

**LESSION PLANS FOR  
A.Y: 2024-25  
SEM – I**

A.Y 2024-25 (



**LESSON PLAN for  
INTRODUCTION TO PROGRAMMING  
2024-25**

I/I

Civil-B

Mr. M Sai Babu

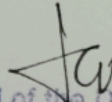
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction to components of Computer system	Chalk & Talk	
2	I	Algorithm	Chalk & Talk	
3	I	Flow chart	Chalk & Talk	
4	I	Program development steps	Chalk & Talk	
5	I	C Tokens	Chalk & Talk	
6	I	Data Types	Chalk & Talk	
7	I	Operator precedence and associativity	Chalk & Talk	
8	I	Structure of C program	Chalk & Talk	
9	I	simple programs using Basic I/O statements	Chalk & Talk	
10	I	SAMPLE PROGRAMS	Chalk & Talk	
11	I	SAMPLE PROGRAMS	Chalk & Talk	
12	I	SAMPLE PROGRAMS	Chalk & Talk	
13	II	Decision statements: if	Chalk & Talk	
14	II	if-else, nested if	Chalk & Talk	
15	II	if-else-if ladder, and switch	Chalk & Talk	
16	II	while loop,	Chalk & Talk	
17	II	do-while loop,	Chalk & Talk	
18	II	for loop, nested loops	Chalk & Talk	
19	II	Branching statements- Break, continue	Chalk & Talk	
20	II	Arrays: Definition Types: Single Dimensional arrays, Multi Dimensional arrays	Chalk & Talk	
21	II	declaration, initialization, accessing elements	Chalk & Talk	
22	II	Matrix operations	Chalk & Talk	
23	II	String Handling functions	Chalk & Talk	
24	II	SAMPLE PROGRAMS	Chalk & Talk	



25	II	SAMPLE PROGRAMS	Chalk & Talk	
26	II	SAMPLE PROGRAMS	Chalk & Talk	
27	II	SAMPLE PROGRAMS	Chalk & Talk	
28	III	Functions: Definition, Declaration, Types of Functions	Chalk & Talk	
29	III	Call by value and call by reference,	Chalk & Talk	
30	III	Passing Arrays to functions	Chalk & Talk	
31	III	Recursion, Scope and lifetime of variables	Chalk & Talk	
32	III	Command line arguments,	Chalk & Talk	
33	III	Storage classes	Chalk & Talk	
34	III	Pointers: Definition, Declaration, Initialization,	Chalk & Talk	
35	III	Pointer arithmetic, functions and pointers	Chalk & Talk	
36	III	Pointer to pointer	Chalk & Talk	
37	III	Uses of Pointers, arrays and pointers	Chalk & Talk	
38	III	SAMPLE PROGRAMS	Chalk & Talk	
39	III	SAMPLE PROGRAMS	Chalk & Talk	
40	IV	Structures: Definition	Chalk & Talk	
41	IV	Declaration, Accessing the structure elements	Chalk & Talk	
42	IV	Array of structures	Chalk & Talk	
43	IV	Arrays with in structures,	Chalk & Talk	
44	IV	pointer to structure, Self referential structure	Chalk & Talk	
45	IV	passing structure to function	Chalk & Talk	
46	IV	nested structures and unions	Chalk & Talk	
47	IV	Dynamic memory allocation	Chalk & Talk	
48	IV	SAMPLE PROGRAMS	Chalk & Talk	
49	IV	SAMPLE PROGRAMS	Chalk & Talk	
50	V	File Handling: Introduction, Types of files	Chalk & Talk	

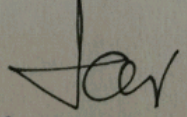


51	V	Defining and Opening a File	Chalk & Talk	
52	V	Closing a File, Input/Output operations on Files	Chalk & Talk	
53	V	Error Handling during I/O operations	Chalk & Talk	
54	V	Random Access to Files	Chalk & Talk	
55	V	SAMPLE PROGRAMS	Chalk & Talk	

  
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Strength of Materials Lab				
Branch	CIVIL	year	II	
AY	2024-25	semester	I	
S. No	Schedule	List of Experiments	No. of hours	Cumulative hours
1	Cycle - I	Tension test on MS and HYSD bars	3	3
2		Bending test on Cantilever beam (Steel)	3	6
3		Determination of Modulus of Elasticity by conducting Bending test on simple support beam	3	9
4		Torsion test on MS bar	3	12
5		Hardness test on steel	3	15
6		Compression test on wood	3	18
7	Cycle - II	Impact test on Mild Steel bar	3	21
8		Deflection test on Fixed beam	3	24
9		Bending test on RS Joist under UTM	3	27
10		Shear test	3	30
11		Determination of Modulus of Elasticity by conducting Bending test on cantilever beam	3	33
Lab Internal Examination			3	36

  
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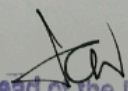
LESSON PLAN for STRENGTH OF MATERIALS, 2024-25, II/I, Civil-A. Dr. V. SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Types of stresses and strains – Hooke's law – stress – strain diagram for mild steel	Chalk & Talk	
2	I	Working stress – Factor of safety – Lateral strain, Poisson's ratio and volumetric strain	Chalk & Talk	
3	I	Bars of varying section	Chalk & Talk	
4	I	Bars of varying section	Chalk & Talk	
5	I	Analysis of composite section– Temperature stresses.	Chalk & Talk	
6	I	Analysis of composite section– Temperature stresses.	Chalk & Talk	Unit-I will be completed
7	II	Definition of beam –Types of supports - Types of beams – Concept of shear force(S.F.) and bending moment (B.M.)	Chalk & Talk	
8	II	S.F and B.M diagrams for cantilever subjected to point loads, UDL., uniformly varying loads and combination of these loads	Chalk & Talk	
9	II	S.F and B.M diagrams for cantilever beams subjected to point loads, UDL., uniformly varying loads and combination of these loads	Chalk & Talk	
10	II	S.F and B.M diagrams for simply supported beams subjected to point loads, UDL., uniformly varying loads and combination of these loads	Chalk & Talk	
11	II	S.F and B.M diagrams for simply supported beams subjected to point loads, UDL., uniformly varying loads and combination of these loads	Chalk & Talk	
12	II	S.F and B.M diagrams for overhanging beams subjected to point loads, UDL., uniformly varying loads and combination of these loads	Chalk & Talk	



LESSON PLAN for STRENGTH OF MATERIALS, 2022-23, II/I, Civil-A. Dr. V. SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
13	II	Point of contra flexure – Relation between S.F., B.M and rate of loading at a section of a beam	Chalk & Talk	Unit-2 will be completed
14	III	Theory of simple bending – Assumptions – Derivation of bending equation - Neutral axis	Chalk & Talk	
15	III	Determination bending stresses – section modulus of rectangular, circular sections (Solid and Hollow)	Chalk & Talk	
16	III	Determination bending stresses – section modulus of I, T and Channel section	Chalk & Talk	
17	III	Determination bending stresses – section modulus of I, T and Channel section	Chalk & Talk	
18	III	Derivation of formula – shear stress distribution across various beam sections like rectangular	Chalk & Talk	
19	III	shear stress distribution across various beam sections like circular, triangular	Chalk & Talk	
20	III	shear stress distribution across various beam sections like I, T sections	Chalk & Talk	Unit-3 will be completed 1 <sup>st</sup> Mid Exams
21	IV	Torsion moment of resistance – Polar section modulus	Chalk & Talk	
22	IV	Torsion moment of resistance – Polar section modulus	Chalk & Talk	
23	IV	Power transmitted by shafts	Chalk & Talk	
24	IV	Power transmitted by shafts	Chalk & Talk	
25	IV	Problems	Chalk & Talk	
26	IV	Problems	Chalk & Talk	
27	IV	Problems	Chalk & Talk	
28	IV	Introduction – Stresses on an inclined section of a bar under axial loading	Chalk & Talk	
29	IV	Compound stresses – Normal and tangential stresses on an inclined plane for biaxial stresses	Chalk & Talk	
30	IV	Compound stresses – Normal and	Chalk & Talk	



		tangential stresses on an inclined plane for biaxial stresses		
LESSON PLAN for STRENGTH OF MATERIALS, 2022-23, II/I, Civil-A. Dr. V.				
SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
30	IV	Two perpendicular normal stresses accompanied by a state of simple shear	Chalk & Talk	
31	IV	Two perpendicular normal stresses accompanied by a state of simple shear	Chalk & Talk	Unit-4 will be completed
32	V	Introduction – Types of columns –long columns – Euler's Crippling Load- - assumptions	Chalk & Talk	
33	V	Derivation of Euler's critical load for various end conditions	Chalk & Talk	
34	V	Derivation of Euler's critical load for various end conditions	Chalk & Talk	
35	V	Derivation of Euler's critical load for various end conditions	Chalk & Talk	
36	V	Derivation of Euler's critical load for various end conditions	Chalk & Talk	
37	V	Equivalent length of a column – slenderness ratio	Chalk & Talk	
47	V	Euler's critical stress – Limitations of Euler's theory	Chalk & Talk	
48	V	Rankine – Gordon formula	Chalk & Talk	
49	V	Secant formula – Empirical formulae	Chalk & Talk	
50	V	Straight line formula	Chalk & Talk	Unit-5 will be completed

  
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U. J. Vani

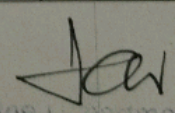


II - I

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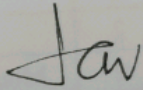
**LESSON PLAN\_FMHHM (2024-25)**

Faculty name		Dr. M. Suresh		
CONTACT HOUR	UNIT NO.	TOPIC	TEACHING METHODOLOGY	REMARKS
1	1	Dimensions and units	BB	
2&3	1	Physical properties of fluids	BB	
4	1	Pascal's law	BB	
5	1	Hydrostatic law	BB	
6&7	1	Manometer	BB	
8	1	Hydrostatics	PPT	
9	1	Center of pressure	PPT	
10&11	1	Derivations and problems	PPT	
12	2	Buoyancy and flotation	PPT	
13&14	2	Meta center and metacentric and problems	BB	
15&16	2	Fluid kinematics Fluid flow-stream line and path line	PPT	
17	2	Classification of flows	BB	
18	2	continuity equations	BB	
19	2	Stream and velocity functions	BB	
20	2	Flow net and problems	BB	
21	3	surface and body surface	BB	
22	3	Euler's equation	BB	
23&24	3	Bernoulli's equation and applications	BB	
25	3	Venturi meter and syphon	PPT	
26	3	Forces and momentum equation	BB	
27	3	Reynold's experiment	BB	
28	3	Laminar and turbulent flows	BB	
29	4	Hydrodynamic forces of jets	BB	
30&31	4	stream and velocity functions	PPT	
32	4	Jet striking centrally and at the tip	PPT	
33	4	Expressions for work done and efficiencies	PPT	
34&35	4	Principal of angular momentum	BB	
36	4	Heads and efficiencies	BB	
37	4	Classification of turbines	PPT	
38	4	Velocity diagram and work done efficiencies	BB	
39	5	Classification of Pumps	BB	
40&41	5	Pumps installation	BB	

