

**LESSION PLANS FOR  
A.Y: 2021-22  
SEM – II**



**LESSON PLAN for  
INTRODUCTION TO PROGRAMMING  
2021-22  
I/II  
Civil-B  
Mr. M Sai Babu**

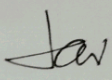
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction to components of Computer system	Chalk & Talk	
2	I	Algorithm	Chalk & Talk	
3	I	Flow chart	Chalk & Talk	
4	I	Program development steps	Chalk & Talk	
5	I	C Tokens	Chalk & Talk	
6	I	Data Types	Chalk & Talk	
7	I	Operator 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	III	Arrays: Definition Types: Single Dimensional arrays, Multi Dimensional arrays	Chalk & Talk	
21	III	declaration, initialization, accessing elements	Chalk & Talk	
22	III	Matrix operations	Chalk & Talk	
23	III	String Handling functions	Chalk & Talk	
24	III	SAMPLE PROGRAMS	Chalk & Talk	



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



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

  
 Head of the Department  
 Department of Civil Engineering  
 AITAM, TEKKA



### LESSON PLAN

ACADAMIC YEAR: 2021-22

YEAR & SEM: II/II,

SECTION: A


FACULTY NAME: Sri. G. GOWRI SANKARAREAO

SUBJECT: STRUCTURAL ANALYSIS-II

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction to static and kinematic indeterminacy. Analysis pin jointed frame trusses	Chalk & Talk	
3	I	Explanation of types of methods. Assumptions and solving forces in simple trusses	Chalk & Talk	
4	I	Solving the forces in members of the truss by method of joints	Chalk & Talk	
5	I	Find the forces by method of joints	Chalk & Talk	
6	I	Find the forces in members of truss by method of joints	Chalk & Talk	
8	I	Solving the problems by method of joints and method of sections	Chalk & Talk	
9	I	Solving the forced in cantilever truss	Chalk & Talk	
11	I	Solving the forced in member of cantilever truss by both methods	Chalk & Talk	Unit-1 will be completed
12	II	Explanation of propped cantilever beam	Chalk & Talk	
14	II	Find the prop. Reaction .Draw shear force and bending moment diagrams	Chalk & Talk	
15	II	Solving the problems of propped cantilever beams	Chalk & Talk	
16	II	Solving problems	Chalk & Talk	
17	II	Explanation of fixed end beams	Chalk & Talk	
18	II	Solving the fixed end moment of the fixed beams	Chalk & Talk	
20	II	Solving the problems and draw the S.F.& B.M.D.	Chalk & Talk	
21	II	Solving Problems	Chalk & Talk	
22	II	Solving the fixed end moments and draw the SF & BMD	Chalk & Talk	
23	II	Solving the problems of the fixed end beams	Chalk & Talk	
25	II	Solving the problems	Chalk & Talk	Unit-2 will be completed
26	III	Explanation of strain energy due to axial load	Chalk & Talk	
27	III	Solving the problems on axial load	Chalk & Talk	
28	III	Solving the problems	Chalk & Talk	
29	III	Strain Energy due to shear force	Chalk & Talk	
31	III	Solving the problems upon the shear force	Chalk & Talk	
32	III	Strain energy due to bending	Chalk & Talk	



33	III	Find the strain energy due to bending	Chalk & Talk	
35	III	Solving the problems	Chalk & Talk	
36	III	Explanation of Castiglioni theorem-1	Chalk & Talk	
37	III	Explanation the Castiglioni theorem-2	Chalk & Talk	Unit-3 will be completed
38	IV	Explanation of three hinged arches and elastic theory of arch.	Chalk & Talk	
40	IV	Explanation of Eddy's theorem. Determination of horizontal thrust, bending moment, normal thrust and radial shear	Chalk & Talk	
41	IV	Find the problems of three hinged arches with point load and udl load	Chalk & Talk	
42	IV	Explanation of two hinged arches	Chalk & Talk	
43	IV	Determination of horizontal thrust, BM	Chalk & Talk	
45	V	Find the problems of two hinged arches	Chalk & Talk	Unit-4 will be completed
46	V	Analysis of continuous beams. Explain the theorem of three moments	Chalk & Talk	
47	V	Analysis of continuous beams with constant EI one or both fixed ends	Chalk & Talk	
48	V	Solving the problems	Chalk & Talk	
50	V	Solving the problems of continuous beams	Chalk & Talk	Unit-5 will be completed
51	VI	Solving the problems on continuous beams	Chalk & Talk	
52	VI	Explanation of moving loads.	Chalk & Talk	
53	VI	Find the maximum shear force and bending moment at a given section and absolute max. shear force and bending moment	Chalk & Talk	
55	VI	Find the problems due to single concentrated load	Chalk & Talk	
56	VI	Find the problems due to UDL Load shorter than the span and longer than the span	Chalk & Talk	
57	VI	Find the problems	Chalk & Talk	
59	VI	Definition of influence lines	Chalk & Talk	
60	VI	Influence lines for SF & BM	Chalk & Talk	
61	VI	Solving the problems for load position for Max.SF at a section	Chalk & Talk	
62	VI	Solving the problems	Chalk & Talk	UNIT-VI

