



**DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF THE PUNJAB, LAHORE.**

**BACHELORS OF ARCHITECTURE (B. ARCH)
5 YEARS PROGRAM**

COURSE OUTLINE

Course Title	Material and Construction Systems III
Course Code	ARCH-253
Credit Hours	3
Semester	Spring
Prerequisites	NA
Tutor	As per Timetable
Student Advising	As per Timetable
Contact	-

Teacher Signature

Chairman Signature

Course introduction

Material and construction systems are a course the familiarizes the student with construction material and their installation techniques. The course is offered in three levels the material and construction III focuses on working drawing and cost estimate.

Learning Objective:

This course will give students a detailed understanding of working drawing and cost estimate commonly used in Architecture and construction. The course will provide detailed guidance on working drawing and cost estimate.

Outcome

Course learning outcomes are as following.

1. The students would be able to prepare and understand working drawing
2. The students will be able to prepare cost estimate

Learning Methodology:

- Lectures as provided in the schedule of the semester activities
- Study of Archival Material and recommended books
- Guest Lectures as per requirement
- Presentation on allocated topics

Grade Evaluation Criteria

Following, is the criteria for the distribution of marks to evaluate final grade in a semester.

Marks Evaluation	Marks in percentage
Sessional (Assignments, Quizzes, Presentations)	30
Mid Term	30
Final examination	40
Total	100

Content	
Unit 1	Introduction to the Course
Unit 2	Working Drawing (Excavation Plan, Foundation Detail)
Unit 3	Working Drawing (Ground Floor Plan, First Floor Plan)
Unit 4	Working Drawing (Elevation)
Unit 5	Working Drawing (Section)
Unit 6	Working Drawing (Details)
Unit 7	Working Drawing (Plumbing Plans)
Unit 8	Working Drawing (Electrification Plans)
Unit 9	Mid Term Exam
Unit 10	Working Drawing (Submission)
Unit 11	Working Drawing (Door and Window)
Unit 12	Working Drawing (Kitchen and Wardrobe)
Unit 13	Working Drawing (Landscape)
Unit 14	Material and Cost Estimation I
Unit 15	Material and Cost Estimation II
Unit 16	Material and Cost Estimation III
Unit 17	Material and Cost Estimation IV
Unit 18	Final Exam
Recommended Books/References	<ul style="list-style-type: none"> • Architectural: Drafting and Design by Donald E. Helper, Paul I. Wallach • Time Saver Standards for Material Types by Joseph De Chiara and

	<p>Johan HancockCallender</p> <ul style="list-style-type: none">• Z H Syed, Materials for Construction• Professional architectural working drawings by Osamu. A. Wakita, Nagy. R. Bakhoum)• Architectural working drawings (Residential & Commercial) by William Perkins Spence
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