  
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42	5	Losses and efficiencies	BB	
43	5	Specific speed	BB	
44	5	Pumps in Series and Parallel	BB	
45	5	Characteristic curves	BB	
46	5	Cavitation	PPT	
47	5	Reciprocating Pump	PPT	
48	5	Discharge, Slip	PPT	
49	5	Indicator Diagrams	BB	
50	ALL	Revision and solving problems	BB	
51	ALL	Revision and solving problems	BB	

  
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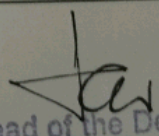
**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI**  
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Class: II-I(A) B. TECH (2024-25)

Subject: Fluid Mechanics and Hydraulic Machines Lab (23CEL202)

Faculty Name: Dr.Sanjay Kumar Ray & Dr.G.Prasanna Kumar

S.No	Name of the Experiment	Hours
1	Introduction to Fluid Mechanics and Hydraulic Machines Lab	3
2	Determination of Coefficient of discharge of Venturimeter	3
3	Determination of Coefficient of discharge of Orifice meter	3
4	Determination of Coefficient of discharge for a small orifice by a constant head method.	3
5	Determination of Coefficient of discharge for an external mouth piece by constant head method.	3
6	5. Determination of Coefficient of discharge of Trapezoidal Notch and /or Triangular Notch.	3
7	Determination of Coefficient of loss of head in a sudden contraction and friction factor.	3
8	Impact of jet on vanes.	3
9	Performance test on Pelton wheel turbine	3
10	Efficiency test on centrifugal pump.	3
11	Efficiency test on reciprocating pump.	3
Total		33

  
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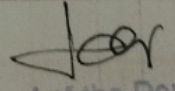
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Class: II-I(B) B. TECH (2024-25)

Subject: Fluid Mechanics and Hydraulic Machines Lab (23CEL202)

Faculty Name: B HARISH

S.No	Name of the Experiment	Hours
1	Introduction to Fluid Mechanics and Hydraulic Machines	3
2	Determination of Coefficient of discharge of Venturimeter	3
3	Determination of Coefficient of discharge of Orifice meter	3
4	Determination of Coefficient of discharge for a small orifice by a constant head method.	3
5	Determination of Coefficient of discharge for an external mouth piece by constant head method.	3
6	5. Determination of Coefficient of discharge of Trapezoidal Notch and /or Triangular Notch.	3
7	Determination of Coefficient of loss of head in a sudden contraction and friction factor.	3
8	Impact of jet on vanes.	3
9	Performance test on Pelton wheel turbine	3
10	Efficiency test on centrifugal pump.	3
11	Efficiency test on reciprocating pump.	3
Total		33

  
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Strength of materials

AY : 2024-25

M. Saibabu

II-I/CVIL-B.

## LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
1	I	Types of Stress & Strain	BBT	
2		Hooke's law, Stress-Strain diagram	"	
3		Working Stress - FOS	"	
4		Elastic constants.	"	
5		Relation b/w Elastic constant	"	
6		problems on Elastic constants	"	
7		Bars of Varying Cross-section	"	
8		problem on bars with varying cross-section	"	
9		analysis of composite bar	"	
10		Thermal stress	"	
11		problem on stress, strain	"	
12		problem on Thermal stress.	"	
13	II	Introduction to Beam, S.F, BM	"	
14		types of beams	"	
15		Introduction to SFD & BMD	"	
16		SFD & BMD of S.S beam	"	
17		SFD, BMD Cantilever beam	"	
18		SFD, BMD Fixed beam	"	
19		SFD, BMD Overhanging beam	"	
20		SFD BMD Continuous beam	"	

\*Black Board / LCD / OHP / Other Method

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LESSON PLAN				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
		problems on S.S beam	"	
21	II	problem on Antiliver beam	"	
22		problems on Overhanging beam.	"	
23		Relation b/w SF & BM, rate of loading	"	
24		Point of Contraflexure.	"	
25		problem on fixed beams	"	
26		problem on Continuous beam	"	
27	III	Introduction to Flexure stress	"	
28		Theory of pure bending, assumptions	"	
29		Derivation of bending equation.	"	
30		Determination of bending stress	"	
31		for I, T-section.	"	
32		Circular sector, Rectangular	"	
33		Introduction to shear stress.	"	
34		Shear distribution across	"	
35		Various beams on Rectangular	"	
36		I-section,	"	
37		T-section	"	
38		problem on bending stress	"	
39		problem on shear stress.	"	
40				

\*Black Board / LCD / OHP / Other Method

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Contact Hour (Cumulative)	Unit No.
41	
42	
43	
44	



LESSON PLAN				Teaching(*) Methodology	Remarks
Contact Hour (Cumulative)	Unit No.	Topic			
41	<u>I</u>	Theory of pure torsion		BBT	
42		Derivation of Torsion Equation		"	
43		assumption, torsion moment restriction.		"	
44		Polar Section modulus		"	
45		Power transmitted by shaft		"	
46		Principal stress & principal strain		"	
47		Stress Induced to bal member		"	
48		axial loading, Compound stress.		"	
49		Normal & Tangential stress.		"	
50		Problem on two perpendicularity		"	
51		normal stress, Mohr's circle.		"	
52	<u>II</u>	Introduction to column & struts		"	
53		Classification, axial load, end restraints		"	
54		End conditions & assumptions		"	
55		Euler's Theory -		"	
56		with boundary conditions.		"	
57		Rankine theory		"	
58		Gordon buckling theory.		"	
59		Secan formula		"	
60		Is rodal formula		"	

\*Black Board / LCD / OHP / Other Method

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18/9/24



LESSON PLAN for FMHM, 2024-25, II/I, Civil-B. KRUPASINDHU BISWAL				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Dimensions and units	Chalk & Talk	
2	I	Physical properties of fluids specific gravity, viscosity	Chalk & Talk	
3	I	surface tension, capillarity	Chalk & Talk	
4	I	pressure at a point	Chalk & Talk	
5	I	Pascal's law	Chalk & Talk	
6	I	Hydrostatic law	Chalk & Talk	
7	I	atmospheric, gauge and vacuum pressure	Chalk & Talk	
8	I	Measurement of pressure.	Chalk & Talk	
9	I	Manometers: simple	Chalk & Talk	
10	I	Differential Manometers	Chalk & Talk	Unit-1 will be completed
11	II	Hydrostatic forces on submerged plane, Horizontal, Vertical	Chalk & Talk	
12	II	inclined and curved surfaces	Chalk & Talk	
13	II	Center of Pressure. Derivations and Problems	Chalk & Talk	
14	II	stability of floating bodies Meta Center	Chalk & Talk	
15	II	Meta centric height	Chalk & Talk	
16	II	Description of fluid flow, Stream line, path line	Chalk & Talk	
17	II	streak lines and stream tube	Chalk & Talk	
18	II	Classification of flows: Steady, unsteady, uniform, non-uniform, laminar, turbulent, rotational and rotational flows	Chalk & Talk	
19	II	Equation of continuity for one, two, three dimensional flows	Chalk & Talk	
20	II	stream functions,	Chalk & Talk	
21	II	velocity potential functions	Chalk & Talk	Unit-2 will be completed
22	III	Surface and body forces	Chalk & Talk	
23	III	Euler's equations for flow along a stream line for 3-D flow	Chalk & Talk	
24	III	Bernoulli's equations for flow along a stream line for 3-D flow	Chalk & Talk	
25	III	Venturi meter and syphon	Chalk & Talk	
26	III	Momentum equation - forces on pipe bend	Chalk & Talk	



**LESSON PLAN for FMHM, 2024-25,II/I, Civil-B. KS BISWAL**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
29	III	Reynold's experiment	Chalk & Talk	
30	III	– Characteristics of Laminar & Turbulent flows	Chalk & Talk	
31	III	Darcy Weisbach equation- Minor losses in pipes	Chalk & Talk	
32	III	- pipes in series and pipes in parallel-	Chalk & Talk	
33		total energy line-hydraulic gradient line	Chalk & Talk	
34	III	pipe networks	Chalk & Talk	Unit-3 will be completed
35	IV	Hydrodynamic force of jets on stationary flat	Chalk & Talk	
36	IV	moving flat, inclined and curved vanes	Chalk & Talk	
37	IV	curved vanes	Chalk & Talk	
38	IV	jet striking centrally and at tip, velocity triangles at inlet and outlet	Chalk & Talk	
39	IV	expressions for work done and efficiency	Chalk & Talk	
40	IV	principle of Angular Momentum	Chalk & Talk	
41	IV	Layout of a typical Hydropower installation	Chalk & Talk	
42	IV	Heads and efficiencies-classification of turbines Pelton wheel	Chalk & Talk	
43	IV	Francis turbine	Chalk & Talk	
44	IV	Kaplan turbine	Chalk & Talk	Unit-4 will be completed
45	V	Pump installation details-classification	Chalk & Talk	
46	V	work done	Chalk & Talk	
47	V	Manometric head	Chalk & Talk	
48	V	minimum starting speed	Chalk & Talk	
49	V	losses and efficiencies	Chalk & Talk	
50	V	specific speed	Chalk & Talk	
51	V	multistage pumps-pumps in parallel and series	Chalk & Talk	
52	V	characteristic curves-NPSH-cavitations	Chalk & Talk	
53	V	Reciprocating Pump:working	Chalk & Talk	
54	V	SLIP,NEGATIVE SLIP	Chalk & Talk	Unit-5will be completed



# LESSON PLAN

Course Name: Python Programming

Branch: CIVIL

Class / Semester: II/I

Code: 23EST206

Academic Year: 2024-25

Period	Unit No.	Topic	Teaching Methodology	Remarks
	<b>I</b>	<b>Introduction to Python Control Structures</b>		
1		History	PPT	
2		Features, installing	PPT	
3		Operators	PPT	
4		Operators	PPT	
5		Statements and Expressions	PPT	
6		Conditional Statements	PPT	
7		Conditional Statements	PPT	
8		Loops	PPT	
	<b>II</b>	<b>Data Types</b>		
9		Mutable vs immutable data type	PPT	
10		Introduction to Numbers, Integers, Floating Point Real Numbers	PPT	
11		Complex Numbers, Operators	PPT	
12		Built-in Functions	PPT	
13		Related Modules	PPT	
14		Sequences - Strings	PPT	
15		Lists	PPT	
16		Tuples	PPT	
17		Dictionaries	PPT	
18		Set Types	PPT	
	<b>III</b>	<b>Functions &amp; File Handling</b>		
19		Definitions, Declaration	PPT	
20		Parameter passing	PPT	
21		calling functions	PPT	
22		creating a file, opening a file	PPT	
23		I/O with file (read, write, append),	PPT	
24		closing a file	PPT	
25		Programs	PPT	
26		Programs	PPT	
	<b>IV</b>	<b>Modules</b>		
27		Modules and Files	PPT	
28		Namespaces	PPT	
29		Importing Modules	PPT	
30		Importing Module Attributes	PPT	
31		Module Built-in Functions	PPT	
32		Packages	PPT	
33		Other Features of Modules	PPT	
34		Other Features of Modules	PPT	

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	V	Classes in Python & Regular Expressions		
35		Principles of Object Orientation	PPT	
36		Creating Classes, Instance Methods and Special Methods	PPT	
37		Class Variables and Inheritance	PPT	
38		Data base connectivity	PPT	
39		Programs demonstrating on oops	PPT	
40		Programs demonstrating on oops	PPT	
41		Introduction to Regular Expressions	PPT	
42		Special Symbols	PPT	
43		Characters	PPT	
44		Res and Python	PPT	
45		Res and Python	PPT	
46		Programs	PPT	
47		Programs	PPT	
48		Programs	PPT	

**BB: CLASS ROOM**

**PPT: POWER POINT PRESENTATION**

**LCD**

#### **TEXT BOOKS**

1. Wesley J .C hun "Core Python Applications Programming", 3<sup>rd</sup> Edition, 2012, Prentice Hall.
2. Brian jones, David Beazley —Python Cookbook I, 3<sup>rd</sup> Edition.

