



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302



Department of Civil Engineering

Date: 20/09/2022

Course Outcome

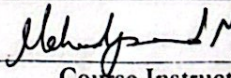
Subject: Geodetic Engineering

Subject Code: 21CV32

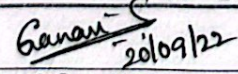
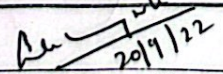
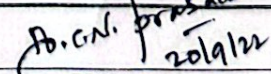
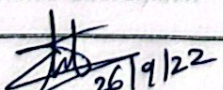
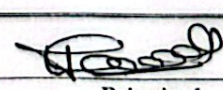
NBA Code: C202

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C202.1	Interpret basics of surveying and apply the same in compass and plane table surveying.	L3
C202.2	Determine the elevations and calculate area and volumes using different methods	L3
C202.3	Explain the concept of theodolite survey for field execution adopting trigonometric survey	L3
C202.4	Design of Simple, compound and reverse curve and understand the concepts of transition and vertical curves	L5
C202.5	Interpret Photogrammetry and aerial survey satellite imageries using remote sensing and positioning system with advanced instruments	L2
C202.6	Execute surveying using different surveying instruments to measure or plot distance, angles and elevations.	L4

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C202.1	3.0											2.0	3.0	
C202.2	3.0	2.0										3.0	3.0	
C202.3	3.0											2.0		
C202.4	3.0	3.0	3.0									2.0	2.0	
C202.5	2.0											1.0	2.0	
C202.6	3.0	3.0			3.0				3.0	3.0		3.0	3.0	
CO Average	2.83	2.67	3.0		3.0				3.0	3.0		2.17	2.6	


20/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 20/09/2022

 20/09/22 Criterion 3 Coordinator	 20/9/22 NBA coordinator	 20/9/22 HOD
 26/9/22 Convener		 Principal



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Date: 21/09/22

Course Outcome

Subject: Strength of materials

Subject Code: 21CV33

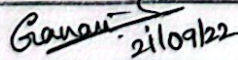
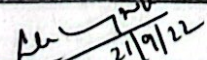
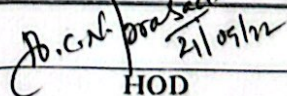


NBA Code: C203

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C203.1	Calculate simple and compound stresses of objects under external loadings.	L3
C203.2	Analyze statically determinate beams subjected to point load, UDL, UVL and moment to find shear forces and bending moments.	L4
C203.3	Calculate bending stresses, shear stresses for statically determinate beams.	L3
C203.4	Calculate stresses in shafts and cylinders	L3
C203.5	Determine slope and deflections in beams and axial forces in columns.	L3
C203.6	Conduct tests to determine the mechanical properties of building materials.	L4

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C203.1	3.0											3.0		3.0
C203.2	3.0	3.0										3.0	3.0	3.0
C203.3	3.0	2.0										2.0	3.0	2.0
C203.4	3.0	2.0												
C203.5	3.0	2.0										2.0	3.0	2.0
C203.6	3.0	3.0							3.0	2.0		3.0	3.0	
CO Average	3.0	2.4							3.0	2.0		2.6	3.0	2.5

Rag. 21/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 21/09/22

 21/09/22	 21/9/22	 21/09/22
Criterion 3 Coordinator	NBA coordinator	HOD
 26/9/22		
Convener		Principal



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Date: 22/9/2022

Course Outcome

Subject: Earth Resources and Engineering

Subject Code: 21CV34

NBA Code: C204

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C204.1	Apply geological knowledge related to disasters and its mitigation in different Civil engineering practices.	L3
C204.2	Discuss the durability and competence of various foundation rocks in different geological settings.	L2
C204.3	Recognize the essential concepts of safety, stability, economy, and durability in surface investigation of Civil engineering projects.	L2
C204.4	Apply the knowledge of subsurface investigation and groundwater improvement techniques to solve problems on borehole, dip and strike and outcrop.	L3
C204.5	Describe the concept of GIS, GPS, and Remote sensing applications in Civil engineering.	L2

CO No	Program Outcomes												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
C204.1	3.0					2.0									
C204.2	2.0											2.0			
C204.3	2.0					2.0						2.0			
C204.4	3.0														
C204.5												2.0			
CO Average	2.5					2.0						2.0			

[Signature] 22/9/2022
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/2022

<i>[Signature]</i> 22/09/22 Criterion 3 Coordinator	<i>[Signature]</i> 22/9/22 NBA coordinator	<i>[Signature]</i> 22/9/22 HOD
<i>[Signature]</i> 26/9/22 Convener		<i>[Signature]</i> 22/9 Principal



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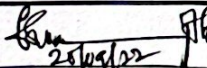
Subject: Computer-Aided Building Planning and Drawing

