



SHREE DEVI INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University & Recognized by AICTE)

AIRPORT ROAD, KENJAR, MANGALORE – 574 142

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Ref :

Date:

2021 SCHEME – CO AND PO MAPPING


Sl.No	Course Code	Subject Name	Credits
1.	21MAT31	Transform Calculus, Fourier Series and Numerical Techniques	3
2.	21CV32	Geodetic Engineering	4
3.	21CV33	Strength of Materials	4
4.	21CV34	Earth Resources and Engineering	3
5.	21CVL35	Computer-Aided Building Planning and Drawing	1
6.	21SCR36	Social Connect and Responsibility	1
7.	21CIP37	Constitution of India and Professional Ethics	1
8.	21CV383	Ability Enhancement Course – III - Personality Development and Soft Skills	1

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Course Name	Transform Calculus, Fourier Series and Numerical Techniques
Course Code	21CV31
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Develop the knowledge of the use of periodic signals and Fourier series to analyze circuits and system communications. 2. Explain the general linear system theory for continuous-time signals and digital signal processing using the Fourier Transform and z-transform. 3. Apply the principles of curve fitting and the most common methods for curve fitting such as linear regression. Outline properties of correlation and compute Karl-Pearson's coefficient of correlation. 4. Employ appropriate numerical methods to solve algebraic and transcendental equations. Apply method of interpolation for prediction and apply numerical integration to calculate definite integrals of analytical functions or experimental data points 5. Apply Green's Theorem, Divergence Theorem and Stokes' theorem in various applications in the field of electro-magnetic and gravitational fields and fluid flow problems. Determine the extremals of functionals and solve the simple problems of the calculus of variations.

CO-PO Mapping:

CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1	3	2	-	-	-	-	-	-	-	-		-

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CO-2	3	2	-	-	-	-	-	-	-	-	-	-
CO-3	3	2	-	-	-	-	-	-	-	-	-	-
CO-4	3	2	-	-	-	-	-	-	-	-	-	-
CO-5	3	2	-	-	-	-	-	-	-	-	-	-
Max.	3	2	-	-	-	-	-	-	-	-	-	-

Course Name	Geodetic Engineering
Course Code	21CV32
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Describe the Basic Principles of surveying and read / interpret the maps needed for the site selection and development. Estimate measurement errors and apply corrections. Understand the various bearing system in Compass survey. Interpret the various Angle using Magnetic compass. Apply the correction in a traverse due to local attraction and closing error. Understand the working principles, methods of Plane table surveying. 2. Understand the working principles of Levelling instruments. Determine the elevations and profile of the ground. 3. Apply the knowledge of measuring angles to solve a practical problem by applying necessary corrections and checks. 4. Design and implement the different types of curves for deviating type of alignments. 5. Use of Modern instruments and methods for obtaining Geo-spatial data, Applications of Remote Sensing & GIS in Civil Engineering

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CO-PO MAPPING:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	-
CO3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-
CO5	3		-	-	2	1	-	-	-	-	-	-
Max.	3	3	-	-	2	1	-	-	-	-	-	-

Course Name	Strength of Materials
Course Code	21CV33



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Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Studying the concept of stress and strain and applying them for different materials in any structural members Decide suitable type of foundation based on soil parameters. 2. To study the different types of beams, supports and loads and construct the shear force and bending moment diagram for beams under the various loadings and support conditions. 3. To study the different types of beams, supports and loads and construct the shear force and bending moment diagram for beams under the various loadings and support conditions. 4. To study the behavior of thin and thick cylinders under the action pressures. Applying torsional equations for the given structural members and constructing the bending and shear stress for the various sections 5. To evaluate the behaviour of beams subjected to various loading conditions using different methods and to determine the structural elements such as columns and struts using Euler's and Rankine-Gordon's formula for different end conditions
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CO- PO Mapping:

CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1	3	3	-	-	-	-	-	-	-	-	-	-
CO-2	3	2	-	-	-	1	-	-	-	-	-	-
CO-3	3	3	-	-	-	2	-	-	-	-	-	-


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CO-4	3	3	-	-	-	2	-	-	-	-	-	-
CO-5	3	3	-	-	-	2	-	-	-	-	-	-
Avg	3	3	-	-	-	2	-	-	-	-	-	-

Course Name	Earth Resources and Engineering
Course Code	21CV34
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Apply geological knowledge in different civil engineering practice. 2. Students will acquire knowledge on durability and competence of foundation rocks, and confidence enough to use the best building materials. 3. Plan enough for the safety, stability, economy and life of the structures that they construct. 4. Assess to solve various issues related to ground water exploration, build up dams, bridges, tunnels which are often confronted with ground water problems. 5. Make Use of GIS, GPS and remote sensing as a latest tool in different civil engineering construction.