HOD   
Civil Engineering

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### LESSON PLAN

Course Name: Python Programming

Branch:CEClass / Semester:II/II

Academic Year:2021-22

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		
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	
VI		Regular Expressions		
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>

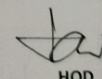


**LESSON PLAN**  
**ACADAMIC YEAR: 2021-22**  
**YEAR & SEM: II/II,**  
**SECTION: A**  
**FACULTY NAME: Sri. G. GOWRI SANKARAREAO**  
**SUBJECT: STRUCTURAL ANALYSIS(Code:20CET206)**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Introduction to static and kinematic indeterminacy. Analysis pin jointed frame trusses	Chalk & Talk	
3	I	Explanation of types of methods. Assumptions and solving forces in simple trusses	Chalk & Talk	
4	I	Solving the forces in members of the truss by method of joints	Chalk & Talk	
5	I	Find the forces by method of joints	Chalk & Talk	
6	I	Find the forces in members of truss by method of joints	Chalk & Talk	
8	I	Solving the problems by method of joints and method of sections	Chalk & Talk	
9	I	Solving the forced in cantilever truss	Chalk & Talk	
11	I	Solving the forced in member of cantilever truss by both methods	Chalk & Talk	Unit-1 will be completed
12	II	Explanation of propped cantilever beam	Chalk & Talk	
14	II	Find the prop. Reaction .Draw shear force and bending moment diagrams	Chalk & Talk	
15	II	Solving the problems of propped cantilever beams	Chalk & Talk	
16	II	Solving problems	Chalk & Talk	
17	II	Explanation of fixed end beams	Chalk & Talk	
18	II	Solving the fixed end moment of the fixed beams	Chalk & Talk	
20	II	Solving the problems and draw the S.F. & B.M.D.	Chalk & Talk	
21	II	Solving Problems	Chalk & Talk	
22	II	Solving the fixed end moments and draw the SF & BMD	Chalk & Talk	
23	II	Solving the problems of the fixed end beams	Chalk & Talk	
25	II	Solving the problems	Chalk & Talk	Unit-2 will be completed
26	III	Explanation of strain energy due to axial load	Chalk & Talk	
27	III	Solving the problems on axial load	Chalk & Talk	
28	III	Solving the problems	Chalk & Talk	
29	III	Strain Energy due to shear force	Chalk & Talk	
31	III	Solving the problems upon the shear	Chalk & Talk	



		force		
32	III	Strain energy due to bending	Chalk & Talk	
33	III	Find the strain energy due to bending	Chalk & Talk	
35	III	Solving the problems		
36	III	Explanation of Castiglioni theorem-1	Chalk & Talk	
37	III	Explanation the Castiglioni theorem-2	Chalk & Talk	Unit-3 will be completed
38	IV	Explanation of three hinged arches and elastic theory of arch.	Chalk & Talk	
40	IV	Explanation of Eddy's theorem. Determination of horizontal thrust, bending moment, normal thrust and radial shear	Chalk & Talk	
41	IV	Find the problems of three hinged arches with point load and udl load	Chalk & Talk	
42	IV	Explanation of two hinged arches .Determination of horizontal thrust, BM	Chalk & Talk	
43	IV	Find the problems of two hinged arches	Chalk & Talk	Unit-4 will be completed
45	V	Analysis of continuous beams. Explain the theorem of three moments	Chalk & Talk	
46	V	Analysis of continuous beams with constant EI one or both fixed ends	Chalk & Talk	
47	V	Solving the problems	Chalk & Talk	
48	V	Solving the problems of continuous beams	Chalk & Talk	
50	V	Solving the problems on continuous beams	Chalk & Talk	Unit-5 will be completed
51	VI	Explanation of moving loads.	Chalk & Talk	
52	VI	Find the maximum shear force and bending moment at a given section and absolute max. shear force and bending moment	Chalk & Talk	
53	VI	Find the problems due to single concentrated load	Chalk & Talk	
55	VI	Find the problems due to UDL Load shorter than the span and longer than the span	Chalk & Talk	
56	VI	Find the problems	Chalk & Talk	
57	VI	Definition of influence lines	Chalk & Talk	
59	VI	Influence lines for SF & BM	Chalk & Talk	Unit-6 will be completed