Subject Code: 21CVL35

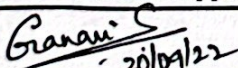

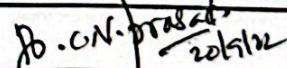
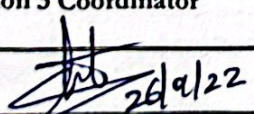

NBA Code: C205

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C205.1	Analyze the given conceptual and structural design data to create a set of drawings.	L4
C205.2	Exhibit essential software skills for drafting of Civil engineering drawings.	L3
C205.3	Submit precise printouts of Civil engineering drawings.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C205.1	3.0	3.0						3.0	2.0			3.0	3.0	
C205.2					3.0				3.0			3.0	3.0	
C205.3					3.0			2.0	2.0	3.0		3.0	3.0	
CO Average	3.0	3.0			3.0			2.5	2.33	3.0		3.0	3.0	


20/09/22
Course Instructor

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 26/9/22 Convener		 Principal



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Department of Civil Engineering

Date: 19/09/22

Course Outcome

Subject: Infrastructure Finance

Subject Code: 21CV384

NBA Code: C208

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C208.1	Explain the concept of comprehensive development plan for infrastructure projects	L2
C208.2	Describe infrastructure services and investor and business opportunities in infrastructure spending plans	L2
C208.3	Illustrate the performance and financial models related to infrastructure and their organizations	L2
C208.4	Recognize the importance of capital requirement of different sectors of infrastructure	L2
C208.5	Discuss the risks, opportunities and revenue sources involved in infrastructure.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C208.1	2.0										2.0	2.0		
C208.2	2.0										2.0			
C208.3	2.0										3.0	2.0		
C208.4	2.0										3.0	2.0	3.0	
C208.5											3.0	2.0		
CO Average	2.0										2.6	2.0	3.0	

Ch. 19/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 19/09/22

<i>Ganur</i> 19/09/22 Criterion 3 Coordinator	<i>Rev. S. M.</i> 20/9/22 NBA coordinator	<i>A. G. N. Prasad.</i> 20/9/22 HOD
<i>[Signature]</i> 26/9/22 Convener		<i>[Signature]</i> Principal



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Course Outcome

Subject: Construction Management & Entrepreneurship

Subject Code: 18CV51

NBA Code: C301

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C301.1	Apply principles of management, planning and scheduling to prepare network diagrams and find critical path.	L3
C301.2	Calculate labor output, equipment efficiency to allocate resources required for an activity.	L3
C301.3	Recognize the need for quality, safety, human values and ethics in construction process.	L2
C301.4	Analyze the economics of a construction activity based on monetary and time value.	L4
C301.5	Recognize the functions of an entrepreneur, role of MSME, schemes available and business planning process.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C301.1	3.0										3.0			
C301.2	3.0										3.0	3.0		
C301.3						3.0		3.0				3.0		
C301.4											3.0	3.0	3.0	
C301.5											3.0	2.0		
CO Average	3.0					3.0		3.0			3.0	2.75	3.0	

Chel
19/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 19/09/22

<i>Ganani S</i> 19/09/22 Criterion 3 Coordinator	<i>M. V. N. K.</i> 20/9/22 NBA coordinator	<i>P. S. Prasad</i> 20/9/22 HOD
<i>[Signature]</i> 27/9/22 Convener		<i>[Signature]</i> Principal



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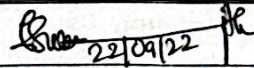
Subject: Analysis of Indeterminate Structures

Subject Code: 18CV52

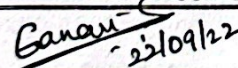
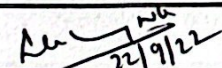
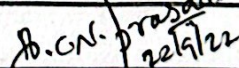
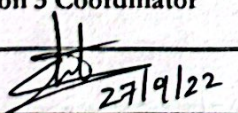
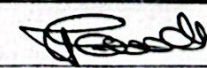
NBA Code: C302

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C302.1	Analyze the beams and frames using slope deflection method.	IA
C302.2	Examine the beams and frames using moment distribution method.	IA
C302.3	Inspect continuous beams and frames using Kani's method.	IA
C302.4	Investigate the continuous beams and plane trusses using flexibility matrix method.	IA
C302.5	Analyze the continuous beams and plane trusses using stiffness matrix method.	IA

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C302.1	3.0	3.0											3.0	
C302.2	3.0	3.0											3.0	
C302.3	3.0	3.0											3.0	
C302.4	3.0	3.0											3.0	2.0
C302.5	3.0	3.0											3.0	2.0
CO Average	3.0	3.0											3.0	2.0


22/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

 22/09/22 Criterion 3 Coordinator	 22/9/22 NBA coordinator	 22/9/22 HOD
 27/9/22 Convener		 Principal



