

**Govt Polytechnic Nayagarh**  
**LESSON PLAN**

<b>Discipline: Civil Engineering</b>	<b>Semester: 6<sup>th</sup>(A)</b>	<b>Name of the teaching faculty: Sangram Mishra</b>	
<b>Subject: ACTE</b>	<b>No. of Days/ per week class allotted: 04periods per week.</b>	<b>No. of weeks: 15 weeks</b> <b>No. Of Days in Week</b>	
<b>Week</b>	<b>Periods</b>	<b>No of period available</b>	<b>Theory Topics</b>
<b>1st</b>	1	1	<b>1 Advanced construction Materials</b> 1.1 Fibers and plastic:-Types of fibers-steel,carbon, glass fibers as construction materials, properties of fibers
	2	1	1.1 Types of plastics-PVC,RPVC,HDPE,FRP,GRP,etc.Colored plastic sheets.Use of plastic as construction material
	3	1	1.2 Artificial Timber-Properties and uses of artificial timber.Types of artificial timber available in market, strength of artificial timber.
	4	1	1.3 Miscellaneous materials-Properties and uses of acoustics materials,wall cladding
<b>2nd</b>	5	1	1.3 plaster boards,micro-silica,artificialsand,bondingagents,adhesives etc. <b>2 Prefabrication</b>
	6	1	2.1 Introduction,necessity and scope of prefabrication
	7	1	2.1 History of prefabrication,current uses of prefabrication,types of prefabricated systems
	8	1	Monthly Class Test -1
<b>3rd</b>	9	1	2.1 Classification of prefabrication,advantages and disadvantages of prefabrication
	10	1	2.2 The theory and process of prefabrication
	11	1	2.2 Design principle of prefabricated systems,types of prefabricated elements
	12	1	2.2 modular coordination 2.3 Indian standard recommendation for modular planning
<b>4th</b>	13	1	<b>3 Earthquake Resistant Construction</b>

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			3.1 Building configuration
	14	1	3.2 Lateral load resisting structures 3 Building characteristics
	15	1	3.3 Building characteristics
<b>5th</b>	16	1	3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems.
	17	1	3.5 Safety consideration during additional construction and alteration of existing buildings.
	18	1	3.6 Additional strengthening measures in masonry building-corner reinforcement , lintel band, sill band etc.
	19	1	<b>4 Retrofitting of Structure</b> 4.1 Seismic retrofitting of reinforced concrete buildings
<b>6th</b>	20	1	4.2 Sources of weakness in RC frame building 4.3 classification of retrofitting techniques and their uses
	21	1	<b>5 Building Services</b> .5.1 Cold water distribution in high rise building, layout of installation
	22	1	.5.1 Cold water distribution in high rise building, layout of installation
	23	1	5.2 Hot water supply -general principles for central plants- layout
<b>7th</b>	24	1	5.3 Sanitation-soil and waste water installation in high rise buildings
	25	1	5.4 Electrical services-i) requirements in high rise buildings
	26	1	5.4 ii) layout of wiring
<b>8th</b>	27	1	Monthly Class Test-2
	28	1	iii) fuses and their types iv) earthing
	29	1	5.5 Lighting
<b>9th</b>	30	1	5.6 Ventilation
	31	1	5.7 Mechanical services-lift , escalator, elevators-types and uses.
	32	1	5.7 Mechanical services-lift , escalator, elevators-types and uses.
<b>10th</b>	33	1	<b>6 Construction and earth moving equipments</b> 6.1 Planning and selection of construction

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			equipments
	34	<b>1</b>	6.2 Study on earth moving equipments
	35	<b>1</b>	6.3 Study and uses of compacting equipments like tamping rollers, smooth wheel rollers, pneumatic tired rollers and vibrating compactors
	36	<b>1</b>	6.3 Study and uses of compacting equipments like tamping rollers, smooth wheel rollers, pneumatic tired rollers and vibrating compactors
<b>11th</b>	37	<b>1</b>	Monthly Class Test 3
	38	<b>1</b>	6.4 Owning and operating cost-problems
	39	<b>1</b>	<b>7 Soil reinforcing techniques</b> 7.1 Necessity of soil reinforcing
	40	<b>1</b>	INTERNAL ASSESSMENT
<b>12th</b>	41	<b>1</b>	7.2 Use wire mesh and geo-synthetics
	42	<b>1</b>	7.3 Strengthening of embankments
	43	<b>1</b>	7.3 Slope stabilization in cutting
	44	<b>1</b>	7.3 embankments by soil reinforcing techniques.
<b>13th</b>	45	<b>1</b>	Revision
	46	<b>1</b>	Revision
	47	<b>1</b>	Previous Year Questions & Answer Discussion
	48	<b>1</b>	Previous Year Questions & Answer Discussion
<b>14th</b>	49	<b>1</b>	Revision
	50	<b>1</b>	Revision
	51	<b>1</b>	Previous Year Questions & Answer Discussion
	52	<b>1</b>	Previous Year Questions & Answer Discussion
<b>15th</b>	53	<b>1</b>	Previous Year Questions & Answer Discussion