1- Course Specification of Working Drawings (1)

I. Course Identification and General Information:						
1	**Course Title:**	**working Drawing (1)**				
2	**Course Code & Number:**	**AE257**				
3	**Credit hours:**	C.H				TOTAL
		Th.	Seminar	Pr	Tr.	
		1		4		***3***
4	**Study level/ semester at which this course is offered:**	3th Year/ Level 2nd Semester				
5	**Pre –requisite (if any):**	Construction (1) (2) (3).				
6	**Co –requisite (if any):**	Non				
8	**Program (s) in which the course is offered:**	Architectural Engineering				
9	**Language of teaching the course:**	English and Arabic				
10	**Location of teaching the course:**	Classes / studios				
11	**Prepared By:**	Dr. Ahmed Ghaleb Al-Sharjabi				
12	**Date of Approval**					

Head of Department	Quality Assurance Unit	Dean of the Faculty	Academic Development Center & Quality Assurance	Rector of Sana'a University
Dr. Samir Mohsen Al-Sirry	Assoc. Prof. Dr. Mohammad Algorafi	Prof. Dr. Mohammed AL-Bukhaiti	Assoc. Prof. Dr. Huda Al-Emad	Prof. Dr. Al-Qassim Mohammed Abbas

II. Course Description:

This course aim to introduce students to skills and concepts of architectural working drawings and Details, prepare and recognize of using technical symbols and graphical terminology of working drawings by apply practical knowledge from related courses, measuring, standardized technical and construction, mainly for small buildings.

III. Course Intended learning outcomes (CILOs) of the course		Referenced PILOs
a.1	Understand technical symbols and graphical terminology.	**A1**
a.2	Identify technical symbols and measures in practical working, according to material and construction standard drawings.	**A5**
b.1	Prepare part of the working drawing set	**B3**
b.2	Recognize an integrated set of working drawings, and select appropriate strategies for the whole design.	**B6**
c.1	Demonstrate proficiency in the integration of information and processes in working drawings	**C2**
c.2	Apply theoretical and practical knowledge gained from other related courses	**C3**
c.3	Produce construction documents (working drawings) by Use software Auto-Cad packages and other tools.	**C3**
d.1	Apply ethical principles and commit to professional ethics	**D2**

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1- Understand technical symbols and graphical terminology	Lecture Selection design project Tutorial Reading Case studies Studio works Individual projects	Problem set – assignment Work in Project assessment Presentations Partial and total work assessment.
a2- Identify technical symbols and measures in practical working, according to material and construction standard drawings	Lecture Tutorial / demonstration Discussions Studio works Individual projects	Work in Project assessment Presentations Partial and total work assessment

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1- Prepare part of the working drawing set	Lecture demonstration Discussions Studio works Individual projects	Work in progress assessment Problem set – assignment Presentations Partial and total work assessment
b2- Recognize an integrated set of working drawings, and select appropriate strategies for the whole design.	lectures demonstration Discussions Studio works Individual projects	Work in progress assessment Problem set – assignment Presentations Partial and total work assessment

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© Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
C1- Demonstrate proficiency in the integration of information and processes in working drawings	demonstration Discussions Studio works Individual projects	Work in progress assessment Problem set – assignment Presentations Work in projects assessment
C2- Apply theoretical and practical knowledge gained from other related courses	demonstration Discussions Studio works Individual projects	Work in progress assessment Problem set – assignment Work in projects assessment
C3- Produce construction documents (working drawings) by Use software Auto-Cad packages and other tools	Lectures using Auto-cad software Discussions Studio works Individual projects	Work in progress assessment Presentations Work in projects assessment

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1- Apply ethical principles and commit to professional ethics	Lecture demonstration Discussions Studio works presentation	Work in progress assessment Problem set – assignment Presentations Partial and total work assessment

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IV. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	contact hours
1	Introduction	a1-a2- b2 c1	Review related subjects and Selection of project for works	1	3
2	Methods or ways of produce WD (1)	a1-a2- b2 c1	Selection specific works of the Project for WD (1) Criteria and data to use	2	2
3	-Principles of preparing working drawings.	a1-a2- b1 b2 c1 c2 c3	Drafting and presentation Techniques, symbols, terminology, measurements and levels	2	2
4	Technical Works Detail construction Integrate Parts to systems	a1-a2- b1 b2 c1 c2 c3 d1	Primary data in site, plans, Section, and elevations,	6	6
5	Classifications and numbering	a1-a2- b1 b2 c3 d1	Details and sheet numbering.	1	1
Number of Weeks /and Units Per Semester				**14**	**14**