CO and PO Mapping:


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CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	-	-	-	-	-	-	-	-	-	-
CO2	3		-	-	-	-	-	-	-	-	-	-
CO3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	-	-	-	-	-	-	-
CO5	3	3	-	-	-	2	2	-	-	-	-	-
Max.	3	3	-	-	-	2	2	-	-	-	-	-

Course Name	Computer Aided Building Planning & Drawing
Course Code	21CVL35
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Prepare, read and interpret the drawings in a professional set up. 2. Know the procedures of submission of drawings and Develop working and submission drawings for building. 3. Plan and design a residential or public building as per the given requirements.

CO and PO Mapping:


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CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	-
CO2	3	3	-	-	2	-	-	-	-	-	-	-
CO3	3	3	-	-	2	-	-	-	-	-	-	-
Max.	3	3	-	-	2	-	-	-	-	-	-	-

Course Name	Social Connect & Responsibilities
Course Code	21SCR36
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Understand social responsibility. 2. Practice sustainability and creativity. 3. Showcase planning and organizational skills.

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	2	-	-	-	-	-	-
CO2	-	-	-	-	-	-	2	-	-	-	-	-
CO3	-	-	-	-	-	-	-	-	1	2	-	-
Max.	-	-	-	-	-	2	2		1	2		
Course Name	Constitution of India and Professional Ethics (CIP)											



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Course Code	21CIP37
Course Objectives	After a successful completion of the course, the student will be able to: <ul style="list-style-type: none"> 1. Have constitutional knowledge and legal literacy. 2. Understand Engineering and Professional ethics and responsibilities of Engineers.

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	2	-	-	-	-
CO2	-	-	-	-	-	2	-	-	-	-	-	-
Max.	-	-	-	-	-	2	-	2	-	-	-	-

Course Name	Personality Development and Soft skills (AEC)
Course Code	21CV383
Course Objectives	After a successful completion of the course, the student will be able to: <ul style="list-style-type: none"> 1. Develop effective communication skills (spoken and written) and effective presentation skills. Actively participate in group discussion / meetings / interviews and prepare & deliver presentations. 2. Conduct effective business correspondence and prepare business reports which produce results. 3. Develop an understanding of and practice personal and professional responsibility.



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	4. Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of teamwork, Inter-personal relationships, conflict management and leadership quality.
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CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	-	-	2	-	-
CO2	-	-	-	-	-	-	-	-	-	-	2	-
CO3	-	-	-	-	-	-	-	2	-	-	-	-
CO4	-	-	-	-	-	-	-	-	2	2	-	-
Max.	-	-	-	-	-	-	-	2	2	2	2	-



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2021 SCHEME – CO AND PO MAPPING

Sl.No	Course Code	Subject Name	Credits
9.	21MAT41	Complex Analysis, Probability and Statistical Methods.	3
10.	21CV42	Fluid Mechanics and Hydraulics	4
11.	21CV43	Public Health Engineering	4
12.	21CV44	Analysis of Structures	3
13.	21BE45	Biology for Engineers	2
14.	21CVL46	Earth Resources and Engineering Lab	1
15.	21KBK47 /21KSK47	Balake Kannada/ Samskrutika Kannada	1
16.	21CV485	Ability Enhancement Course – Green Building	1
17.	21UH49	Universal Human Values	1
18.	21INT49	Inter/Intra Institutional Internship	2


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Course Name	Fluid Mechanics and Hydraulics
Course Code	21CV42
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 6. Understand fundamental properties of fluids and solve problems on Hydrostatics. 7. Apply Principles of Mathematics to represent Kinematics and Bernoulli's principles. 8. Compute discharge through pipes, notches and weirs. 9. Design of open channels of various cross sections. 10. Design of turbines for the given data and understand their operation characteristics