HOD  
CIVIL DEPARTMENT



LESSON PLAN for BASIC DESIGN OF STEEL STRUCTURES, 2021-22, III/II, Civil-B.				
Dr. V. SOWJANYA YANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Basics of bolted/ riveted connections	PPT	
2	I	Types of bolts, Types of bolted joints	PPT	
3	I	Failure of bolted joints, Specifications of bolted joints	PPT & Chalk & Talk	
4	I	Welded connections: Introduction, Advantages and disadvantages of welding	Chalk & Talk	
5	I	Strength of welds-Butt and fillet welds, IS Code requirements	Chalk & Talk	
6	I	Design of welds fillet weld subjected to moment acting in the plane to the plane of the joints	Chalk & Talk	
7	I	Design of welds fillet weld subjected to moment acting in the plane to the plane of the joints	Chalk & Talk	
8	I	Design of welds fillet weld subjected to moment acting out of plane to the plane of the joints	Chalk & Talk	
9	I	Design of welds fillet weld subjected to moment acting out of plane to the plane of the joints	Chalk & Talk	
10	I	Beam to beam and beam to Column connections	Chalk & Talk	Unit-1 will be completed
11	II	Beams: Allowable stresses, design requirements as per IS Code	Chalk & Talk	
12	II	design requirements as per IS Code	Chalk & Talk	
13	II	Design of laterally supported beams	Chalk & Talk	
14	II	Design of laterally supported beams	Chalk & Talk	
15	II	Design of laterally supported beams	Chalk & Talk	
16	II	Design of laterally unsupported beams	Chalk & Talk	
17	II	Design of laterally unsupported beams	Chalk & Talk	
18	II	Design of laterally unsupported beams	Chalk & Talk	
19	II	Design of plated beams	Chalk & Talk	
20	II	Design of plated beams	Chalk & Talk	Unit-2 will be completed
21	III	Tension members -Types of tension members	Chalk & Talk	
22	III	Net sectional Area, Effective net area, Types of failures	Chalk & Talk	
LESSON PLAN for BASIC DESIGN OF STEEL STRUCTURES, 2021-22, III/II, Civil-B.				

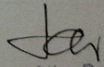


Dr. V. SOWJANYA VANI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
23	III	Design strength of tension members	Chalk & Talk	
24	III	Design strength of tension members	Chalk & Talk	1 <sup>st</sup> Mid Exams
25	III	Effective length of columns. Slenderness ratio	Chalk & Talk	
26	III	Design of compression members	Chalk & Talk	
27	III	Design of compression members	Chalk & Talk	
28	III	Design of Built up compression members – Design of lacings and battens.	Chalk & Talk	
29	III	Design of Built up compression members – Design of lacings and battens.	Chalk & Talk	
30	III	Design Principles of Eccentrically loaded columns, splicing of columns	Chalk & Talk	Unit-3 will be completed
31	IV	Gantry girder: Introduction, Loads	Chalk & Talk	
32	IV	Design of Gantry girders	Chalk & Talk	
33	IV	Design of Gantry girders	Chalk & Talk	
34	IV	Design of Gantry girders	Chalk & Talk	
35	IV	Design of Gantry girders	Chalk & Talk	
36	IV	Roof elements	Chalk & Talk	
37	IV	Design of Purlin's	Chalk & Talk	
38	IV	Design of Purlin's	Chalk & Talk	
39	IV	Design of Purlin's	Chalk & Talk	
40	IV	Design of Purlin's	Chalk & Talk	Unit-4 will be completed
41	V	Plate Girder: Introduction, Elements of plate girder	Chalk & Talk	
42	V	Plate Girder: Design consideration – I S Code recommendations	Chalk & Talk	
43	V	Design of plate girder-Welded	Chalk & Talk	
44	V	Design of plate girder-Welded	Chalk & Talk	
45	V	Design of plate girder-Welded	Chalk & Talk	
46	V	Design of stiffeners	Chalk & Talk	
47	V	Design of stiffeners	Chalk & Talk	
48	V	Design of stiffeners	Chalk & Talk	
49	V	Design of stiffeners	Chalk & Talk	
50	V	Design of stiffeners	Chalk & Talk	Unit-5 will be completed
51		Grand Test		2 <sup>nd</sup> Mid Exams