B - Practical Aspect: (if any)				
Order	**Tasks/ Experiments**	**Number of Weeks**	**contact hours**	**Learning Outcomes**
1	Discussion methods of selection works.	1	0	a2 b1 b2 c1
2	Discussion principles of work in plans (technical information)	2	6	a2 b1 b2 c1
3	Discussion work in plans integration sys.	2	6	b1 b2 c1 c2 c3
4	Discussion work in Sections technical data	1 for assessment	6	b1 b2 c1 c2 c3
5	Discussion work in elevations technical data	2	7	b1 b2 c1 c2 c3
6	Discussion work in technical details, systems etc.	2	7	a1 a2 b1 b2 c1 c2 c3
7	Final drafting and Description	1 for assessment	6	b1 b2 c1 c2 c3
8	Final classification and Numbering sets of drawings	1	4	b1 b2 c1 c2 c3
	Total	14 Weeks	42 Hrs	
	Theoretical + Practical	For the 14th Weeks	56 Hr	
Number of Weeks /and Units Per Semester				

V. Teaching strategies of the course:

Teaching is divided into four main stages: stage I , II , III, IV
Lecturing
Discussions , criticism and corrections in studios
Presentations
Tutorial
Reading
using Auto-cad software
Studio works
Individual projects

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VI. Assignments:

No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1	Phase I Presenting primary data of working Drawings	a1-a2- b1	4	10%
2	Phase II Presentation plans in working Documents	a1 a2 b1 b2 c1 c2	8	25%
3	Phase III Presentation sections and elevations in working Documents	a1 a2 b1 b2 c1	12	15%
4	Phase IV Presentation sections and details in working Documents	b2 c1 c2 c3 d1	14	10%
5	Participation and Attendance	a1 a2 b1 b2 c1 c2 c3 d1	1-14	10%
	Sum			**70**

VII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Re-design project in WD ways (assignment / Quizzes) + Plans, sections, elevations and details presentation in WD documents in four phases,	4- 13	105	70%	a1 a2 b1 b2 c1 c2 c3 d1
2	As final-exam (Submission final WD documents) Project	14 final	45	30%	a1 a2 b1 b2 c1 c2 c3 d1
	Sum		**150**	**100%**	

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VIII. Learning Resources:

- *Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).*

1- Required Textbook(s) (maximum two).

1- Wakita, Osamu A. and Richard M. Linde, **The Professional Practices of Architectural Working Drawing,** John Wiley & sons, NY, USA. 1994
2- Stitt, Fred A., **Working Drawing Manual**

2- Essential References.

1- Ralph W. Liebing, **Architectural Working Drawings**, 3rd Edition John Wiley & Sons, 2002
2- Keith styles, **Working Drawing handbook, architecture press. 1995**

3- Electronic Materials and Web Sites *etc*.

1- Auto-Cad all versions , Rivet, Google sketches up
2- working Drawings E-books,

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IX. Course Policies:

1	**Class Attendance:** The students should have more than 75 % of attendance according to rules and regulations of the faculty.
2	**Tardy:** The students should respect the timing of attending the lectures. They should attend within 1 minute from starting of the lecture.
3	**Exam Attendance/Punctuality:** The student should attend the exam on time. The punctuality should be implemented according to rules and regulations of the faculty for midterm exam and final exam.
4	**Assignments & Projects:** The assignment is given to the students after each chapter, the student has to submit all the assignments for checking on time.
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6	**Plagiarism:** The student will be terminated from the Faculty, if one student attends the exam on another behalf according to the policy, rules and regulations of the university.
7	**Other policies:** _ All the teaching materials should be kept out the examination hall. _ the mobile phone is not allowed. _There should be a respect between the student and his teacher.

Reviewed By	**Vice Dean for Academic Affairs and Post Graduate Studies Dr. Tarek A. Barakat** **Quality Assurance Unit Dr. Mohammad Algorafi** **Name of Reviewer from the Department: Dr. Riyad Muharram** **Name of Reviewer from the Department: Dr. Dr. Samir Al-Sirry**
	Deputy Rector for Academic Affairs Prof. Dr. Ibrahim AlMutaa **Dr. Ahmed Mujahed** **Dr. Munaser Alsubri**

Head of Department Dr. Samir Mohsen Al-Sirry	Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi	Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti	Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad	Rector of Sana'a University Prof. Dr. Al-Qassim Mohammed Abbas