CO-PO MAPPING:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-									
CO2	3	3	-									
CO3	3	3	-			1						
CO4	3	3	-									
CO5	3	3	-			1						
Average	3	3	-			1						


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Course Name	Public Health Engineering
Course Code	21CV43
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 6. Estimate average and peak water demand for a community. 7. Evaluate water quality and environmental significance of various parameters and plan suitable treatment system. 8. Design the different units of water treatment plant. 9. Understand and design the various units of wastewater treatment plant. 10. Acquire capability to conduct experiments and estimate the concentration of different parameters and compare the obtained results with the concerned guidelines and regulations.

CO- PO Mapping:

CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1	3	3	-	-	-	2	2	-	-	-	-	-			
CO-2	3	3	-	-	-	2	2	-	-	-	-	-			
CO-3	3	3	-	-	-	2	2	-	-	-	-	-			
CO-4	3	2	-	-	-	-	2	-	-	-	-	-			
CO-5	3	2	-	-	-	-	2	-	-	-	-	-			
Avg	3	3	-	-	-	2	2	-	-	-	-	-			

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Course Name	Analysis of Structures
Course Code	21CV44
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 6. Evaluate slope and deflections in beams using geometrical methods. 7. Determine deflections in trusses and frames using energy principles. 8. Analyse arches and cables for stress resultants. 9. Apply slope deflection method in analysing indeterminate structures and construct bending moment diagram. 10. Analyse continuous beams, frames and trusses using stiffness matrix method of analysis.

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	-	-	-	-	-	-	-	-	-	-
CO2	3	3	-	-	-	-	-	-	-	-	-	-
CO3	3	3	-	-	-	-	-	-	-	-	-	-
CO4	3	3	-	-	-	1	-	-	-	-	-	-
CO5	3	3	-	-	-	1	-	-	-	-	-	-
Average	3	3	-	-	-	1	-	-	-	-	-	-


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Course Name	Earth Resources and Engineering Laboratory
Course Code	21CVL46
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 4. Identify the minerals, rocks and utilize them effectively in Civil Engineering practices. 5. Interpret subsurface information such as thickness of soil, weathered zone, depth of hard rock and saturated zone by using geophysical methods. 6. Interpret and understand the geological conditions of the area for implementation of Civil Engineering projects. 7. Adapt the techniques in the interpretation of topographical map and LANDSAT Imageries to find out the lineaments and other structural features for the given area

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	-	-	-	-	-	-	-	-	-	-
CO2	2	2	-	-	-	2	-	-	-	-	-	-
CO3	2	2	-	-	-	2	-	-	-	-	-	-
CO4	2	2	-	-	-	2	1	-	-	-	-	-
Average	2	2	-	-	-	2	1	-	-	-	-	-

Course Name	Green Buildings
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Course Code	21CV485
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 4. Understand the Definition, Concept & Objectives of the terms cost effective construction and green building 5. Apply cost effective techniques in construction 6. Apply cost effective Technologies and Methods in Construction. 7. Understand the Problems due to Global Warming. 8. State the Concept of Green Building & Understand Green Buildings

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	1	-	-	1	-	-	-	-	-	-	-
CO2	-	1	-	-	1	-	-	-	-	-	-	-
CO3	-	1	-	-	1	-	-	-	-	-	-	-
CO4	-	1	-	-	-	-	2	-	-	-	-	-
CO5	1	1	-	-	-	-	2	-	-	-	-	-
Average	1	1	-	-	1	-	2	-	-	-	-	-


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Course Name	Universal Human Values
Course Code	21UHV49
Course Objectives	<p>After a successful completion of the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Holistic vision of life. 2. Socially responsible behaviour 3. Environmentally responsible work 4. Ethical human conduct 5. Having Competence and Capabilities for Maintaining Health and Hygiene

CO and PO Mapping:

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	2	-	-	-	-
CO2	-	-	-	-	-	2	-	-	-	-	-	-
CO3	-	-	-	-	-	-	2	-	-	-	-	-
CO4	-	-	-	-	-	-	-	2	-	-	-	-
CO5	-	-	-	-	-	2	2	-	-	-	-	-
Average	-	-	-	-	-	2	2	2	-	-	-	-



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