#### **REFERENCES BOOKS**

1. Mark Lutz "Programming Python, 4th Edition" O'Reilly Media.
2. Think Python, Allen Downey, Green Tea Press

#### **Web Links**

<https://docs.python.org/3/tutorial/index.html>  
<https://pythonprogramminglanguage.com>



# II-I B.Tech BPCT Lesson Plan.

AY: 2024-2025 I Sem. Dr. G. Prasad Kumar

## LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
1	1	Introduction, Building Bye-laws	CR/BB	
2	1	Objectives of Building Byelaws	CR/BB	
3	1	Objectives, FSR, FAR.	CR/BB	
4	1	Principles underlying building bye laws	CR/BB	
4	1	Principles underlying laws	CR/BB	
5	1	Classification of building	"	
6	1	Open space Requirements	"	
7	1	Lighting requirements	"	
7	1	Ventilation requirements	"	
8	1	Building Services	"	
8	1	Plumbing	"	
9	1	Electrical fixtures	"	
10	2	Orientation of building	"	
11	2	Grouping, Privacy	"	
11	2	Elegance, Flexibility	"	
12	2	Roomness, Circulation	"	
13	2	Furniture Requirements	"	
13	2	Sanitation & Economy	"	
14	2	Effect of Sun	"	
14	2	Factors effecting orientation	"	

\*Black Board / LCD / OHP / Other Method

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LESSON PLAN				Teaching(*) Methodology	Remark
Contact Hour (Cumulative)	Unit No.	Topic			
				CP/BB	
15	2	find out - facing of a house		"	
16	2	Minimum standards for various parts of building		"	
17	2	Minimum Requirements		"	
18	2	Introduction to various		"	
18	2	Software tools in building		"	
18	2	Planning		"	
19	2	Planning of Educational buildings		"	
20	2	Planning of hospitals		"	
21	2	Interior Decoration - Principles		"	
22	2	Basic Concepts of Design		"	
23	2	Balance, Unity		"	
23	2	Rhythm, Emphasis		"	
24	2	Contrast, Scale, Proportion		"	
25	3	Masonry - Classification		"	
26	3	Stone Masonry		"	
27	3	Rubble & Ashlar Masonry		"	
28	3	Brick Masonry		"	
29	3	Flemish & English Bond		"	
30	3	Foundations		"	
31	3	Shallow foundations		"	

\*Black Board / LCD / OHP / Other Method

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# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remark
32	3	Deep foundations - types	CR/BB	
33	3	Pointing	"	
34	3	Water Proofing	"	
35	3	Damp Proofing	"	
36	3	Termite Proofing	"	
37	3	Plastering	"	
38	3	External & Internal Finishes	"	
39	3	White Washing	"	
40	3	Distemping	"	
41	4	Construction Techniques	"	
41	4	For various elements of building	"	
42	4	Scaffolding	"	
43	4	Shoring	"	
44	4	Under Pinning	"	
44	4	Form Work	"	
45	4	Erection & Fabrication	"	
45	4	Introduction to Prefabricated Elements	"	
46	5	Construction Equipments	"	
46	5	Trucks	"	
47	5	Excavators	"	

\*Black Board / LCD / OHP / Other Method



LESSON PLAN				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks

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\*Black Board / LCD / OHP / Other Method



**LESSON PLAN**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks <sup>of</sup> U
1	1	Introduction, Building Bye-laws	CR/BB	
2	1	Objectives of Building Bye-laws	CR/BB	
3	1	Objectives, FSR, FAR.	CR/BB	
4	1	Principles underlying building bye-laws	CR/BB	
4	1	Principles underlying laws.	CR/BB	
5	1	Classification of building	"	
6	1	Open Space Requirements	"	
7	1	Lighting requirements	"	
7	1	Ventilation requirements	"	
8	1	Building Services	"	
8	1	Plumbing	"	
9	1	Electrical fixtures.	"	
10	2	Orientation of building	"	
11	2	Grouping, Privacy	"	
11	2	Elegance, Flexibility	"	
12	2	Roominess, Circulation	"	
13	2	Furniture Requirements	"	
13	2	Sanitation & Economy	"	
14	2	Effect of Sun	"	
14	2	Factors effecting orientation	"	

\*Black Board / LCD / OHP / Other Method  
 Approved by the Department  
 Department of Civil Engineering



LESSON PLAN			
Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology
			CB/EB
15	2	find out - facing of a house	"
16	2	Minimum standards for various parts of building	"
17	2	Minimum Requirements	"
18	2	Introduction to various	"
18	2	Software tools in building	"
18	2	Planning	"
19	2	Planning of Educational buildings	"
20	2	Planning of hospitals	"
21	2	Interior Decoration - Principles	"
22	2	Basic Concepts of Design	"
23	2	Balance, Unity	"
23	2	Rhythm, Emphasis	"
24	2	Contrast, Scale, Proportion	"
25	3	Masonry - Classification	"
26	3	Stone Masonry	"
27	3	Rubble & Ashlar Masonry	"
28	3	Brick Masonry	"
29	3	Flkish & English Bond	"
30	3	Foundations	"
31	3	Shallow foundations	"

\*Black Board / LCD / OHP / Other Method

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Contact Hour (Cumulative)	Unit No.
32	3
33	
34	
35	
36	



LESSON PLAN				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
			(R/BB)	
32	3	Deep foundations - types	"	
33	3	Pointing	"	
34	3	Water Proofing	"	
35	3	Damp Proofing	"	
36	3	Termite Proofing	"	
37	3	Plastering	"	
38	3	External & Internal Finishes	"	
39	3	White washing	"	
40	3	Distemping.	"	
41	4	Construction Techniques	"	
41	4	For various elements of building	"	
42	4	Scaffolding	"	
43	4	Shoring	"	
44	4	Under Pinning	"	
44	4	Form Work	"	
45	4	Erection & Fabrication	"	
45	4	Introduction to Prefabricated Elements	"	
46	5	Construction Equipments	"	
46	5	Types	"	
47	5	Excavators	"	

Black Board / LCD / OHP / Other Method

\*Black Board / LCD / OHP / Other Method



## LESSON PLAN

[illegible]



## LESSON PLAN

Course Name: Python Programming

Branch: CE Class / Semester: II/I

Academic Year: 2024-25

Period	Unit No.	Topic	Teaching Methodology	Remarks
	<b>I</b>	<b>Introduction to Python Control Structures</b>		
1		History	PPT	
2		Features, Installing	PPT	
3		Operators	PPT	
4		Operators	PPT	
5		Statements and Expressions	PPT	
6		Conditional Statements	PPT	
7		Conditional Statements	PPT	
8		Loops	PPT	
	<b>II</b>	<b>Data Types</b>		
9		Mutable vs immutable data type	PPT	
10		Introduction to Numbers, Integers, Floating Point Real Numbers	PPT	
11		Complex Numbers, Operators	PPT	
12		Built-in Functions	PPT	
13		Related Modules	PPT	
14		Sequences - Strings	PPT	
15		Lists	PPT	
16		Tuples	PPT	
17		Dictionaries	PPT	
18		Set Types	PPT	
	<b>III</b>	<b>Functions &amp; File Handling</b>		
19		Definitions, Declaration	PPT	
20		Parameter passing	PPT	
21		calling functions	PPT	
22		creating a file, opening a file	PPT	
23		I/O with file (read, write, append),	PPT	
24		closing a file	PPT	
25		Programs	PPT	
26		Programs	PPT	
	<b>IV</b>	<b>Modules</b>		
27		Modules and Files	PPT	
28		Namespaces	PPT	
29		Importing Modules	PPT	
30		Importing Module Attributes	PPT	
31		Module Built-in Functions	PPT	
32		Packages	PPT	
33		Other Features of Modules	PPT	
34		Other Features of Modules	PPT	



	V	Classes in Python & Regular Expressions		
35		Principles of Object Orientation	PPT	
36		Creating Classes, Instance Methods and Special Methods	PPT	
37		Class Variables and Inheritance	PPT	
38		Data base connectivity	PPT	
39		Programs demonstrating on oops	PPT	
40		Programs demonstrating on oops	PPT	
41		Introduction to Regular Expressions	PPT	
42		Special Symbols	PPT	
43		Characters	PPT	
44		Res and Python	PPT	
45		Res and Python	PPT	
46		Programs	PPT	
47		Programs	PPT	
48		Programs	PPT	

BB: CLASS ROOM

PPT: POWER POINT PRESENTATION

LCD

#### TEXT BOOKS

1. Wesley J .C hun "Core Python Applications Programming", 3rd Edition, 2012, Prentice Hall.
2. Brian jones, David Beazley —Python Cookbook I, 3rd Edition.