Sana'a University
Faculty of Engineering
Department: Basic Engineering Sciences
Title of the Program: B.Sc. Of Architectural Engineering

Template for Course Plan (Syllabus)

I. Information about Faculty Member Responsible for the Course:								
Name of Faculty Member	Associ Prof . Ahmed Ghaleb Al-Sharjabi	**Office Hours**						
Location& Telephone No.	**Architecture Department** 00967 777141317	**SAT**	**SUN**	**MON**	**TUE**	**WED**	**THU**
E-mail	ahgfn8989@Gmail.com		**10-12 AM**			12-14 PM	

II. Course Identification and General Information:						
1-	**Course Title:**	**Working Drawings (1)**				
2-	**Course Number & Code:**	**AE257**				
3-	**Credit hours:**	**C.H**				**Total**
		Th.	**Seminar**	**Pr.**	**F. Tr.**	
		1		4		***3***
4-	**Study level/year at which this course is offered:**	**3th Year/ Level 2st semester**				
5-	**Pre –requisite (if any):**	**Construction (1) (2) (3)**				
6-	**Co –requisite (if any):**	**Non**				
7-	**Program (s) in which the course is offered**	**Architectural Engineering**				
8-	**Language of teaching the course:**	**English and Arabic**				
9-	**System of Study:**	**Semester / Regular**				
10-	**Mode of delivery:**	**Lecture / Drafting Studio**				
11-	**Location of teaching the course:**	**Studios in Architecture Dept.**				

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III. Course Description:

This course aim to introduce students to skills and concepts of architectural working drawings and Details, prepare and recognize of using technical symbols and graphical terminology of working drawings by apply practical knowledge from related courses, measuring, standardized technical and construction, mainly for small buildings.

IV. Intended learning outcomes (ILOs) of the course:

- Brief summary of the knowledge or skill the course is intended to develop**:**

a1- Understand technical symbols and graphical terminology..
a2- Identify technical symbols and measures in practical working drawings.
b1- Prepare part of the working drawing set
b2- Recognize an integrated set of working drawings.
c1- Apply theoretical and practical knowledge gained from other related courses.
c2- Demonstrate proficiency in the integration of technology of building and processes in construction documents
c3- Produce construction documents (working drawings) by Use software Auto-Cad pack and other tools.
d1- Apply ethical principles and commit to professional ethics

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V.Course Content:

- Distribution of Semester Weekly Plan of Course Topics/Items and Activities.

A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Introduction, identify the subject, and related issues, selection of working Project for work. Describe the time schedule of the working process, and the content. Ways of integrate data, re-drifting project into a Working Drawing document.	1-3	3
2	Methods and ways of produce WD (1) Selection villa Project or small size building for WD (1),	4- 6	2
3	-Introduction to principles of preparing (such as symbols, terminology, measurements, and detail construction) data in plans, Section, and elevations, and layout of water pipes, electricity conduits, rainwater plan, drainage manholes layout to the main sewerage of the city. -consideration to infrastructure systems, site plan,. - Describe criteria and data to use, when integration BoQ and specifications.	7-12	4
4	Technical Works Integrate Parts to systems, sorting sheets and numbering system.	12-13	2
5	Classifications and numbering	14	1
	Total	14	12
Number of Weeks /and Units Per Semester			

B – Practical Aspect: ***(if any)***			
Order	**Topics List**	**Week Due**	**Contact Hours**
1	Discussion methods of selection works.	1	0
2	Discussion principles of work in plans (technical information)	2	6
3	Discussion work in plans integration sys.	2	6
4	Discussion work in Sections technical data	1 for assessment	6
5	Discussion work in elevations technical data	2	7
6	Discussion work in technical details, systems etc.	2	7
7	Final drafting and Description	1 for assessment	6
8	Final classification and Numbering sets of drawings	1	4
	Total	14 Weeks	42 Hrs
	Theoretical + Practical	For the 14th Weeks	56 Hr
Number of Weeks /and Units Per Semester			

VI. Teaching strategies of the course:

Teaching is divided into four main stages: stage I , II , III, IV
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5	Participation and Attendance	**a1 a2 b1 b2 c1 c2 c3 d1**	1-14	10%

VIII. Schedule of Assessment Tasks for Students During the Semester:

Assessment	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
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X. Course Policies:	
Unless otherwise stated, the normal course administration policies and rules of the Faculty of ----- apply. For the policy, see: ----------	
1	**Class Attendance:** The students should have more than 75 % of attendance according to rules and regulations of the faculty.
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