_GUIDE_TO_WRITING_A_FEASIBILITY_STUDY



10- Facilities required for teaching and learning:

- Appropriate teaching design studios including presentation board, data show
- Google classroom
- References in the library

11- Requirements for Disable facilities:

- On line teaching hours if it is needed
- Extra assignments

Course Instructor	
Head of the Department	Dr. Amara Marye
Date:	2023-2024