#### REFERENCES BOOKS

1. Mark Lutz "Programming Python, 4th Edition" O'Reilly Media.
2. Think Python, Allen Downey, Green Tea Press

#### Web Links

<https://docs.python.org/3/tutorial/index.html>  
<https://pythonprogramminglanguage.com>



LESSON PLAN for TE, 2024-25, III/I, Civil - A. Sri G. Anil Kumar				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction	PPT	
2	I	Highway development	PPT	
3	I	Modes of transportation, role of highway transportation in India	PPT	
4	I	Necessity and road development plans		
5	I	Road development plans	PPT	
6	I	Road network patterns	PPT	
7	I	Alignment	BB	
8	I	Factors affecting alignment	BB	
9	I	Engineering surveys and drawings	PPT	
10	II	Geometric design, Cross section elements	PPT	
11	II	Sight distance and types	BB	
12	II	SSD, OSD, ISD	BB	
13	II	Sight distance problems	BB	
14	II	Super elevation	BB	
15	II	Problems on super elevation	BB	
16	II	Design of transitional curve	BB	
17	II	Extra widening	BB	



18	II	Design of vertical curves	BB	
19	II	Design of vertical curves	BB	
20	II	Vertical gradient	BB	
21	III	Highway material – soil	PPT	
22	III	Aggregate properties	PPT	
23	III	Aggregate tests	PPT	
24	III	Bitumen and tar	PPT	
25	III	Tests on bitumen	PPT	
26	III	Bitumen types	PPT	
27	III	Problems on mix design	PPT	
28	III	Bituminous concrete	PPT	
29	III	Marshall mix design	BB	
30	IV	Different types of roads	PPT	
31	IV	Earthen and WBM Roads	BB	
32	IV	BT roads	PPT	
33	IV	CC roads and stresses	PPT	
34	IV	Tie bars and dowel bars	PPT	
35	IV	Flexible pavement construction	PPT	
36	IV	Distresses on flexible pavement	PPT	



37	IV	Types of pavement & maintenance	PPT	
38	IV	Maintenance and drainage	PPT	
39	IV	Arboriculture culture and lighting	PPT	
40	V	Elements of Traffic Engineering - Vehicle & Road User Characteristics,	PPT	
41	V	Accessibility & Mobility concept,	PPT	
42	V	Traffic Volume studies & methods,	PPT	
43	V	Speed Studies – Time Mean Speed, Space Mean Speed,	PPT	
44	V	Travel time and Delay studies,	PPT	
45	V	Origin - Destination studies,	PPT	
46	V	Highway capacity and level of service (LOS)	PPT	
47	V	Highway capacity and level of service (LOS)	BB	
48	V	capacity of urban and rural roads,	PPT	
49	VI	PCU concept and its limitations	PPT	
50	VI	Parking Studies – Problems of parking,	PPT	
51	VI	types of parking facilities – on street & off street,	PPT	
52	VI	types of parking facilities – on street & off street,	PPT	
53	VI	Accidents -Causes and Mitigative measures	PPT	



LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-A. Sri. S. RAMLAL				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Concepts of limit state design-Basic statical principles	Chalk & Talk	
2	I	Characteristic loads – characteristic strength	Chalk & Talk	
3	I	Partial load and safety factors – representative stress – strain curves for cold worked deformed bars and mild steel bars	Chalk & Talk Role Play	
4	I	Representative stress – strain curves for cold worked deformed bars and mild steel bars	Chalk & Talk	
5	I	Based on IS Code :456-2000. Assumptions in limit state design	Chalk & Talk	
6	I	Stress – block parameters	Chalk & Talk	
7	I	limit state analysis and design of singly reinforced	Chalk & Talk	
8	I	limit state analysis and design of singly reinforced	Chalk & Talk	
9	I	limit state analysis and design of singly reinforced	Chalk & Talk	
10	I	Comparison of Limit stage method with working stress and ultimate load method	Chalk & Talk	Unit-1 will be completed
11	II	limiting moment of Resistance	Chalk & Talk	
12	II	Design of doubly reinforced	Chalk & Talk	
13	II	Design of doubly reinforced	Chalk & Talk	
14	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
15	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
16	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
17	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	Unit-2 will be completed
18	III	Limit state analysis and design of section for shear and torsion	Chalk & Talk	
19	III	Problems on shear	Chalk & Talk	
20	III	Problems on shear	Chalk & Talk	
21	III	Problems on shear	Chalk & Talk	



# LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-A. Sri. S. RAMLAL

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
22	III	Torsion example	Chalk & Talk	
23	III	Torsion example	Chalk & Talk	
24	III	concept of bond, anchorage and development length, I.S. code provisions	Chalk & Talk	Unit-3 will be completed & 1 <sup>st</sup> Mid Exams
25	III	concept of bond, anchorage and development length, I.S. code provisions	Chalk & Talk	
26	IV	Classification of slabs	Chalk & Talk	
27	IV	Design of one - way slabs	Chalk & Talk	
28	IV	Design of two - way slabs	Chalk & Talk	
29	IV	Design of two - way slabs	Chalk & Talk	
30	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	
31	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	Unit-4 will be completed
32	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	
33	V	Effective length of a column, I S Code provisions	Chalk & Talk	
34	V	Design of short columns under axial loads	Chalk & Talk	
35	V	Design of short columns under axial loads	Chalk & Talk	
36	V	Design of short columns under axial loads	Chalk & Talk	
37	V	Design of short columns under b uniaxial bending	Chalk & Talk	
38	V	Design of short columns under biaxial bending	Chalk & Talk	
39	V	Design of short columns under biaxial bending	Chalk & Talk	
40	V	Design of long columns	Chalk & Talk	
41	V	Design of long columns	Chalk & Talk	
42	V	Design of long columns	Chalk & Talk	Unit-5 will be completed
43	VI	Types of footings.	Chalk & Talk	
44	VI	Distribution of base pressure	Chalk & Talk	
45	VI	General Design considerations for footings.	Chalk & Talk	
46	VI	Design of Isolated rectangular footing	Chalk & Talk	

LESSON PLAN for

Contact Hour  
(Cumulative)

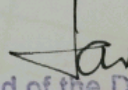
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48

49



LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-A. Sri. S. RAMLAL				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
47		Design of Isolated rectangular footing	Chalk & Talk	
48		Design of Isolated rectangular footing	Chalk & Talk	
49		Design of Isolated rectangular footing	Chalk & Talk	
50		Design of Isolated square footing	Chalk & Talk	
51		Design of Isolated square footing	Chalk & Talk	
52		Design of Isolated square footing	Chalk & Talk	Unit-5 will be completed
		Grand Test		2 <sup>nd</sup> Mid Exams

  
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Lab Name: **TRANSPORTATION ENGINEERING Lab**

Year: 2024-2025

Branch: Civil

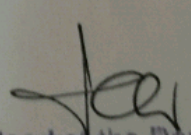
Semester: III-I

Sec-A

Faculty Name: Sri G Anil Kumar

Course Code: 20CEL206

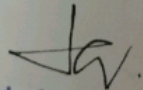
S.No	Lab Lesson Schedule	No. of Hours
1	Aggregate Crushing value	3
2	Aggregate Impact Test.	3
3	Specific Gravity and Water Absorption.	3
4	Attrition Test	3
5	Abrasion Test.	3
6	Shape tests	3
7	Viscosity Test.	3
8	Ductility Test.	3
9	Softening Point Test.	3
10	Flash and fire point tests.	3
11	Penetration test	3
12	Stripping test	3
Total Contact Hour		36

  
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**LESSON PLAN for TE , 2024-25, III/I, Civil - B.**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction	PPT	
2	I	Highway development	PPT	
3	I	Modes of transportation, role of highway transportation in India	PPT	
4	I	Necessity and road development plans		
5	I	Road development plans	PPT	
6	I	Road network patterns	PPT	
7	I	Alignment	BB	
8	I	Factors affecting alignment	BB	
9	I	Engineering surveys and drawings	PPT	
10	II	Geometric design, Cross section elements	PPT	
11	II	Sight distance and types	BB	
12	II	SSD, OSD, ISD	BB	
13	II	Sight distance problems	BB	
14	II	Super elevation	BB	
15	II	Problems on super elevation	BB	
16	II	Design of transitional curve	BB	
17	II	Extra widening	BB	

  
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18	II	Design of vertical curves	BB
19	II	Design of vertical curves	BB
20	II	Vertical gradient	BB
21	III	Highway material – soil	PPT
22	III	Aggregate properties	PPT
23	III	Aggregate tests	PPT
24	III	Bitumen and tar	PPT
25	III	Tests on bitumen	PPT
26	III	Bitumen types	PPT
27	III	Problems on mix design	PPT
28	III	Bituminous concrete	PPT
29	III	Marshall mix design	BB
30	IV	Different types of roads	PPT
31	IV	Earthen and WBM Roads	BB
32	IV	BT roads	PPT
33	IV	CC roads and stresses	PPT
34	IV	Tie bars and dowel bars	PPT
35	IV	Flexible pavement construction	PPT
36	IV	Distresses on flexible pavement	PPT



37	IV	Types of pavement & maintenance	PPT	
38	IV	Maintenance and drainage	PPT	
39	IV	Arboriculture culture and lighting	PPT	
40	V	Elements of Traffic Engineering - Vehicle & Road User Characteristics,	PPT	
41	V	Accessibility & Mobility concept,	PPT	
42	V	Traffic Volume studies & methods,	PPT	
43	V	Speed Studies – Time Mean Speed, Space Mean Speed,	PPT	
44	V	Travel time and Delay studies,	PPT	
45	V	Origin - Destination studies,	PPT	
46	V	Highway capacity and level of service (LOS)	PPT	
47	V	Highway capacity and level of service (LOS)	BB	
48	V	capacity of urban and rural roads,	PPT	
49	VI	PCU concept and its limitations	PPT	
50	VI	Parking Studies – Problems of parking,	PPT	
51	VI	types of parking facilities – on street & off street,	PPT	
52	VI	types of parking facilities – on street & off street,	PPT	
53	VI	Accidents -Causes and Mitigative measures	PPT	



### LESSON PLAN

ACADAMIC YEAR: 2024-25

YEAR & SEM: III/I,

SECTION: A

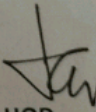
FACULTY NAME: Sri. G. GOWRI SANKARAREAO

SUBJECT: ADVAN CDC STRUCTURAL ANALYSIS

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Assumptions in slope deflection method - application to the analysis of statically indeterminate beams with and without settlement of supports	BB	
2	I	Solving the problems of continuous beam without sinking	BB	
4	I	Solving the problems of continuous beam without sinking	BB	
5	I	Solving the problems of continuous beam with sinking	BB	
6	I	Solving the end moments of the rigid frame without sway	BB	
8	I	Solving the end moments of the rigid frame with sway and draw the BMD & SFD, Solving the end moments of the rigid frame with sway and draw the BMD & SFD	BB	
9	II	Moment Distribution method explain Stiffness and carry over factors and also Distribution factors	BB	
10	II	Solving the problems of continuous beam end moments without sinking	BB	
12	II	Solving the problems of continuous beam end moments without sinking and draw BMD.	BB	
13	II	Solving the problems of continuous beam end moments with sinking and draw BMD.	BB	
15	II	Solving the end moments of the rigid frame and draw the BMD & SFD, Solving the end moments of the rigid frame with sway and draw the BMD & SFD	BB	
16	III	Kani's method- Analysis of continuous beams – including without sinking	BB	
17	III	Analysis of continuous beams – including without sinking	BB	
19	III	Kani's method- Analysis of continuous beams – including with sinking	BB	
20	III	Kani's method- Analysis of continuous beams – including without sinking	BB	



21	III	Analysis of continuous beams – including without sway	BB	
23	III	Analysis of continuous beams – including without sway	BB	Unit-3 will be completed
24	III	Find end moments and draw the BMD & SFD of the portal frame with sway	BB	
25	IV	Introduction to Stiffness Method	BB	
26	IV	Analysis of continuous beams with two unknowns.	BB	
27	IV	Analysis of continuous beams with two unknowns.	BB	
39	IV	Analysis of continuous beams with two unknowns.	BB	
30	IV	Analysis of portal frame with two unknowns.	BB	
31	IV	Analysis of portal frame with two unknowns	BB	
33	IV	Analysis of portal frame with two unknowns	BB	Unit-4 will be completed
34	IV	Analysis of portal frame with two unknowns	BB	
35	V	Explanation of flexibility method	BB	
36	V	Analysis of continuous beams with two unknowns use flexibility method	BB	
38	V	Analysis of continuous beams with two unknowns.	BB	
39	V	Analysis of portal frame with two unknowns	BB	
41	V	Analysis of portal frame with two unknowns by flexibility method	BB	
42	V	f Analysis of portal frame with two unknowns by flexibility method	BB	Unit-5 will be completed
42	VI	Introduction to Plastic Analysis	BB	
44	VI	Assumption in plastic theory-plastic hinge-plastic moment or collapse moment-collapse load	BB	
45	VI	load factor- shape factor- collapse load for Different types of beams	BB	
46	VI	Find the collapse load in beams	BB	
48	VI	Solving the collapse load in beams	BB	
49	VI	Solving the collapse load in beams		
50	VI	Solving the collapse load in beams		
52	VI	Solving the collapse load in beams		Unit-6 will be completed