Sec- A

LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2021-22, III/II, Civil-A. Sri. S. Ramlal				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Retaining walls introduction	Chalk & Talk	
2	I	Design of cantilever retaining wall	Chalk & Talk	
3	I	Design of cantilever retaining wall	Chalk & Talk	
4	I	Design of cantilever retaining wall	Chalk & Talk	
5	I	Design of counterfort retaining wall	Chalk & Talk	
6	I	Design of counterfort retaining wall	Chalk & Talk	
7	I	Design of counterfort retaining wall	Chalk & Talk	
8	I	Design of counterfort retaining wall	Chalk & Talk	
9	I	Design of combined footing	Chalk & Talk	
10	I	Design of combined footing	Chalk & Talk	Unit-1 will be completed
11	II	Design of RCC water tanks on ground- introduction	Chalk & Talk	
12	II	Design of RCC water tanks on ground- circular	Chalk & Talk	
13	II	Design of RCC water tanks on ground- circular	Chalk & Talk	
14	II	Design of RCC water tanks on ground- circular	Chalk & Talk	
15	II	Design of RCC water tanks on ground- square	Chalk & Talk	
16	II	Design of RCC water tanks on ground- square	Chalk & Talk	
17	II	Design of RCC water tanks on ground- square	Chalk & Talk	
18	II	Design of RCC water tanks on ground- rectangle	Chalk & Talk	
19	II	Design of RCC water tanks on ground- rectangle	Chalk & Talk	
20	II	Design of RCC water tanks on ground- rectangle	Chalk & Talk	Unit-2 will be completed
21	III	Slabs: Yield line theory of slabs	Chalk & Talk	
22	III	Yield line theory of slabs	Chalk & Talk	
23	III	Circular slab design – Simply supported conditions with Uniformly Distributed Loads	Chalk & Talk	
24	III	Circular slab design – Simply supported conditions with Uniformly Distributed Loads	Chalk & Talk	

  
Head of the Department  
Department of Civil Engineering  
AITAM, TEKKALI.



LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2021-22, III/II, Civil-A, Sri. S. Ramlal					Remarks
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology		
25	III	Circular slab design – Simply supported conditions with Uniformly Distributed Loads	Chalk & Talk		
26	III	Circular slab design – Fixed end conditions with Uniformly Distributed Loads	Chalk & Talk		
27	III	Circular slab design – Fixed end conditions with Uniformly Distributed Loads	Chalk & Talk		
28	III	Flat slab design	Chalk & Talk		
29	III	Flat slab design	Chalk & Talk		
30	III	Flat slab design	Chalk & Talk		Unit-3 will be completed 1 <sup>st</sup> Mid Exams
31	IV	Piles and pile caps: Design of bored cast-in-situ piles (bearing and friction types)	Chalk & Talk		
32	IV	Design of bored cast-in-situ piles (bearing and friction types)	Chalk & Talk		
33	IV	Design of bored cast-in-situ piles (bearing and friction types)	Chalk & Talk		
34	IV	Design of bored cast-in-situ piles (bearing and friction types)	Chalk & Talk		
35	IV	Design of Pile cap for three piles using bending method	Chalk & Talk		
36	IV	Design of Pile cap for three piles using bending method	Chalk & Talk		
37	IV	Design of Pile cap for three piles using bending method	Chalk & Talk		
38	IV	Design of Pile cap for four piles using bending method	Chalk & Talk		
39	IV	Design of Pile cap for four piles using bending method	Chalk & Talk		
40	IV	Design of Pile cap for four piles using bending method	Chalk & Talk		
41	V	Multistory building system –detailing for Ductility	Chalk & Talk		Unit-4 will be completed
42	V	Multistory building system –detailing for Ductility	Chalk & Talk		
43	V	Multistory building system –detailing for Ductility	Chalk & Talk		

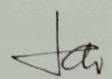


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**LESSON PLAN for ADVANCED DESIGN OF REINFORCED CONCRETE, 2021-22,  
III/II, Civil-A. Sri. S. Ramlal**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
44	V	Design for earthquake	Chalk & Talk	
45	V	Design for earthquake	Chalk & Talk	
46	V	Design for earthquake	Chalk & Talk	
47	V	Design for earthquake	Chalk & Talk	
48	V	Design of wind forces	Chalk & Talk	
49	V	Design of wind forces	Chalk & Talk	
50	V	Design of wind forces	Chalk & Talk	Unit-5 will be completed
51	VI	Different types of loadings on bridges according to IRC	Chalk & Talk	
52	VI	Design of RCC Culvert-deck slab for IRC Class AA loading	Chalk & Talk	
53	VI	Design of RCC Culvert-deck slab for IRC Class AA loading	Chalk & Talk	
54	VI	Design of RCC Culvert-deck slab for IRC Class AA loading	Chalk & Talk	
55	VI	Design of RCC Culvert-deck slab for IRC Class A loading	Chalk & Talk	
56	VI	Design of RCC Culvert-deck slab for IRC Class A loading	Chalk & Talk	
57	VI	Design of RCC Culvert-deck slab for IRC Class A loading	Chalk & Talk	Unit-6 will be completed
58		Grand Test		2 <sup>nd</sup> Mid Exams

