

**Faculty of Engineering & Technology**

**Building Construction & Materials 3**

**Information :**

**Course Code :** ARC 341

**Level :** Undergraduate

**Course Hours :** 4.00- Hours

**Department :** Department of Architectural Engineering

**Instructor Information :**

Title	Name	Office hours
Lecturer	Hala Ali Nabil Mohamed Ali	2
Teaching Assistant	Omar Magdy Ahmed Ibrahim Elbahrawy	
Teaching Assistant	Kamal Abdeleziz Ali Selim	1
Teaching Assistant	Salma Mohamed Eltohamy Elgendy	1

**Area Of Study :**

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

1. Be introduced to an important aspect of construction documents: working drawings. It entails the preparation of small scale orthographic projections (plans, elevations, sections) generally referred to as the general drawings of the construction documents set.
2. Develop a coverage concerning working drawings through more detailed large scale drawings.
3. Develop the proper methods of the preparation and production of architectural working drawings.
4. Share ideas and work in a team or a group.

**Description :**

Working drawings preparation (plans, sections, elevations, details, finishes, wood, and metal works), Execution stages (site works, foundations, skeleton, scaffoldings, quality control).

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	Sort the structure and construction systems and techniques.
2 -	Recognize current building materials and construction techniques and trends for the future of the building industry.
3 -	Demonstrate knowledge and understanding of theories of building details.

**b. Intellectual Skills: :**

1 -	Understand the basic principles of working drawings.
2 -	Understand the more detailed drawings of the buildings parts.
3 -	Criticize and evaluate alternatives.

**c. Professional and Practical Skills: :**

1 -	Submit professional complete full detailed working drawings.
2 -	Use appropriate graphic and modeling techniques for representation.

**d. General and Transferable Skills: :**

1 -	Communicate effectively with other people using visual, graphic, written and verbal means.
2 -	Work in a self-directed manner.
3 -	Work coherently and successfully as a part of a team in projects, assignments and research work.
4 -	Manage time and meet deadlines.
5 -	Analyze problems and use innovative thinking in their solution.
6 -	Use the Internet in searching for data and information about different building details.

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Research: Different types of wood and their uses	6	2	4
Flush door details	6	2	4
Foundations . Axes . Columns	6	2	4
Panel door details	6	2	4
Ground floor plan of a small villa	6	2	4
Research: the different tools used in plastering	6	2	4
Parquet floor details	6	2	4
(Marble / Tiles / Ceramics) floor details	6	2	4
False ceiling details (Metal Lath)	6	2	4
Drawing the elevation of a small villa	6	2	4
Acoustical Ceiling Details	6	2	4
Drawing the section of a small villa	6	2	4

**Teaching And Learning Methodologies :**

Lectures.
Tutorials.
Research assignments.
Information collection from different sources.
Site Visits and field trips.

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	30.00		
Attendance	5.00		
Final Exam	20.00		
Final Project	20.00		

Participation	5.00		
Two Midterm Exams	20.00		

**Course Notes :**

No course notes are required

**Recommended books :**

- \* Barry, R., The Construction of Buildings (Vol.1 and 3), Blackwell Science Ltd.,1999
- \* Allen, E., & Iano, J. (2004). Fundamentals of Building Construction: Materials and Methods. Hoboken, N.J.: Wiley.
- \* Architectural Magazines and Projects

**Periodicals :**

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**Web Sites :**

The Work of the Design Professional: Choosing Building Systems \* American Institute of Architects (AIA): [www.aia.org](http://www.aia.org)  
 \* American Planning Association (APA): [www.planning.org](http://www.planning.org) \* Canadian Codes Centre: [irc.nrc-cnrc.gc.ca/codes](http://irc.nrc-cnrc.gc.ca/codes) \*  
 International Code Council (ICC): [www.iccsafe.org](http://www.iccsafe.org)

\* U.S. Department of Justice, Americans with Disabilities Act (ADA): [www.ada.gov](http://www.ada.gov)  
 Construction Standards and Information Resources \* American National Standards Institute (ANSI): [www.ansi.org](http://www.ansi.org) \*  
 ASTM International: [www.astm.org](http://www.astm.org) \* Canadian Standards Association (CSA): [www.csa.ca](http://www.csa.ca) \* Construction Specifications Canada (CSC): [www.csc-dcc.ca](http://www.csc-dcc.ca) \* Construction Specifications Institute (CSI): [www.csinet.org](http://www.csinet.org) \* National  
 Institute of Building Sciences (NIBS): [www.nibs.org](http://www.nibs.org)

\* National Research Council Canada, Institute for Research in Construction (NRC-IRC): [nrc-cnrc.gc.ca](http://nrc-cnrc.gc.ca)