  
HOD

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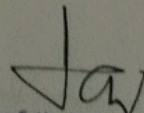
A.Y: 24-25

### Lesson Plan for Smart Energy and Transportation system (III-I, AR20)

Contact Hour (Cumulative)	Unit No	Topic	Teaching Methodology	Remarks
1	I	Smart Energy: - Defining the concept of smart energy	PPT	
2	I	Objectives of smart energy	PPT	
3	I	Elements of smart energy management system	PPT	
4	I	Energy efficient building	PPT	
5	I	Net zero energy and energy plus buildings	PPT	
6	I	Building codes	PPT	
7	I	Energy efficiency	PPT	
8	I	Use of renewable energy (RE) challenges in making city energy smart	PPT	
9	I	Use of renewable energy (RE) challenges in making city energy smart	PPT	Unit 1 will be completed
10	II	Solar energy for smart cities	PPT	
11	II	Development of solar cities	PPT	
12	II	Solar street lights	PPT	
13	II	Traffic signal boards	PPT	
14	II	Solar energy conversion	PPT	
15	II	Solar thermal systems	PPT	
16	II	Solar photovoltaics (PV) generating systems	PPT	
17	II	Roof top solar systems	PPT	Unit 2 will be completed
18	III	Smart Grid-demand management through smart grids	PPT	
19	III	Electric vehicles (EVs)	PPT	
20	III	Need for electric vehicles	PPT	
21	III	EV-ecosystem components	PPT	
22	III	Vehicles and battery	PPT	
23	III	Charging infrastructure types of chargers	PPT	
24	III	Charging infrastructure types of chargers	PPT	Unit 3 will be completed



Contact Hour (Cumulative)	Unit No	Topic	Teaching Methodology	Remarks
25	IV	Smart transport system - Need for urban smart transport system	PPT	
26	IV	Objectives and components of urban transport system	PPT	
27	IV	Strategies in smart transport system	PPT	
28	IV	Transit orientated development (TOD)	PPT	
29	IV	Non-motorized transport	PPT	Unit 4 will be completed
30	V	ICT supported smart transport: Real-time traffic information system (RTIS)	PPT	
31	V	Real time traffic monitoring system (RTMS)	PPT	
32	V	Automated fare collection system	PPT	
33	V	Public vehicles - smart transport solutions	PPT	
34	V	Private vehicle - smart transport solutions	PPT	
35	V	Commercial vehicles and smart transport solutions	PPT	Unit 5 will be completed
36	VI	Public, private & commercial vehicles and smart transport solutions	PPT	
37	VI	Case studies at national level on smart energy and transport system	PPT	
38	VI	Case studies at national level on smart energy and transport system	PPT	
39	VI	Case studies at national level on smart energy and transport system	PPT	
40	VI	Case studies at international level on smart energy and transport system	PPT	
41	VI	Case studies at international level on smart energy and transport system	PPT	
42	VI	Case studies at international level on smart energy and transport system	PPT	Unit 6 will be completed

  
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LESSON PLAN for ASA, 2024-25, III/I, Civil-B. Dr. D. Hima Chandan				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Assumptions in slope deflection method - application to the analysis of statically indeterminate beams with and without settlement of supports	BB	
2	I	Solving the problems of continuous beam without sinking	BB	
4	I	Solving the problems of continuous beam without sinking	BB	
5	I	Solving the problems of continuous beam with sinking	BB	
6	I	Solving the end moments of the rigid frame without sway	BB	
8	I	Solving the end moments of the rigid frame with sway and draw the BMD & SFD, Solving the end moments of the rigid frame with sway and draw the BMD & SFD	BB	
9	II	Moment Distribution method explain Stiffness and carry over factors and also Distribution factors	BB	
10	II	Solving the problems of continuous beam end moments without sinking	BB	
12	II	Solving the problems of continuous beam end moments without sinking and draw BMD.	BB	
13	II	Solving the problems of continuous beam end moments with sinking and draw BMD.	BB	
15	II	Solving the end moments of the rigid frame and draw the BMD & SFD, Solving the end moments of the rigid frame with sway and draw the BMD & SFD	BB	
16	III	Kani's method- Analysis of continuous beams – including without sinking	BB	
17	III	Analysis of continuous beams – including without sinking	BB	
19	III	Kani's method- Analysis of continuous beams – including with sinking	BB	
20	III	Kani's method- Analysis of continuous beams – including without sinking	BB	



21	III	Analysis of continuous beams – including without sway	BB	
23	III	Analysis of continuous beams – including without sway	BB	
24	III	Find end moments and draw the BMD & SFD of the portal frame with sway	BB	Unit-3 will be completed
25	IV	Introduction to Stiffness Method	BB	
26	IV	Analysis of continuous beams with two unknowns.	BB	
27	IV	Analysis of continuous beams with two unknowns.	BB	
39	IV	Analysis of continuous beams with two unknowns.	BB	
30	IV	Analysis of portal frame with two unknowns.	BB	
31	IV	Analysis of portal frame with two unknowns	BB	
33	IV	Analysis of portal frame with two unknowns	BB	
34	IV	Analysis of portal frame with two unknowns	BB	Unit-4 will be completed
35	V	Explanation of flexibility method	BB	
36	V	Analysis of continuous beams with two unknowns use flexibility method	BB	
38	V	Analysis of continuous beams with two unknowns.	BB	
39	V	Analysis of portal frame with two unknowns	BB	
41	V	Analysis of portal frame with two unknowns by flexibility method	BB	
42	V	f Analysis of portal frame with two unknowns by flexibility method	BB	Unit-5 will be completed
42	VI	Introduction to Plastic Analysis	BB	
44	VI	Assumption in plastic theory-plastic hinge-plastic moment or collapse moment-collapse load	BB	
45	VI	load factor- shape factor- collapse load for Different types of beams	BB	
46	VI	Find the collapse load in beams	BB	
48	VI	Solving the collapse load in beams	BB	
49	VI	Solving the collapse load in beams		
50	VI	Solving the collapse load in beams		
52	VI	Solving the collapse load in beams		Unit-6 will be completed

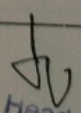


LESSON PLAN for ENVIRONMENTAL ENGINEERING, 2021-22 III/I, Civil-B. B.Harish				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Sources of Water ,Comparison from quality and quantity	BB	
2	I	Intakes, infiltration galleries. Waterborne diseases	BB	
3	I	Protected water supply	BB & Interactive	
4	I	Population forecasting methods,	BB	
5	I	Design period ,Types of water demand	BB	
6	I	Factors affecting per capita demand	BB	
7	I	Fluctuations ,	BB & LCD	
8	I	Fire demand	BB & LCD	
9	I	Storage capacity	BB & LCD	
10	I	Drinking water quality standards: IS 10500	BB & LCD	Unit-1 will be completed
11	II	Layout and general outline of water treatment units	BB	
12	II	Aeration, sedimentation , principles	BB& LCD	
13	II	Design factors	BB& LCD	
14	II	Coagulation , jar test	BB& Student Seminar	
15	II	Flocculation	BB& LCD	
16	II	Clarifier design coagulants , feeding arrangements	BB& Student Interaction	
17	II	Filtration, theory,	BB& LCD	
18	II	Working of slow and rapid gravity filters , multimedia filters ,	BB& LCD	
19	II	Design of filters , troubles in operation,	BB& LCD	
20	II	Disinfection, theory of chlorination, chlorine demand, other disinfection practices.	BB& LCD	Unit-2 will be completed
21	III	Requirements ,methods and layouts.	BB& Student Seminar	
22	III	Design of distribution systems , Hardy Cross and equivalent pipe methods ,	BB	

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LESSON PLAN for ENVIRONMENTAL ENGINEERING, 2023-24, III/I, Civil-B.				
B.HARISH				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
			BB	
23	III	Service reservoirs	BB	
24	III	Capacity by Mass Curve Method	BB& LCD	
25	III	Joints, sluice valves,	BB	
26	III	Air valves,	BB	1 <sup>st</sup> Mid Exams
27	III	Scour valves Check valves, water meters	BB	
28	III	Check valves, water meters	BB	Unit-3 will be completed
29	III	Water meters	BB	
30	IV	Sewage and storm water estimation -	BB& Student Seminar	
31	IV	Characteristics of sewage , Decomposition of sewage,.	BB	
32	IV	Examination of sewage ,	BB	
33	IV	B.O.D. Equation, and C.O.D.	BB	
34	IV	Design of sewers ,	BB	
35	IV	Shapes and materials	BB & LCD	
36	IV	Sewer appurtenances, manholes	BB & LCD	
37	IV	Inverted siphon ,catch basins	BB	
38	IV	Flushing tanks ,ejectors,	BB	
39	IV	Pumps	BB	
40	IV	Pump houses	BB& Student Seminar	Unit-4 will be completed
41	V	Waste water treatment plant , Flow diagram	BB	
42	V	Primary treatment , design of screens	BB	
43	V	Grit chambers, Skimming tanks	BB	
44	V	Sedimentation tanks	BB	
45	V	Biological treatment, trickling filters	BB& Student Seminar	
46	V	Activated sludge processes (ASP).	BB	
47	V	Sludge digestion , factors effecting, design of Digestion tank	BB	
48	V	Sludge disposal by drying	BB	
49	V	Septic tanks working principles and,	BB	

  
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LESSON PLAN for ENVIRONMENTAL ENGINEERING, 2023-24, III/I, Civil-B.				
B.HARISH				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
50	V	Septic tanks design	BB	
51	V	Soak pits	BB	
52	VI	Definition and classification of air pollutants	BB	Unit-5 will be completed
53	VI	Sources and effects, air pollution meteorology	BB	
54	VI	Control of particulates, Gravity settlers, cyclone filters	BB	
55	VI	ESPs, Control of gaseous pollutants, Adsorption, Absorption, Combustion, Condensation,	BB	
56	VI	Air quality standards and limits.	BB	
57	VI	Definition and impacts of noise pollution	BB	
58	VI	Permissible limits of noise,	BB	Unit-6 will be completed
59	VI	Measurement of noise and control of noise pollution.	BB	2 <sup>nd</sup> Mid Exams

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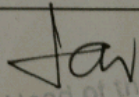
**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI**  
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Class: III-I(B) B. TECH (2024-25)

Subject: Environmental Engineering Lab(20CEL307)