  
**Head of the Department**  
**Department of Civil Engineering**  
**AITAM, TEKKALI.**



Lab Name: **TRANSPORTATION ENGINEERING Lab**

Branch: Civil

Year: 2021-2022

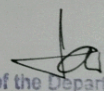
Sec-A

Semester: III-II

Course Code: 20CEL206

Faculty Name: Sri G Anil Kumar

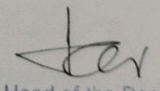
S.No	Lab Lesson Schedule	No. of Hours
1	Aggregate Crushing value	3
2	Aggregate Impact Test.	3
3	Specific Gravity and Water Absorption.	3
4	Attrition Test	3
5	Abrasion Test.	3
6	Shape tests	3
7	Viscosity Test.	3
8	Ductility Test.	3
9	Softening Point Test.	3
10	Flash and fire point tests.	3
11	Penetration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

  
Head of the Department  
Department of Civil Engineering  
AITAM, TEKKALI.



TE-1

LESSON PLAN for TRANSPORTATION ENGINEERING, 2021-22, III/IV Civil-A.				
Sri G Anil Kumar				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	<b>Highway development and planning:</b>	BB & Interactive	
2	I	Invention of wheel		
3	I	Different modes of transportation	BB & PPT	
4	I	role of highway transportation in India	BB & PPT	
5	I	Necessity for Highway Planning	BB & PPT	
6	I	Different Road Development Plans	BB & PPT	
7	I	Classification of Roads	BB & PPT	
8	I	Road Network Patterns.	BB & PPT	
9	I	<b>Highway Alignment introduction</b>	BB & PPT	
10	I	Alignment - Factors controlling Alignment	BB & PPT	
11	I	Alignment - Factors controlling Alignment	BB & PPT	
12	I	Engineering Surveys for Highways	BB & PPT	
13	I	Drawings and Reports.	BB & PPT	Unit-1 will be completed
14	II	<b>Geometric design: Importance of Geometric Design.</b>	BB & PPT	
15	II	Highway Cross Section Elements	BB & PPT	
16	II	Pavement Surface Characteristics,	BB & PPT	
17	II	Sight Distance - Stopping Sight Distance	BB & PPT	
18	II	Overtaking Sight Distance and Intermediate Sight Distance.	BB & PPT	
19	II	<b>Design of Horizontal Alignment</b>	BB & PPT	
20	II	Design of Super elevation and Extra widening	BB & PPT	
21	II	Design of Transition Curves	BB & PPT	
22	II	Design of Vertical Alignment	BB & PPT	
23	II	Grade Compensation.	BB & PPT	Unit-2 will be completed
24	III	<b>Highway materials: Soil</b>	BB & PPT	
25	III	Aggregate	BB & PPT	
26	III	Bitumen and Tar	BB & PPT	
27	III	Tests on aggregates -Aggregate Properties and their Importance	BB & PPT	
	III	Tar properties - Differentiation between Tar and Bitumen	BB & PPT	

  
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Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
28	III	Bitumen - different forms of bitumen - tests on bitumen	BB & PPT	
29	III	Bituminous Concrete	BB & PPT	
30	III	requirements of Design Mix -	BB & PPT	
31	III	Marshall's Method of Bituminous Mix design	BB & PPT	
	III	Modified Hubbard Field method of mix design.	BB & PPT	Unit-3 will be completed
32	IV	<b>Highway Construction: Construction of Roads -Earthen roads</b>	BB & PPT	
33	IV	W.B.M. Roads	BB & PPT	
34	IV	Bituminous Roads - distresses	BB & PPT	
35	IV	Cement Concrete roads	BB & PPT	
36	IV	Tie bars and Dowel bars	BB & PPT	
37	IV	Rigid pavement distresses	BB & PPT	
38	IV	Highway Maintenance	BB & PPT	
39	IV	Arboriculture -Street lighting.	BB & PPT	
40	IV	Highway drainage	BB & PPT	Unit-4 will be completed
41	V	<b>Traffic engineering: Elements of Traffic Engineering</b>	BB & PPT	
42	V	Vehicle & Road User Characteristics	BB & PPT	
43	V	Accessibility & Mobility concept	BB & PPT	
44	V	Traffic Volume studies & methods	BB & PPT	
45	V	Speed Studies	BB & PPT	
46	V	Time Mean Speed	BB & PPT	
47	V	Space Mean Speed	BB & PPT	
48	V	Travel time and Delay studies	BB & PPT	
49	V	Origin - Destination studies	BB & PPT	Unit-5 will be completed
50	VI	<b>Highway capacity:</b> Highway capacity	BB & PPT	
51	VI	level of service (LOS)	BB & PPT	
52	VI	capacity of urban and rural roads	BB & PPT	
53	VI	PCU concept and its limitations.	BB & PPT	
54	VI	<b>Parking:</b> Parking Studies – Problems of parking	BB & PPT	
55	VI	types of parking facilities – on street & off street	BB & PPT	
56	VI	Accidents -Causes and Mitigative measures	BB & PPT	Unit-6 will be completed



