Course Outline

Arch 2207: Building and Finished Materials

Part A

1	Course No./Course Code	Arch 2207			
2	Course Title	Building and Finished Materials			
3	Course Type (GEd/Core Course/Electives)	Optional Course			
4	Year/Semester and Section	2nd/Even			
5	Academic Session				
6	Course Instructor	Nadia Monzur, Nazia Afrin Trina			
7	Prerequisite (If any)	Nil			
8	Credit Value	2.00			
9	Contact Hours	2.00			
10	Total Marks	100			
11	Rationale of the Course	The course work will provide fundamental knowledge of the uses and productions of common building and finish materials available in the local and global building industry. By understanding the manufacturing process and life cycle analysis of the materials, the course will allow students to compare and justify the selection of suitable building materials and their potential use in context-specific architectural design and construction.			
12	Course Objectives	 Develop a knowledge of the most commonly used building and finish materials available in the building industry both locally and globally Equip students with an understanding of how different materials are sourced and/or manufactured to make them convenient for construction work and maintenance Create an account of the life cycle of building materials to compare the outcome of using different types of materials in terms of environmental impact and sustainability 			

		4. Develop knowledge of the suitability of different materials as required by professional design practices in terms of construction, maintenance, aesthetics and cost.
13	Course Learning	After completing this course students will be able to
	Outcomes (CLOs)	 Demonstrate knowledge of different types of factory-produced and locally sourced building and finish materials that are most commonly used in the building industry. Discuss the uses, manufacturing process and methods of usage of various types of building materials in building construction. Apply the knowledge of different uses of a single material and how different types of materials work together to integrate the design and construction process that satisfies the regulations practised by professionals in a given context.
		 Demonstrate the ability to compare different types of building materials in terms of their carbon footprint in construction projects through life cycle analysis to ensure informed decision-making during the design phase.

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

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PL0 11	PL0 12
	Knowl edge	Critica I aware ness and analys is	Desig n synthe sis and buildin g integr ation	Techni cal aptitu de	Prese ntatio n and comm unicati on	Advan ce techn ologic al skill	Societ y, enviro nment and sustai nabilit y	Ethical princip les and regula tory contex t	Higher educat ion and schola rly qualiti es	Individ ual and team work	Mana geme nt and projec t econo mics	Lifelon g learnin g
CLO 1	1											
CLO 2	1											
CLO 3		1	1									
CLO 4	1		1	1			1					

Part B

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

Introduction to various types of building materials, their uses, properties, manufacturing process and maintenance; Stone, Brick, Sand, Cement, Concrete, Steel, Timber etc.; Traditional and rural materials; Bamboo, different uses of Earth etc. as building materials, Life cycle analysis of building materials.

Introduction to various types of Finish materials; Plastering, Pointing, Floor finishes, Glass, Roofing, Paint, Insulation etc., their nature, classification, manufacturing process, properties and uses.

WEEK	TOPIC	TEACHING LEARNING STRATEGY (ID, VP, LDM, PD, WB) ¹	ASSESSMENT STRATEGY (Test/ Assignment/ Quizzes)	CORRESPONDI NG CLOs
1	Introduction to types of Building and Finished Materials	ID, LDM	-	CLO 1, CLO 2, CLO 3, CLO 4
2	Stone, Plastering	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4
3	Brick, Pointing	-do-	Class test 01	CLO 1, CLO 2, CLO 3, CLO 4
4	Sand, Floor finish: Hard	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4
5	Cement, Floor finish: Soft	-do-	Class test 02	CLO 1, CLO 2, CLO 3, CLO 4
6	Concrete, Glass	-do-	Assignment 01	CLO 1, CLO 2, CLO 3, CLO 4
7	Steel, Paint	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4

¹ Interactive discussion=ID, Video presentation=VP, Lecture discussion with multimedia=LDM, Panel discussion=PD, white board illustration=WB

WEEK	TOPIC	TEACHING LEARNING STRATEGY (ID, VP, LDM, PD, WB) ¹	ASSESSMENT STRATEGY (Test/ Assignment/ Quizzes)	CORRESPONDI NG CLOs
8	Timber, Roofing	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4
9	Bamboo,	-do-	Class test 03	CLO 1, CLO 2, CLO 3, CLO 4
10	Earth, Insulator	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4
11	Life cycle analysis of Building materials	-do-	Class test 04	CLO 1, CLO 2, CLO 3, CLO 4
12	Life cycle analysis examples	-do-	Assignment 02	CLO 1, CLO 2, CLO 3, CLO 4
13	Life Cycle Analysis and Design	-do-	-	CLO 1, CLO 2, CLO 3, CLO 4

Part C

15		
	ASSESSMENT	ASSESSMENT STRATEGY
	AND	CLASS TEST:
	EVALUATION	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		
Understand	2		
Apply	5		10
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.
		SUPPLEMENTARY READINGS 1.
		OTHERS N/A