Course Outline

Arch 2205: Construction Details

Part A

1	**Course No./Course Code**	**Arch 2205**
2	**Course Title**	**Construction Details**
3	**Course Type (GEd/Core Course/Electives/…..)**	**Core Course**
4	**Year/Semester and Section**	**2nd/Odd**
5	**Academic Session**	
6	**Course Instructor**	**Nazia Afrin Trina, Md. Nazmul Hoda**
7	**Prerequisite (If any)**	**Nil**
8	**Credit Value**	**2.00**
9	**Contact Hours**	**2.00**
10	**Total Marks**	**100**
11	**Rationale of the Course**	This course primarily aims to develop knowledge about the process of building construction and its relationship to design intentions. Moreover, familiarize with the basic principles of all types of construction methods and techniques. Lastly, develop knowledge of different construction techniques as required by professional design practices in terms of construction, maintenance, aesthetics, and cost.
12	**Course Objectives**	1. Provide fundamental knowledge about the process of building construction and its relationship to design intentions.

		2. Develop in-depth understanding of the basic principles of all types of construction methods and techniques. 3. Develop knowledge about different construction techniques as required by professional design practices in term.
13	**Course Learning Outcomes (CLOs)**	After completing this course students will be able to 1. Demonstrate knowledge about ideas and concepts of different types of construction techniques. 2. Identify and associate proper construction methods in association with the need of the building type, structural requirement and aesthetical soundness. 3. Integrate knowledge about building technologies and advanced materials in professional practice.

Mapping/Alignment of CLO with Program Learning Outcomes (PLOs)

	PLO 1	**PLO 2**	**PLO 3**	**PLO4**	**PLO 5**	**PLO 6**	**PLO 7**	**PLO 8**	**PLO 9**	**PLO 10**	**PLO 11**	**PLO 12**
	Knowledge	Critical awareness and analysis	Design synthesis and building integration	Technical aptitude	Presentation and communication	Advance technological skill	Society, environment and sustainability	Ethical principles and regulatory context	Higher education and scholarly qualities	Individual and team work	Management and project economics	Lifelong learning
CLO 1	✓											
CLO 2		✓	✓	✓								
CLO 3				✓		✓						✓

Part B

14. Course Plan specifying content, CLOs, co curricular activities (if any), teaching learning and assessment strategy mapped with CLOs.

This course focuses on introduction to construction. General principles of construction and relationship to design intentions. Types of essential structural elements e.g. (foundations, floors, walls, and roof systems) and their construction methods and techniques. Method of damp proofing and its treatment in diverse situations. Vertical circulation systems, their types, materials, and construction techniques such as elevators, escalators and stairs, etc. in buildings. Classification of doors and windows, their fixtures, fastening, use and applications. Special spaces in buildings.

WEEK	**TOPIC**	**TEACHING LEARNING STRATEGY** (ID, VP, LDM, PD, WB, HD)[1]	**ASSESSMENT STRATEGY** (Preliminary, Test, Report, presentation, quizzes, Viva voce)	**CORRESPONDING CLOs**
1	Introduction to the Course & Types of Buildings, Introduction to the Course & Types of Buildings.	ID, LDM	-	CLO 1
2	Site Exploration and Preliminary Investigation, Definition and Typology of Vertical Circulation.	-do-	-	CLO 1
3	Definition and Typology of Foundation, Definition and Typology of Vertical Circulation.	-do-	Class test 01	CLO 1
4	Different types of Shallow Foundation, Construction Techniques of Vertical Circulation.	-do-	-	CLO 1

[1] Interactive discussion=ID, Video presentation=VP, Lecture discussion with multimedia=LDM, Panel discussion=PD, white board illustration=WB, Hands on demonstration=HD