V-DIVYASRI  
III-II-(B)

LESSON PLAN for BASIC DESIGN OF STEEL STRUCTURES, 2021-22, III/II, Civil-B. V.DIVYASRI				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
1	I	Basics of bolted/riveted connections	PPT	
2	I	Types of bolts, Types of bolted joints	PPT	
3	I	Failure of bolted joints, Specifications of bolted joints	PPT & Chalk & Talk	
4	I	Welded connections: Introduction, Advantages and disadvantages of welding	PPT	
5	I	Strength of welds-Butt and fillet welds. IS Code requirements	PPT	
6	I	Example problems on welded connections	Chalk & Talk	
7	I	Design of welds fillet weld subjected to moment acting in the plane to the plane of the joints	Chalk & Talk	
8	I	Design of welds fillet weld subjected to moment acting in plane to the plane of the joints	Chalk & Talk	
9	I	Design of welds fillet weld subjected to moment acting out of plane to the plane of the joints	Chalk & Talk	
10	I	Design of welds fillet weld subjected to moment acting out of plane to the plane of the joints	Chalk & Talk	
11	I	Beam to beam and beam to Column connections, revision of unit -I	Chalk & Talk	Unit-I will be completed
12	II	Beams: Allowable stresses, design requirements as per IS Code, calculation of $Z_{pz}$	Chalk & Talk	
13	II	Beams: Allowable stresses, design requirements as per IS Code, calculation of $Z_{pz}$	Chalk & Talk	
14	II	Design of laterally supported beams	Chalk & Talk	
15	II	Design of laterally supported beams	Chalk & Talk	
16	II	Design of laterally supported beams higher shear case	Chalk & Talk	
17	II	Design of laterally supported beams higher shear case	Chalk & Talk	
18	II	Design of laterally unsupported beams	Chalk & Talk	
19	II	Design of laterally unsupported beams	Chalk & Talk	
20	II	Design of plated beams	Chalk & Talk	
21	II	Design of plated beams	Chalk & Talk	




**LESSON PLAN for BASIC DESIGN OF STEEL STRUCTURES, 2021-22, III/II, Civil-B.  
V.DIVYASRI**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
22	II	Revision of unit -II	Chalk & Talk	Unit-2 will be completed
23	III	Tension members -Types of tension members, Net sectional Area, Effective net area	Chalk & Talk	
24	III	Tension members -Types of tension members, Net sectional Area, Effective net area	Chalk & Talk	
25	III	Types of failures, Design strength of tension members	Chalk & Talk	
26	III	Types of failures, Design strength of tension members	Chalk & Talk	
27	III	Introduction, Effective length of columns, Slenderness ratio, Design of compression members	Chalk & Talk	
28	III	Introduction, Effective length of columns, Slenderness ratio, Design of compression members	Chalk & Talk	
29	III	Design of Built up compression members – Design of lacings and battens	Chalk & Talk	
30	III	Design of Built up compression members – Design of lacings and battens	Chalk & Talk	
31	III	Design of Built up compression members – Design of lacings and battens	Chalk & Talk	
32	III	Design Principles of Eccentrically loaded columns, splicing of columns	Chalk & Talk	
33	III	Revision of unit -III	Chalk & Talk	Unit-3 will be completed
34	IV	Gantry girder: Introduction, Loads	Chalk & Talk	
35	IV	Design of Gantry girder	Chalk & Talk	
36	IV	Design of Gantry girder	Chalk & Talk	
37	IV	Design of Gantry girder	Chalk & Talk	
38	IV	Design of Gantry girder	Chalk & Talk	
39	IV	Design of Gantry girder	Chalk & Talk	
40	IV	Roof elements, Design of Purlin's	Chalk & Talk	
41	IV	Design of Purlin's	Chalk & Talk	
42	IV	Design of Purlin's	Chalk & Talk	
43	IV	Design of Purlin's	Chalk & Talk	
44	IV	Revision of unit -IV	Chalk & Talk	Unit-4 will be completed
45	V	Plate Girder: Introduction, Elements of plate girder	Chalk & Talk	