Faculty Name: B HARISH

S.No	Name of the Experiment	Hours
1	Introduction to Environmental Engineering lab	3
2	To determine the hardness of the given water samples	3
3	To determine the alkalinity of a given water sample	3
4	To determine the acidity of a given water sample	3
5	pH metric estimation of acid by base	3
6	Conductometric estimation of acid by base	3
7	Estimation of Dissolved oxygen in water sample	3
8	Determination of iron by thiocyanate colorometry	3
9	Determination of optimum dose of coagulants by Jar Test Apparatus.	3
10	To determine the turbidity of the given water sample	3
11	pH metric estimation of acid by base	3
12	Determination of Biochemical oxygen demand	3
Total		36

  
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LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-B. Dr. V. SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Concepts of limit state design-Basic statical principles	Chalk & Talk	
2	I	Characteristic loads – characteristic strength	Chalk & Talk	
3	I	Partial load and safety factors – representative stress – strain curves for cold worked deformed bars and mild steel bars	Chalk & Talk Role Play	
4	I	Representative stress – strain curves for cold worked deformed bars and mild steel bars	Chalk & Talk	
5	I	Based on IS Code :456-2000. Assumptions in limit state design	Chalk & Talk	
6	I	Stress – block parameters	Chalk & Talk	
7	I	limit state analysis and design of singly reinforced	Chalk & Talk	
8	I	limit state analysis and design of singly reinforced	Chalk & Talk	
9	I	limit state analysis and design of singly reinforced	Chalk & Talk	
10	I	Comparison of Limit stage method with working stress and ultimate load method	Chalk & Talk	Unit-1 will be completed
11	II	limiting moment of Resistance	Chalk & Talk	
12	II	Design of doubly reinforced	Chalk & Talk	
13	II	Design of doubly reinforced	Chalk & Talk	
14	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
15	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
16	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	
17	II	Design of doubly reinforced and flanged T beam sections	Chalk & Talk	Unit-2 will be completed
18	III	Limit state analysis and design of section for shear and torsion	Chalk & Talk	
19	III	Problems on shear	Chalk & Talk	
20	III	Problems on shear	Chalk & Talk	
21	III	Problems on shear	Chalk & Talk	

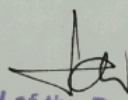


LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-B.				
Dr. V. SOWJANYA VANI			Teaching Methodology	Remarks
Contact Hour (Cumulative)	Unit No.	Topic		
22	III	Torsion example	Chalk & Talk	
23	III	Torsion example	Chalk & Talk	
24	III	concept of bond, anchorage and development length, I.S. code provisions	Chalk & Talk	Unit-3 will be completed & 1 <sup>st</sup> Mid Exams
25	III	concept of bond, anchorage and development length, I.S. code provisions	Chalk & Talk	
26	IV	Classification of slabs	Chalk & Talk	
27	IV	Design of one - way slabs	Chalk & Talk	
28	IV	Design of two - way slabs	Chalk & Talk	
29	IV	Design of two - way slabs	Chalk & Talk	
30	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	
31	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	Unit-4 will be completed
32	IV	Design of continuous slabs using IS Coefficients (conventional)	Chalk & Talk	
33	V	Effective length of a column, I S Code provisions	Chalk & Talk	
34	V	Design of short columns under axial loads	Chalk & Talk	
35	V	Design of short columns under axial loads	Chalk & Talk	
36	V	Design of short columns under axial loads	Chalk & Talk	
37	V	Design of short columns under b uniaxial bending	Chalk & Talk	
38	V	Design of short columns under biaxial bending	Chalk & Talk	
39	V	Design of short columns under biaxial bending	Chalk & Talk	
40	V	Design of long columns	Chalk & Talk	
41	V	Design of long columns	Chalk & Talk	Unit-5 will be completed
42	V	Design of long columns	Chalk & Talk	
43	VI	Types of footings.	Chalk & Talk	
44	VI	Distribution of base pressure	Chalk & Talk	
45	VI	General Design considerations for footings.	Chalk & Talk	



25, III/I, Civil-B.  
Remarks

46	VI	Design of Isolated rectangular footing	Chalk & Talk	
LESSON PLAN for DESIGN OF CONCRETE STRUCTURES, 2024-25, III/I, Civil-B. Dr. V. SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
47		Design of Isolated rectangular footing	Chalk & Talk	
48		Design of Isolated rectangular footing	Chalk & Talk	
49		Design of Isolated rectangular footing	Chalk & Talk	
50		Design of Isolated square footing	Chalk & Talk	
51		Design of Isolated square footing	Chalk & Talk	
52		Design of Isolated square footing	Chalk & Talk	Unit-5 will be completed
		Grand Test		2 <sup>nd</sup> Mid Exams

  
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Class: IV-I

B. TECH (2024-25)

Subject: Essential Components of Smart Cities (20SCT 404)

Faculty Name:

Contact Hour (Cumulative)	Unit No.	Topics	Teaching Methodology	Remarks
1	1	<b>Small Buildings:</b> Introduction	PPT	
2	1	Attributes Of Smart Buildings	BB	
3	1	Essential Components of Intelligent and Smart Buildings.	BB	
4	1	Objective of smart buildings -energy centric view -	BB	
5	1	Lighting -Heating-ventilation and air conditioning (HVAC)	PPT	
6	1	Systems for communication - monitoring and surveillance	BB	
7	1	Fires safety and Emergency warning.	BB	
8	1	Barriers and challenges in implementing smart cities.	BB	Unit-I will be completed
9	2	<b>Smart Water and Waste Management</b> Introduction	PPT	
10	2	Possible approaches -concept of water security	BB	
11	2	Multi-level perspective of urban water system.	BB	
12	2	Functions and objectives of smart water management system and its benefits	BB	
13	2	Objective and scope of smart waste management systems.	PPT	
14	2	IOT based system for waste collecting and management -	BB	
15	2	ICT based system for waste collecting and management -	BB	
16	2	Auto meted waste collection system (AWCS)	BB	Unit-II will be completed
17	3	<b>Start economy and Governness</b> Introduction	PPT	
18	3	Objectives of smart economy	BB	
19	3	Smart economy transformation	BB	
20	3	Entrepreneurship	BB	
21	3	Critical public infrastructure and services	PPT	
22	3	promoting innovation	BB	
23	3	Facility for training and skill enhancement	BB	Unit-III will be completed



24	4	<b>Smart governance -ICT</b>	BB	
25	4	Dependence of Smart Governance.	BB	
26	4	smart governance implementation stages	PPT	
27	4	Computerization & Networking	BB	
28	4	Commissioning Internet based interaction -	BB	
29	4	Improving public service delivery	BB	
30	4	Stakeholder participation and collaboration.	PPT	Unit-IV will be completed
31	5	Implementing GIS/GPS - Mapping and land information system	BB	
32	5	<b>Smart Environment:</b> Environment challenges -	BB	
33	5	Climate change and pollution control	BB	
34	5	Impact on biodiversity and ecosystem.	BB	
35	5	Measures to realize smart environment	PPT	
36	5	Mixed land use & Sustainable Food Production and consumption Patterns	BB	
37	5	Avoiding heat island formation - monitoring and Management of urban noise	BB	
38	5	Monitoring pollution levels for effective interventions.	BB	Unit-V will be completed
39	6	ICT framework for environmental management - benefits - challenges.	PPT	
40	6	<b>ICT for Smart Cities:</b> Introduction	BB	
41	6	Taxonomy of layers of ICT architecture	BB	
42	6	Access Layer -Application Layer - Data Layer	BB	
43	6	Communication layer & instrumentation layer	PPT	
44	6	security layer- IOT / M2M Layer	BB	
45	6	ICT major technology areas network technologies	BB	
46	6	storage technology - computing technologies	BB	
47	6	Sensor technologies - information security technologies	BB	
	6	New devices and technologies in ICT	BB	Unit-VI will be completed

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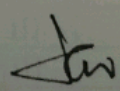


**LESSON PLAN for AR-20 REMOTE SENSING and GIS, 2024-25, IV/I, Civil-A.**  
**Dr. B. VISWESWARA REDDY**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction to Remote Sensing	BB & Interactive	
2	I	Components of Remote Sensing	BB & LCD	
3	I	Electro Magnetic Radiation-Basic Wave Theory	BB & Student Seminar	
4	I	Electro Magnetic Radiation-Quantum Wave Theory	BB & Student Seminar	
5	I	Electro Magnetic Spectrum	BB & Student Seminar	
6	I	EMR interaction with Atmosphere	BB & LCD	
7	I	Scattering and Absorption	BB & LCD	
8	I	EMR interaction with Earth Surface Materials	BB & LCD	
9	I	EMR interaction with Vegetation	BB & LCD	
10	I	EMR interaction with Soil & Water	BB & LCD	
11	I	Atmospheric Windows & Its significance	BB & LCD	Unit-1 will be completed
12	II	Introduction to Platforms	BB & LCD	
13	II	Ground Borne & Air Borne	BB & LCD	
14	II	Space Borne Platforms	BB & LCD	
15	II	Sensors-types-Classification	BB	
16	II	Active Sensors	BB & LCD	
17	II	Passive Sensors	BB & LCD	
18	II	Introduction to Resolutions-Spectral resolution	BB & LCD	
19	II	Radiometric and Temporal Resolutions	BB & LCD	
20	II	Image data Characteristics	BB & LCD	
21	II	Image Data Formats-BIL, BIP and BSQ	BB & LCD	Unit-2 will be completed
22	III	Introduction to Image Analysis	BB & LCD	
23	III	Elements of Visual Interpretation	BB & LCD	
24	III	Digital Image Processing	BB	
25	III	Image Enhancement Techniques- Linear	BB & LCD	
26	III	Non Linear Enhancement Techniques	BB & LCD	
27	III	Introduction to image Classification	BB	
28	III	Supervised Classification	BB & LCD	
29	III	Un Supervised Classification	BB & LCD	Unit-3 will be completed



Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
			BB	
			BB	
			BB	
30	IV	Introduction to GIS	BB & LCD	
31	IV	Key Components	BB	
32	IV	Map Projections	BB	
33	IV	Projections Based on Scale	BB	
34	IV	Projections Based on Purpose	BB	
35	IV	Data-Spatial Data	BB	
36	IV	Non Spatial Data	BB & LCD	
37	IV	Spatial Data Inputs	BB & LCD	
38	IV	Raster Data Models	BB	Unit-4 will be completed
39	IV	Vector Data Models		
40	IV	Raster Vs Vector Data	BB	
			BB & LCD	
41	V	Introduction to Overlay analysis	BB & LCD	
42	V	Overlay function	BB & LCD	
43	V	Vector Overlay Operations	BB & LCD	
44	V	Raster Overlay Operators	BB & LCD	
45	V	Arithmetic Operators	BB & LCD	
46	V	Comparison & Logical Operators	BB & LCD	
47	V	Conditional Expressions	BB & LCD	Unit-5 will be completed
48	V	Overlay using Decision Table		
			BB	
49	VI	Introduction to RS & GIS applications	BB & LCD	
50	VI	Land use/Land cover applications	BB & LCD	
51	VI	Agricultural applications	BB & LCD	
52	VI	Forest applications	BB & LCD	
53	VI	Geological applications	BB & LCD	
54	VI	Geomorphological applications	BB & LCD	
55	VI	Urban applications	BB & LCD	
56	VI	Flood Zone Delineation	BB & LCD	Unit-6 will be completed

