Course Modules of the Subject Taught for the Session Feb - May 2024-25 (Even Semester)
Course Syllabi with CO's

Faculty Name **: SRIVATHSA H U**				Academic Year: 2024-2025			
Department: CIVIL ENGINEERING							
Course Code	Course Title	Core/Elective	Prerequisite	Contact Hours			Total Hrs/ Sessions
				L	T	P	
BCVL606	**SOFTWARE APPLICATION LAB**	**CORE**	1. **Analysis of indeterminate structures** 2. **Surveying II**	-	-	2	20
Objectives	This course will enable students to 1. Use industry standard software in a professional set up. 2. understand the elements of finite element modeling, specification of loads and boundary condition, performing analysis and interpretation of results for final design. 3. Develop customized automation tools						

Topics Covered as per Syllabus

Use of civil engineering software's:

Use of software's for: 1. Analysis of plane trusses, continuous beams, portal frames

2. 3D analysis of multistoried frame structures

Project Management-Construction scheduling using any Project management software

 a) Understanding basic features of Project management software

 b) Constructing Project: create WBS, Activities, and tasks and Computation Time using Excel spread sheet and

transferring the same to Project management software

 c) Identification of Predecessor and Successor activities with constrain

d) Constructing Network diagram and analyzing for Critical path, Critical activities and other non-Critical paths, Project

duration, Floats.

e) Study on various View options available

f) Basic understanding about Resource Creation and allocation

 g) Understanding about Splitting the activity, linking multiple activity, assigning Constrains, Merging Multiple projects,

Creating Baseline Project

One Project having min 20 activities needs to be designed and analyzed Project management software as a guideline Project

could be from Buildings: Residential / School / college / Hospitals / Technology park, Industrial, Typical Road

Construction project, Sewage / water Treatment Project, Bridge / elevated structure project, Water supply system 9hrs 2.

GIS applications using open source software

a. To create shape files for point, line and polygon features with a map as reference.

 b. To create decision maps for specific purpose. 3hrs

Use of EXCEL spread sheets:

Computation of earthwork, Design of horizontal curve by offset method, Design of super elevation

List of Text Books

1.P. C. Varghese, "Limit state design of reinforced concrete", PHI New Delhi
2. Reddy C S, "Basic structural analysis". Tata McGraw-Hill publishing Company Ltd.
3. P C Tripathi and P N Reddy, "Principles of Management", Tata McGraw-Hill Education
4. The GIS Book – George B Korte, P.E – 5 TH Edn. Thomson Learning.

List of Reference Books

1. Training manuals and User manuals
2. Relevant course reference books

URLs: 1. https://nptel.ac.in/courses/105105105/

Course Outcomes	After the completion of course, students are able to 1. Analyze the continuous beams, frames, trusses and multi-storey buildings using Civil Engineering Software	L4

2. Create points, lines and polygons to determine latitude & longitude, length and area using GIS application		L4
3. Create task, scheduling, creating base line, critical path for an activity using Microsoft Project application		L4
4. Formulate a spread sheet for Horizontal curve, Super elevation, Beams, Slabs and earthwork using Excel application		L3

Internal Assessment Marks: 40 (1 Session Test is conducted during the semester).

The Correlation of Course Outcomes (CO's) and Program Outcomes (PO's)

Subject Code:	BCVL606	TITLE: **Software Application Lab**				Faculty Name:		SRIVATHSA H U			
List of Course Outcomes	Program Outcomes										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1	2	2	-	-	3	-	-	-	-	2	-	2
CO-2	2	-	-	-	3	-	-	-	-	2	-	2
CO-3	2	2	-	-	3	-	-	-	-	2	2	2
CO-4	2	2	-	-	3	-	-	-	-	2	-	2

Note: 3 = Strong Contribution   2 = Average Contribution   1 = Weak Contribution   - = No Contribution

The Correlation of Course Outcomes (CO's) and Program Specific Outcomes (PSO's)

Subject Code:	BCVL606	TITLE: **Software Application Lab**	Faculty Name:	SRIVATHSA H U
List of Course Outcomes	Program Specific Outcomes			
	PSO1		PSO2	
CO-1	2		**-**	
CO-2	2		**-**	
CO-3	2		**-**	
CO-4	2		-	

Note: 3 = Strong Contribution   2 = Average Contribution   1 = Weak Contribution   - = No Contribution