

**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING**



LESSON PLAN

SUBJECT: BUILDING MATERIALS & CONSTRUCTIONS TECHNOLOGY (TH 3)

FACULTY: MISS JASHASWINI BEHERA

ACCADEMIC SESSION: 2022-23

SEMESTER: 3RD

SEC: C

Sd/-

H O D (Civil Engg.)

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

Discipline: Civil Engineering	Semester: 3rd Section: C		Name of teaching faculty: MISS JASHASWINI BEHERA
Subject: Building materials & Constructions Technology	No of days /per week class allotted: 05 periods per week. (Mon, Wed, Thu -1 period each and Fri-2 periods)		Semester From Date: 15-09-2022 To Date: 22-12-202 No of weeks: 14 weeks
Week	Date	No of period available	Topics to be covered
1ST	15/09/2022	1	1 Stone 1.1 Classification of rock, uses of stone
	16/09/2022	2	1.1 Natural bed of stone, 1.2 Qualities of good building stone 1.3 Dressing of stone
2ND	19/09/2022	1	1.4 Characteristics of different types of stone and their uses
	21/09/2022	1	2 Bricks 2.1 Brick earth-its composition
	22/09/2022	1	2.2 Brick making–Preparation of brick earth, Moulding
	23/09/2022	2	Drying, Burning in kilns (continuous Process) 2.3 Classification of bricks, size of traditional and modular bricks,
3RD	26/09/2022	1	Qualities of good building bricks
	28/09/2022	1	3 Cement, Mortar and Concrete

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

			3.1 Cement: Types of cements, Properties of cements
	29/09/2022	1	3.1 Manufacturing of cement
	30/09/2022	2	Monthly Class Test -1 3.2 Importance and application of blended cement with fly ash and blast furnace slag. 3.3 Mortar: Definition and types of mortar 3.4 Sources and classification of sand, Bulking of sand
4TH	10/10/2022	1	3.5 Use of gravel, morrum and fly ash as different building material
	12/10/2022	1	3.6 Concrete: Definition and composition- Water cement ratio, Workability
	13/10/2022	1	Mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete
	14/10/2022	2	Part-B 1 Introduction 1.1 Building sand classification of buildings based on occupancy 1.2 Different components of a building.
5TH	17/10/2022	1	1.3 Site investigation–objectives, site reconnaissance and explorations. 2 Foundations
	19/10/2022	1	2.1 Concept of foundation and its purpose
	20/10/2022	1	2.2 Types of foundations–shallow and deep 2.3 Shallow foundation–constructional details of: Spread Foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block
	21/10/2022	2	2.4 Deep foundations: Pile foundations-their suitability, Classification of piles based on materials, function and method of installation.

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

6TH	26/10/2022	1	4 Other Construction Materials 4.1 Timber: Classification and Structure of timber
	27/10/2022	1	4.2 Seasoning of timber– Importance
	28/10/2022	2	4.3 Characteristics of good timber 4.4 Clay products and refractory materials–Definition and Classification
7TH	31/10/2021	1	4.5 Properties and uses of refractory materials-tiles, terracotta
	02/11/2021	1	4.5 Properties and uses of refractory materials-porcelain Glazing
	03/11/2022	1	4.6 Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel
	04/11/2022	2	5 Surface Protective Materials 5.1 Composition of Paints, enamels, varnishes 5.2 Types and uses of surface protective materials like Paints, Enamels,
8TH	07/11/2022	1	5.2 Types and uses of surface protective materials Varnishes, Distempers
	09/11/2022	1	5.2 Types and uses of surface protective materials like Emulsion
	10/11/2022	1	5.2 Types and uses of surface protective materials like French polish and Wax polish.
	11/11/2022	2	3 Walls & Masonry Works : 3.1 Purpose of walls 3.2 Classification of walls–load bearing, non-load bearing walls, retaining walls.
9TH	14/11/2022	1	3.3 Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

			masonry walls . (Concept Only).
	16/11/2022	1	Internal Assessment
	17/11/2022	1	3.4 Partition Walls: Suitability and uses of brick and wooden partition walls 3.5 Brick masonry: Definition of different terms.
	18/11/2022	2	3.6 Bond – meaning and necessity: English bond for 1 and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1 and 1-1/2 brick square pillars in English bond
10TH	22/11/2022	1	3.7 Stone Masonry 3.8 Glossary of terms–String course, corbel, cornice, block-in-course, grouting, mouldings, templates,
	23/11/2022	1	3.8 Glossary of terms- throating, through stones, parapet, coping, pilaster and buttress.
	24/11/2022	1	4 Doors, Windows And Lintels 4.1 Glossary of terms used indoors and windows 4.2 Doors–different types of doors
	25/11/2022	2	4.3 Windows –different types of windows 4.4 Purpose of use of arches and lintels.
11TH	28/11/2022	1	Monthly Class Test -2
	30/12/2022	1	5 Floors, Roofs and Stairs 5.1 Floors: Glossary of terms, Types of floor finishes–cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring (Concept only)

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

	01/12/2022	1	5.2 Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs 5.3 Stairs: Glossary of terms; Staircase, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room
	02/12/2022	2	5.4 Various types of stair case – straight flight, dog legged, open well, quarter turn, half turn (newel and geometrical stairs), Bifurcated stair, spiral stair, cantilever stair, tread riser stair.
12TH	05/12/2022	1	6 Protective, Decorative Finishes, Damp and Termite Proofing 6.1 Plastering–purpose–Types of plastering, Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc.
	07/12/2022	1	6.2 Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing. 6.3 Pointing–purpose
	08/12/2022	1	6.3 Types of pointing
	09/12/2022	2	6.4 Painting–objectives–method of painting new and old wall surfaces, wood surface and metal surfaces –powder coating and spray painting on metal surfaces.
13TH	12/12/2022	1	6.5 White washing–Colour washing–Distempering–internal and external walls 6.6 Damp and Termite proofing–Material sand Methods.
	14/12/2022	1	7 Green Buildings, Energy Management and Energy Audit Of Buildings & Project

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

			7.1 Concept of green building 7.2 Introduction to Energy Management and Energy Audit of Buildings.
	15/12/2022	1	7.3 Aims of energy management of buildings
	16/12/2022	2	7.4 Types of energy audit, Response energy audit questionnaire 7.5 Energy surveying and audit report.
14TH	19/12/2022	1	MonthlyClassTest-3
	21/12/2022	1	Revision
	22/12/2022	1	Previous Year Question