  
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Lab Name: Geographic Information System

Branch: Civil Engineering

Sec-A

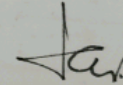
Course Code: 20CEL411

Year:2024-2025

Semester: 4-1<sup>st</sup>

Faculty Name: Dr. B. Visweswara Reddy

S.No	Lab Lesson Schedule	No. of Hours
1	Preprocess of image / toposheet (which includes Georeferencing, Projection and Subset)	3
2	Digitization of Features from the Toposheet	3
3	Topology of digitized of features	3
4	Study of features estimation	3
5	Creation of Thematic maps	3
6	Layout Preparation	3
7	Digital Elevation Model	3
8	Calculation of volumes for Hills and Tanks	3
9	Database creation for Road Network analysis	3
10	Delineation of watershed boundary	3
11	Mosaic of a dataset	3
12	Clip/Subset of a dataset	3
Total Contact Hour		36



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# STRUCTURAL DESIGN LAB USING SOFTWARE TOOLS LESSON PLAN

AY: 2024-25

Branch: Civil Engineering

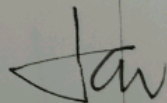
Year and Semester: IV B.Tech I Semester

Section: A

Course Code: 20CEL410

Faculty Name: Dr.G.Prasanna Kumar

S.No.	Lab Experiment Schedule	No. of Hours
1.	2-D Frame Analysis	3
2.	2-D Frame Design	3
3.	Steel Tabular Truss Analysis	3
4.	Steel Tabular Truss Design	3
5.	3-D Frame Analysis	3
6.	3-D Frame Design	3
7.	Retaining Wall Analysis	3
8.	Retaining Wall Design	3
9.	Simple Tower Analysis	3
10.	Simple tower Design	3
11.	Simple slab culvert Analysis	3
12.	Simple slab culvert Design	3
Total Contact Hours		36

  
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## STRUCTURAL DESIGN LAB USING SOFTWARE TOOLS LESSON PLAN

AY: 2024-25

Branch: Civil Engineering

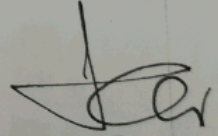
Year and Semester: IV B.Tech I Semester

Section: B

Course Code: 20CEL410

Faculty Name: G.Gowri Sankara Rao

S.No.	Lab Experiment Schedule	No. of Hours
1.	2-D Frame Analysis	3
2.	2-D Frame Design	3
3.	Steel Tabular Truss Analysis	3
4.	Steel Tabular Truss Design	3
5.	3-D Frame Analysis	3
6.	3-D Frame Design	3
7.	Retaining Wall Analysis	3
8.	Retaining Wall Design	3
9.	Simple Tower Analysis	3
10.	Simple tower Design	3
11.	Simple slab culvert Analysis	3
12.	Simple slab culvert Design	3
Total Contact Hours		36

  
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Class: IV-I [Section: B]

B. TECH (2024-25)

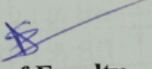
Subject: Remote Sensing and Geographic Information System (20CEE411)

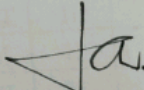
Faculty Name: Dr. Sanjay Kumar Ray

Hour (Cumulative)	Unit No.	Topics	Teaching Methodology	Remarks
1	I	Basics of Remote Sensing - Introduction	BB & LCD	
2	I	Components of remote sensing	BB & LCD	
3	I	Electromagnetic radiation	BB & LCD	
4	I	Electromagnetic spectrum	BB & LCD	
5	I	EMR interaction with atmosphere	BB & LCD	
6	I	EMR interaction with atmosphere	BB & LCD	
7	I	EMR interaction with Earth Surface Materials	BB & LCD	
8	I	EMR interaction with Earth Surface Materials	BB & LCD	
9	I	Atmospheric Windows and its Significance.	BB & LCD	Unit-I will be completed
10	II	Types of platforms - groundborne, airborne	BB & LCD	
11	II	Space born platforms	BB & LCD	
12	II	Types and classification of sensors	BB & LCD	
13	II	Types and classification of sensors	BB & LCD	
14	II	Sensor resolution - Spatial	BB & LCD	
15	II	Spectral Resolution	BB & LCD	
16	II	Radiometric Resolution	BB & LCD	
17	II	Temporal Resolution	BB & LCD	
18	II	Image data characteristics	BB & LCD	
19	II	Digital image data formats	BB & LCD	
20	II	Band interleaved by pixel	BB & LCD	
21	II	Band interleaved by line	BB & LCD	
22	II	Band sequential.	BB & LCD	Unit-II will be completed
23	III	Image Analysis : Introduction	BB & LCD	
24	III	Elements of visual interpretations	BB & LCD	
25	III	Digital image processing	BB & LCD	
26	III	Image enhancement	BB & LCD	
27	III	Image enhancement	BB & LCD	
28	III	Image classification	BB & LCD	
29	III	Supervised classification	BB & LCD	
30	III	Unsupervised classification	BB & LCD	Unit-III will be completed
31	IV	GIS - Introduction	BB & LCD	
32	IV	Key components	BB & LCD	
33	IV	Map projections	BB & LCD	
34	IV	Map projections	BB & LCD	
35	IV	Data - Spatial and non-Spatial	BB & LCD	
36	IV	Spatial data input	BB & LCD	



37	IV	Raster data models	BB & LCD	
38	IV	Vector data models	BB & LCD	Unit-IV will be completed
39	IV	Raster versus vector.	BB & LCD	
40	V	Spatial Data Analysis: Introduction	BB & LCD	
41	V	Overlay function - vector overlay operations	BB & LCD	
42	V	Arithmetic operators	BB & LCD	
43	V	Comparison and logical operators	BB & LCD	
44	V	Conditional expressions	BB & LCD	Unit-V will be completed
45	V	Overlay using a decision table.	BB & LCD	
46	VI	RS & GIS Applications: Land use and Land cover	BB & LCD	
47	VI	Agriculture	BB & LCD	
48	VI	Forestry	BB & LCD	
49	VI	Geology	BB & LCD	
50	VI	Geomorphology	BB & LCD	
51	VI	Urban applications	BB & LCD	Unit-VI will be completed
52	VI	Flood zone delineation and mapping.	BB & LCD	

  
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**LESSON PLAN for ESTIMATION COSTING AND QUANTITY SURVEYING, 2024-25,  
IV/I, Civil-B. Sri. S.Ramlal**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	General items of work in Building	Chalk & Talk	
2	I	General items of work in Building	Chalk & Talk	
3	I	Standard Units	Chalk & Talk	
4	I	Principles of working out quantities for detailed and abstract estimates	Chalk & Talk	
5	I	Approximate method of Estimating	Chalk & Talk	
6	I	Detailed Estimates of Buildings	Chalk & Talk	
7	I	Detailed Estimates of Buildings	Chalk & Talk	
8	I	Types of contracts	Chalk & Talk	
9	I	Types of contracts	Chalk & Talk	
10	I	Tenders	Chalk & Talk	Unit-1 will be completed
11	II	Earthwork for roads and canals: Lead and Lift	Chalk & Talk	
12	II	Types of methods	Chalk & Talk	
13	II	Mid Sectional area method	Chalk & Talk	
14	II	Mean sectional area method	Chalk & Talk	
15	II	Problems	Chalk & Talk	
16	II	Problems	Chalk & Talk	
17	II	Problems	Chalk & Talk	
18	II	Problems	Chalk & Talk	
19	II	Problems	Chalk & Talk	
20	II	Problems	Chalk & Talk	Unit-2 will be completed
21	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
22	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
23	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
24	III	Working out data for Brick Masonry	Chalk & Talk	
25	III	Working out data for R.R. Masonry	Chalk & Talk	
26	III	Working out data for Plastering	Chalk & Talk	1 <sup>st</sup> Mid Exams
27	III	Working out data for Plain Concrete	Chalk & Talk	

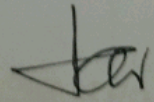


LESSON PLAN for ESTIMATION COSTING AND QUANTITY SURVEYING, 2024-25, IV/I, Civil-A. Sri. S.Ramlal				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
28	III	Working out data for R.C.C.	Chalk & Talk	
29	III	Working out data for R.C.C.	Chalk & Talk	
30	III	Working out data for Distempering	Chalk & Talk	Unit-3 will be completed
31	IV	Reinforcement bar bending schedule: Footing	Chalk & Talk	
32	IV	Footing	Chalk & Talk	
33	IV	Pedestal	Chalk & Talk	
34	IV	Column	Chalk & Talk	
35	IV	Plinth beam	Chalk & Talk	
36	IV	Slab beam	Chalk & Talk	
37	IV	Slab beam	Chalk & Talk	
38	IV	Slab	Chalk & Talk	
39	IV	Slab	Chalk & Talk	
40	IV	Bar requirement schedules	Chalk & Talk	Unit-4 will be completed
41	V	Introduction to BIM: Basic modelling and project navigation	Chalk & Talk	
42	V	BIM tools	Chalk & Talk	
43	V	New workflows of construction planning & management	Chalk & Talk	
44	V	New workflows of construction planning & management	Chalk & Talk	
45	V	Model-based quantity-takeoff	Chalk & Talk	
46	V	Model-based quantity-takeoff	Chalk & Talk	
47	V	cost estimation	Chalk & Talk	
48	V	Scheduling and planning with 4D BIM	Chalk & Talk	
49	V	Construction safety is planning using BIM	Chalk & Talk	
50	V	Construction safety is planning using BIM	Chalk & Talk	Unit-5 will be completed
51		Grand Test		2 <sup>nd</sup> Mid Exams



**LESSON PLAN for ESTIMATION COSTING AND QUANTITY SURVEYING, 2023-24,  
IV/I, Civil-B. Sri. S.Ramlal**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	General items of work in Building	Chalk & Talk	
2	I	General items of work in Building	Chalk & Talk	
3	I	Standard Units	Chalk & Talk	
4	I	Principles of working out quantities for detailed and abstract estimates	Chalk & Talk	
5	I	Approximate method of Estimating	Chalk & Talk	
6	I	Detailed Estimates of Buildings	Chalk & Talk	
7	I	Detailed Estimates of Buildings	Chalk & Talk	
8	I	Types of contracts	Chalk & Talk	
9	I	Types of contracts	Chalk & Talk	
10	I	Tenders	Chalk & Talk	Unit-1 will be completed
11	II	Earthwork for roads and canals: Lead and Lift	Chalk & Talk	
12	II	Types of methods	Chalk & Talk	
13	II	Mid Sectional area method	Chalk & Talk	
14	II	Mean sectional area method	Chalk & Talk	
15	II	Problems	Chalk & Talk	
16	II	Problems	Chalk & Talk	
17	II	Problems	Chalk & Talk	
18	II	Problems	Chalk & Talk	
19	II	Problems	Chalk & Talk	
20	II	Problems	Chalk & Talk	Unit-2 will be completed
21	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
22	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
23	III	Rate Analysis: Standard specifications for different items of building construction	Chalk & Talk	
24	III	Working out data for Brick Masonry	Chalk & Talk	
25	III	Working out data for R.R. Masonry	Chalk & Talk	
26	III	Working out data for Plastering	Chalk & Talk	1 <sup>st</sup> Mid Exams
27	III	Working out data for Plain Concrete	Chalk & Talk	