WEEK	TOPIC	TEACHING LEARNING STRATEGY (ID, VP, LDM, PD, WB, HD)[1]	ASSESSMENT STRATEGY (Preliminary, Test, Report, presentation, quizzes, Viva voce)	CORRESPONDING CLOs
5	Different types of Shallow Foundation, Definition and Classification of Doors and Windows.	-do-	Class test 02	CLO 1,2
6	Different types of Deep Foundation, Definition and Classification of Doors and Windows.	-do-	Assignment 01	CLO 1,2
7	Different types of Deep Foundation, Doors and Windows' Fixtures, Fastening.	-do-	-	CLO 3
8	Types of Structures and their Expressions, Doors and Windows' Fixtures, Fastening.	-do-	Class test 03	CLO 3
9	Different Types of Arches, Floor and Walls, Doors and Windows' Use and Applications.	-do-	-	CLO 3
10	Different Types of Arches, Floor and Walls, Doors and Windows' Use and Applications.	-do-	Class test 04	CLO 2
11	Insulation Systems and Cavity Walls, Study on Special spaces in buildings, their layout and uses.	-do-	-	CLO 2
12	Different Types of Damp Proofing Techniques, Study on Special spaces in buildings, their layout and uses.	-do-	-	CLO 2,3
13	Summary of the construction system, Study on Special spaces in buildings, their layout and uses.	-do-	Assignment 02	CLO 2,3

Part C

15	ASSESSMENT AND EVALUATION	ASSESSMENT STRATEGY CLASS TEST: A total of 4 class tests will be taken during the semester, 2 for each part (part A and part B). The marks of these class tests will be counted in 20. At the end of the semester, the average mark of 3 of these class tests will count for the final grade. Marks from the class test with the highest marks for each student will be counted. STUDENT PRESENTATION Students will be required to study a topic and present it to the entire class at various points during the semester. These presentations can be done in groups or individually, depending on the requirement of the assigned topic. The presentation may make use of audio-visual learning tools. Course teachers will accommodate the marks to be counted besides class test marks. ASSIGNMENT Apart from class tests and presentations, course teachers may assign additional assignments to benefit the students during the semester. Course teachers will accommodate the marks to be counted besides class test marks. SEMESTER FINAL At the end of the semester, a semester final exam will take place. The total mark of this exam is 60 for both parts, meaning each part (part A and part B) will hold 30 marks.
		MARKS DISTRIBUTION The mark from class attendance, Class tests/ presentation/ assignment/ and semester final will be added to calculate the entire course marks for each student. The details of the strategy can be found in the following table of CIE - Continuous Internal Evaluation provided to each student.

		Final Marks (100) = Class Participation and Attendance (10) + Class Test (20) + Assignment/ Project/ Viva-voce/ Presentation/others (10) + Semester Final Examination (60)
		MAKE-UP PROCEDURES Assignment

CIE- CONTINUOUS INTERNAL EVALUATION (40 MARKS)

BLOOM'S CATEGORY	CLASS TEST (20 MARKS)	ASSIGNMENT/ PROJECT/ VIVA-VOCE/ PRESENTATION/ OTHERS (10 MARKS)	CLASS PARTICIPATION AND ATTENDANCE (10 MARKS)
Remember	2		10
Understand	2		
Apply	5		
Analyze	4	3	
Evaluate	4	2	
Create	3	5	

SMEE-SEMESTER/YEAR MID & END EXAMINATION (60 MARKS)

BLOOM'S CATEGORY	TEST MARK
Remember	
Understand	
Apply	
Analyze	
Evaluate	
Create	

Part D

16	**LEARNING MATERIALS**	**RECOMMENDED READINGS** 1. Kumar, S., (2006) Building Construction, Standard Publishers Distributors. 2. Singh, G., Building construction. 3. Purina, B. C., Building construction.
		SUPPLEMENTARY READINGS 1. Ching, D. K. F., (1943) Building Construction Illustrated, 4th edition, New Jersey: John wiley and Sons Inc. 2. Singh, A., Berghorn, G., Joshi, S., and Syal, M., (2010). Review of life-cycle assessment applications in building construction. Journal of Architectural Engineering, 17(1), 15-23.
		OTHERS *N/A*