**LESSON PLAN for BASIC DESIGN OF STEEL STRUCTURES, 2021-22,III/II, Civil-B.**  
**V.DIVYASRI**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
46	V	Plate Girder: Design consideration – I S Code recommendations	Chalk & Talk	
47	V	Design of plate girder-Welded	Chalk & Talk	
48	V	Design of plate girder-Welded	Chalk & Talk	
49	V	Design of plate girder-Welded	Chalk & Talk	
50	V	Design of plate girder-Welded	Chalk & Talk	
51	V	Design of stiffeners	Chalk & Talk	
52	V	Design of stiffeners	Chalk & Talk	
53	V	Design of stiffeners	Chalk & Talk	
54	V	Design of stiffeners	Chalk & Talk	
55	V	Revision of unit -V	Chalk & Talk	
56	V	Revision of unit -V	Chalk & Talk	Unit-5 will be completed

  
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### LESSON PLAN

**Subject Name:** Computer Aided Engineering Drawing and Practice Lab

**AY:** 2021-22

**Branch:** Civil Engineering

**Year and Semester:** IIIB.TechII Semester

**Section:** A

**Course Code:** 18CEL308

**Faculty Name:** Dr.V.Sowjanya Vani

S.No.	Lab Experiment Schedule	No. of Hours
1.	Generation of points, lines, curves,	3
2.	polygons, Dimensioning.	3
3.	object selection commands – edit, zoom, cross hatching, pattern filling, utility commands	3
4.	2D wire frame modelling	3
5.	3D wire frame modelling	3
6.	Isometric projections	3
7.	Orthographic projections of isometric projections	3
8.	Modelling of simple solids	3
9.	Plan, Front Elevation and Sectional Elevation of buildings	3
10	Plan, Front Elevation and Sectional Elevation of buildings	3
11.	3Ddrawings of buildings	3
12.	3Ddrawings of buildings	3
Total Contact Hours		36




**LESSON PLAN for GROUNDWATER DEVELOPMENT & MANAGEMENT, 2021-22, IV/II, Civil-B.**  
**Dr. B. VISWESWARA REDDY**

Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
0		General Awareness on PEO, PO & PSO's	Chalk & Talk	
1	I	Introduction to Groundwater-Hydrological Cycle	Chalk & Talk	
2	I	Origin & Rock properties effects on groundwater	Chalk & Talk	
3	I	Vertical distribution of groundwater	Chalk & Talk	
4	I	Geological formation of an aquifers	Chalk & Talk	
5	I	Types of aquifers	Chalk & Talk	
6	I	Porosity, specific yield & retention	Chalk & Talk	
7	I	Permeability & Darcy's law	Chalk & Talk	
8	I	Storage Coefficient, Transmissivity and three dimensional derivation	Chalk & Talk	
9	I	Three dimensional derivation	Chalk & Talk	
10	I	Ground water flow contours & their applications	Chalk & Talk	Unit-1 will be completed
11	I	Steady state flow towards a well- confined aquifers	Chalk & Talk	
12	I	Steady state flow towards a well- Un confined aquifers	Chalk & Talk	
13	I	Dupit's & Theims equations & assumptions	Chalk & Talk	
14	II	Formation Constants	Chalk & Talk	
15	II	Yield of an open well interface & well tests	Chalk & Talk	
16	II	Well Tests	Chalk & Talk	
17	II	Unsteady state flow towards a well	Chalk & Talk	
18	II	Theis Solution	Chalk & Talk	
19	II	Theis Solution	Chalk & Talk	
20	II	Leaky aquifers	Chalk & Talk	Unit-2 will be completed
21	III	Introduction to Methods of Groundwater Exploration	Chalk & Talk	
22	III	Surface Methods: Electrical Resistivity Method	Chalk & Talk	
23	III	Seismic Refraction Method	Chalk & Talk	
24	III	Sub-surface Methods: Geophysical Logging	Chalk & Talk	
25	III	Resistivity Logging	Chalk & Talk	
26	III	Resistivity Logging	Chalk & Talk	
27	III	Applications aerial Photogrammetry	Chalk & Talk	
28	III	Case Studies in Subsurface investigations	Chalk & Talk	Unit-3 will be completed



Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
29	IV	Concept of artificial Recharge	Chalk & Talk	
30	IV	Recharge Methods	Chalk & Talk	
31	IV	Recharge Methods	Chalk & Talk	
32	IV	Recharge Methods	Chalk & Talk	
33	IV	Recharge Methods	Chalk & Talk	
34	IV	Relative merits	Chalk & Talk	
35	IV	Remote Sensing and GIS in Artificial Recharge	Chalk & Talk	
36	IV	Remote Sensing and GIS in Artificial Recharge	Chalk & Talk	
37	IV	Remote Sensing and GIS in Artificial Recharge	Chalk & Talk	
38	IV	Case Studies	Chalk & Talk	Unit-4 will be completed
39	V	Introduction to saline water intrusion	Chalk & Talk	
40	V	Occurrence of saline water intrusion	Chalk & Talk	
41	V	Occurrence of saline water intrusion	Chalk & Talk	
42	V	Ghyben-Herzberg relation	Chalk & Talk	
43	V	Ghyben-Herzberg relation	Chalk & Talk	
44	V	Shape of Interface	Chalk & Talk	
45	V	Shape of Interface	Chalk & Talk	
46	V	Controlling of saline water intrusion	Chalk & Talk	
47	V	Controlling measures of saline water intrusion	Chalk & Talk	
48	V	Groundwater basin & its management	Chalk & Talk	
49	V	Groundwater basin & its management	Chalk & Talk	
50	V	Concepts of Conjunction use of water	Chalk & Talk	
51	V	Concepts of Conjunction use of water	Chalk & Talk	
52	V	Case studies	Chalk & Talk	
53	V	Case studies	Chalk & Talk	
54	V	Revision	Chalk & Talk	
55	V	Revision	Chalk & Talk	
56	V	Revision	Chalk & Talk	Unit-5 will be completed


  
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LESSON PLAN for DISASTER MANAGEMENT, 2021-22, IV/II, Civil-A. Dr. B. VISWESWARA REDDY				
Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
0		General Awareness on PEO, PO & PSO's	Chalk & Talk	
1	I	Introduction Disaster Management	Chalk & Talk	
2	I	Vulnerability, Risk severity & their concepts	Chalk & Talk	
3	I	Frequency and Details of Disasters	Chalk & Talk	
4	I	Capacity, Impact & Prevention of Disasters	Chalk & Talk	
5	I	Mitigation measures & Characteristics of Disasters	Chalk & Talk	
6	I	Types of Disasters	Chalk & Talk	
7	I	Disaster Management Cycle	Chalk & Talk	
8	I	Hazard & Vulnerability profile of India	Chalk & Talk	Unit-1 will be completed
9	I	Natural Disasters: Causes & Distribution pattern of Floods	Chalk & Talk	
10	I	Consequences & Mitigation Measures of Floods	Chalk & Talk	
11	I	Causes, Distribution Pattern, Consequences & Mitigation Measures of droughts	Chalk & Talk	
12	I	Cyclones: Causes, Distribution Pattern, Consequences & Mitigation Measures	Chalk & Talk	
13	I	Earthquakes & Tsunamies	Chalk & Talk	
14	II	Manmade Disasters: Landslides, forest fires & Nuclear Disasters	Chalk & Talk	
15	II	Chemical & Biological Disasters	Chalk & Talk	
16	II	Transportation Accidents & Urban Flooding	Chalk & Talk	Unit-2 will be completed
17	III	Environmental & Physical Impacts of Disasters	Chalk & Talk	
18	III	Social, Ecological & Economic Impacts	Chalk & Talk	
19	III	Political, Health & Demographic aspects	Chalk & Talk	
20	III	Hazard Locations, Global, & National Disaster trends	Chalk & Talk	
21	III	Disaster Mitigation Strategies	Chalk & Talk	
22	III	Disaster Mitigation Strategies	Chalk & Talk	
23	III	Emerging Trends in Disaster mitigation	Chalk & Talk	
24	III	National Disaster Management Authority Activities	Chalk & Talk	Unit-3 will be completed



Contact Hour (Cumulative)	Unit No.	Topic	Teaching Methodology	Remarks
25	IV	Phases of Disaster Management Cycle: Prevention & Mitigation	Chalk & Talk	
26	IV	Preparedness, relief & Recovery	Chalk & Talk	
27	IV	Structural Measures	Chalk & Talk	
28	IV	Non Structural Measures & Risk Analysis	Chalk & Talk	
29	IV	Vulnerability & Capacity Assessment	Chalk & Talk	
30	IV	Warning Systems & Post Disaster Environmental Response	Chalk & Talk	
31	IV	Role & Responsibilities of Govt. & Non. Govt. agencies	Chalk & Talk	
32	IV	Policies and Legislations for Disaster Risk reduction	Chalk & Talk	
33	IV	Policies and Legislations for Disaster Risk reduction	Chalk & Talk	Unit-4 will be completed
34	V	Damage Assessment and Rehabilitation	Chalk & Talk	
35	V	Rehabilitation & Reconstruction	Chalk & Talk	
36	V	Development of Physical & Economical Infrastructure	Chalk & Talk	
37	V	Role of Various agencies in Recovery measures	Chalk & Talk	
38	V	Role in dealing with victims psychology and education	Chalk & Talk	
39	V	Role in awareness, monitoring & evaluation of Rehabilitation work	Chalk & Talk	
40	V	Constraints in Monitoring and Evaluation	Chalk & Talk	
41	V	Long-term Counter Disaster Planning	Chalk & Talk	Unit-5 will be completed

  
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