  
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**AITAM, TEKKAJI**



LESSON PLAN for ESTIMATION COSTING AND QUANTITY SURVEYING, 2023-24, IV/I, Civil-A. Sri. S.Ramlal				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
28	III	Working out data for R.C.C.	Chalk & Talk	
29	III	Working out data for R.C.C.	Chalk & Talk	
30	III	Working out data for Distempering	Chalk & Talk	Unit-3 will be completed
31	IV	Reinforcement bar bending schedule: Footing	Chalk & Talk	
32	IV	Footing	Chalk & Talk	
33	IV	Pedestal	Chalk & Talk	
34	IV	Column	Chalk & Talk	
35	IV	Plinth beam	Chalk & Talk	
36	IV	Slab beam	Chalk & Talk	
37	IV	Slab beam	Chalk & Talk	
38	IV	Slab	Chalk & Talk	
39	IV	Slab	Chalk & Talk	
40	IV	Bar requirement schedules	Chalk & Talk	Unit-4 will be completed
41	V	Introduction to BIM: Basic modelling and project navigation	Chalk & Talk	
42	V	BIM tools	Chalk & Talk	
43	V	New workflows of construction planning & management	Chalk & Talk	
44	V	New workflows of construction planning & management	Chalk & Talk	
45	V	Model-based quantity-takeoff	Chalk & Talk	
46	V	Model-based quantity-takeoff	Chalk & Talk	
47	V	cost estimation	Chalk & Talk	
48	V	Scheduling and planning with 4D BIM	Chalk & Talk	
49	V	Construction safety is planning using BIM	Chalk & Talk	
50	V	Construction safety is planning using BIM	Chalk & Talk	Unit-5 will be completed
51		Grand Test		2 <sup>nd</sup> Mid Exams



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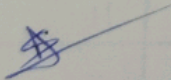
Class: IV-I [Section: B]

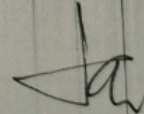
B. TECH (2024-25)

Subject: Geographic Information System Lab (20CEL411)

Faculty Name: Dr. Sanjay Kumar Ray

S.No	Name of the Experiment	Hours
1	Preprocess of image / toposheet (which includes Georeferencing, Projection and Subset)	5
2	Digitization of Features from the Toposheet	5
3	Topology of digitized of features	5
4	Study of features estimation	5
5	Creation of Thematic maps	5
6	Layout Preparation	5
7	Digital Elevation Model	5
8	Calculation of volumes for Hills and Tanks	5
9	Database creation for Road Network analysis	5
10	Delineation of watershed boundary	5
11	Mosaic of dataset	5
Total		60

  
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V-DIVYASEE  
2024-25  
PSC (IV-I)  
Section-B

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remar
		<u>Introduction</u>		
1	I	Theory & Behavioural basic Concepts	B.B	
	I	Advantages & disadvantages	PPT	
2	I	Materials required, high	PPT	
3		Strength concrete, high		
		Strength Steel		
4	I	Systems & methods	PPT	
5	I	Analysis of sections		
6	I	Stress & Strength Concept	BBT	
7		Load balancing Concept		
8	I	Effect of loading on the	B.B	
9		tensile stresses in tendon	B.B	
10	I	effect of tendon profile on	B.B	
11		deflections		
	II	<u>losses of prestress</u>		
12	II	Types of losses in pretension	B.B	
13		& post tension members		
14	II	loss due to elastic deformation	B.B	



# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
15	II	loss due to shrinkage	B.B	
16		and creep of concrete		
17	II	loss due to relaxation		
18		Steel		
19	II	loss due to Anchorage	B.B	
20		Slip		
21	II	loss due to friction		
22	II	total allowed losses for design	B.B	
	III	<u>Design for flexure</u>		
23	IV	flexural strength of	B.B	
24		pretensioned concrete member		
25	IV	time of flexural failure		
26	III	fracture of steel & tension		
27	III	failure of under & over reinforced section	B.B	
28	III	Strain compatibility		
29		method.		
30	IV	calculation of flexural	B.B	
31		Strength as per IS 1343-2012		

\*Black Board / LCD / OHP / Other Method

Contact Hour  
(Cumulative)

32

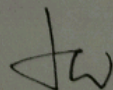


# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Rem
32	IV	Shear & Torsion	B.B	
		Shear & torsional resistance of pre-stressed concrete members.		
33	IV	principle stresses	B.B	
34	IV	Time of shear cracks		
35	IV	web shear cracks		
36		flexural cracks		
37	IV	Design of shear reinforcement as per IS 1343-	B.B	
38		2012 Shear & principal stresses due to torsion		
	V	<u>Deflection</u>		
39		Deflection & design of	B.B	
40		anchorage zone. factors influencing deflections		
41	V	short term deflections of uncracked members	B.B	
42	V	prediction of long term		



Syllabus of Analysis			B.P.	Contact Hour Cumulative	Date
44		Zone stresses in post-tensioned beam			
45	IV	check for transfer bond	B.B.		
46		length in pre-tensioned beam			
47	V	Indeterminate structures			
48		Composite beams and continuous beams			
49	VI	Analysis and design of composite beams	B.B.		
50	VII	Method of achieving continuity in continuous beams			
51					
52	VIII	Analysis for secondary moment	B.B.		
53					
54	IX	Concordant cable			
55	X	linear transformation	B.B.		
56	XI	calculation of stresses			
	XII	principles of design			

  
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## LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
2 (1)	I	Introduction to M.E Definition,	Black board	
5 (2)	I	Nature & scope of M.E		
1 (3)	I	Demand analysis, Demand determinants.		
2 (4)	I	Law of demand & its exceptions.		
3 (5)	I	Elasticity of demand, types, types of price elasticity.		
2 (6)	I	Demand forecasting, Factors governing demand forecasting.		
5 (7)	I	Methods of demand forecasting.		
1 (8)	I	Explanation.		
2 (9)	I	Explanation.		
3 (10)	II	Introduction to Production function, Iso cost, Isoquants.		
2 (11)	II	MRTS, Least combination of inputs, Law of returns.		
5 (12)	II	Economics of scale,		
1 (13)	II	Cost analysis, cost concepts types & costs.		
2 (14)	II	Fixed VS variable costs. Explicit VS Implicit costs		
3 (15)	II	Out of Pocket VS Imputed costs		
2 (16)	II	Introduction to BEA, significance & limitations of B.E.A.		
5 (17)	II	Determination of BEP with graphical representation.		
1 (18)	II	Simple problems		
2 (19)	II	Simple problems		



2 (21)	III	Introduction to markets, Market structures.	Black board	
5 (22)	III	Types of competition, Features of perfect competition.	11	
1 (23)	III	Monopoly & Monopolistic competition.	11	
2 (24)	III	Price out put determination in case of perfect competition.	11	
3 (25)	III	Price out put determination in case of monopoly.	11	
2 (26)	III	Pricing concept.	11	
5 (27)	III	Different pricing strategies	11	
1 (28)	III	Explanation.	11	
2 (29)	IV	Introduction to management Concept, nature, Importance, Functions of management.	11	
3 (30)	IV	Taylor's scientific management, Fayol's principles of management.	11	
2 (31)	IV	Mayo's Hawthorne experiments	11	
5 (32)	IV	Maslow's theory of human needs.	11	
1 (33)	IV	Douglas Mc Gregor's theory X and theory Y	11	
2 (34)	IV	Herzberg's two-factor theory of motivation.	11	
3 (35)	IV	System approach to management.	11	
2 (36)	IV	Leadership styles.	11	
5 (37)	IV	Social responsibilities of management.	11	
1 (38)	V	Introduction to marketing.	11	
2 (39)	V	Function of marketing.	11	
3 (40)	V	Marketing mix.	11	

\*Black Board / LCD / OHP / Other Method

Contact Hour  
(Cumulative)

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# LESSON PLAN

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2024-25  
PSC  
IV-I

Contact Hour (Cumulative)	Unit No.	Topic	Teaching / Methodology	Remar
		<u>Introduction</u>		
1	I	Theory & Behaviour basic Concepts	B.B	
	I	Advantages & disadvantages	PPT	
2	I	Materials required, high	PPT	
3		Strength concrete, high		
		Strength Steel		
4	I	Systems & methods	PPT	
5	I	Analysis of sections		
6	I	Stress & strength Concept	B.B	
7		Load balancing Concept		
8	I	Effect of loading on the	B.B	
9		tensile stresses in tendon	B.B	
10	I	effect of tendon profile on	B.B	
11		deflections		
	II	<u>losses of prestress</u>		
12	II	Types of losses in pretension	B.B	
13		& post tension members		
14	II	loss due to elastic deformation	B.B	



# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
15	II	loss due to shrinkage	B.B	
16		and creep of concrete		
17	II	loss due to relaxation		
18		Steel		
19	II	loss due to Anchorage	B.B	
20		slip		
21	II	loss due to friction		
22	II	total allowed losses	B.B	
		for design		
	III	<u>Design for flexure</u>		
23	III	flexural strength of	B.B	
24		pretensioned concrete member		
25	III	time of flexural failure		
26	III	fracture of steel & tension		
27	III	failure of under &	B.B	
		over reinforced section		
28	III	Strain compatibility		
29		method.		
30	III	calculation of flexural	B.B	
31		strength as per IS 1343-2012		

\*Black Board / LCD / OHP / Other Method

LESSON

Contact Hour (Cumulative)	Unit No.	Topic
32	IV	Shear

33



# LESSON PLAN

Contact Hour (cumulative)	Unit No.	Topic	Teaching(*) Methodology	Rem
32	IV	Shear & Torsion	B.B	
		Shear & torsional resistance of pre-stressed concrete members.		
33	IV	principle stresses	B.B	
34	IV	Form of shear cracks		
35	IV	web shear cracks		
36		flexural cracks		
37	IV	Design of shear reinforcement as per IS 1343-	B.B	
38		2012 Shear & principal stresses due to torsion		
	V	<u>Deflection</u>		
39		Deflection & design of	B.B	
40		anchorage zone factors influencing deflections		
41	V	short term deflections of uncracked members	B.B	
42	V	prediction of long term		



			contact hour cumulative	Date
45	✓	check for transverse beams	B.B.	
46		length in precompression		
47	✓	Indeterminate structure		
48		Composite beams and continuous beams		
49	✓	Analysis and design of Composite beams	B.B.	
50	✓	Method of achieving continuity in continuous beams		
51				
52	✓	Analysis for secondary moments	B.B.	
53				
54	✓	Concordant cable linear transformation	B.B.	
55	✓	calculation of stresses at joints		
56	✓			

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48

Composite beams and  
Continuous beams

49

11

## Analysis and design of Composite beams

BB

50

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Method of achieving  
continuity in continuous  
beams

51

52

五

Analysis for secondary moment

B. P.

53

54

✓

Concordant cable  
linear transformation

B.B.

55

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linear  
calculation of stresses  
1. tension

56

44

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