

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	1
Assistant Lecturer	Nouran Ashraf Ali Abdeltawab	
Teaching Assistant	Dina Wael El sayed Ahmed Mostafa	
Teaching Assistant	Zeinab Soliman Mohamed Galal Soliman	1
Teaching Assistant	Shorouk Hossam Ahmed Hassan	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.
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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
* American Planning Association (APA): www.planning.org * Canadian Codes Centre: irc.nrc-cnrc.gc.ca/codes * International Code Council (ICC): www.iccsafe.org

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

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