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Date: 19/09/22

Course Outcome

Subject: Basic Geotechnical Engineering

Subject Code: 18CV54

NBA Code: C304

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C304.1	Identify the different types of soil and interpret their properties.	L3
C304.2	Describe the concept of soil structure, clay mineralogy and interpret the compaction parameters of the soil.	L3
C304.3	Analyze the permeability and stress characteristics of soil.	L4
C304.4	Understand the concept of shear stresses in soil to determine its shear strength parameters.	L3
C304.5	Interpret the consolidation characteristics of soil.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C304.1	3.0							2.0				3.0	3.0	2.0
C304.2	3.0												3.0	2.0
C304.3	3.0	3.0												3.0
C304.4	3.0												3.0	3.0
C304.5	3.0											2.0	2.0	2.0
CO Average	3.0	3.0						2.0				2.5	2.75	2.4

Ganani S
19/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 19/09/22

<i>Ganani S</i> 19/09/22 Criterion 3 Coordinator	<i>Arun</i> 20/9/22 NBA coordinator	<i>D. C. S. Prasad</i> 20/9/22 HOD
<i>[Signature]</i> 27/9/22 Convener		<i>[Signature]</i> Principal



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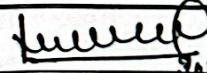
Subject: Municipal Wastewater Engineering

Subject Code: 18CV55



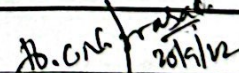
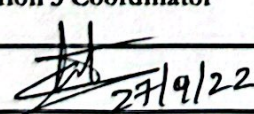
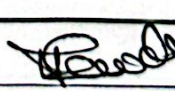
NBA Code: C305

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C305.1	Assess the sewage generation rate and to select the appropriate sewer appurtenances and materials in sewer network	L6
C305.2	Describe the wastewater characteristics and design the sewer network.	L5
C305.3	Develop the components of primary treatment units & demonstrate methods and effects of effluents' disposal.	L5
C305.4	Design the biological treatment components of Suspended growth system and Attached growth system.	L5
C305.5	Describe advanced wastewater treatment methods and design low-cost treatment units.	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C305.1	3.0	3.0	3.0			2.0	2.0					2.0		
C305.2	3.0	3.0	3.0				2.0					2.0		3.0
C305.3	3.0	3.0	3.0				3.0					3.0		2.0
C305.4	3.0	3.0	3.0									2.0		2.0
C305.5	3.0	3.0	3.0			2.0						2.0	3.0	3.0
CO Average	3.0	3.0	3.0			2.0	2.33					2.2	3.0	2.5


Course Instructor 20/09/22

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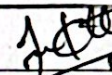
Subject: Highway Engineering

Subject Code: 18CV56

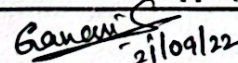
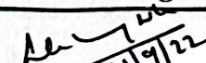
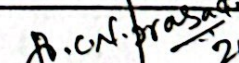
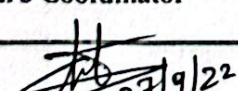
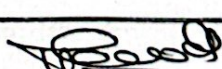
NBA Code: C306

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C306.1	Describe the concept of road development proposal for new alignment and re-alignment of highways and categorize them.	L4
C306.2	Design road geometrics & structural components of pavement.	L5
C306.3	Interpret the engineering properties of materials to design flexible and rigid pavements	L5
C306.4	Explain the construction process and materials of rigid and flexible pavements.	L2
C306.5	Design of highway drainage system in consideration of highway economics.	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C306.1	3.0	3.0												
C306.2	3.0	3.0	3.0									2.0	3.0	3.0
C306.3	3.0	3.0	3.0					2.0				2.0	3.0	3.0
C306.4	3.0											3.0		
C306.5	3.0	3.0	3.0									2.0	3.0	3.0
CO Average	3.0	3.0	3.0					2.0				2.25	3.0	3.0


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Department of Civil Engineering



Date: 22/09/22

Course Outcome

Subject: Surveying Practice

Subject Code: 18CVL57

NBA Code: C307

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C307.1	Demonstrate the concepts underlying the experiment and conduct procedures to collect reliable data.	L3
C307.2	Calculate relevant data from the experiment, analyze it and interpret the results.	L4
C307.3	Present comprehensive experiment reports effectively communicating the methodology, results and conclusions through reports and viva.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C307.1	2.0				3.0				2.0			3.0	3.0	
C307.2	3.0	3.0										2.0	3.0	
C307.3	2.0									3.0				
CO Average	2.33	3.0			3.0				2.0	3.0		2.5	3.0	

Maheshwari
22/09/22
Course Instructor

Maheshwari
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

<i>Ganani</i> 22/09/22 Criterion 3 Coordinator	<i>Maheshwari</i> 22/9/22 NBA coordinator	<i>A. G. Prasad</i> 22/9/22 HOD
<i>[Signature]</i> 27/9/22 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 21/09/22

Course Outcome

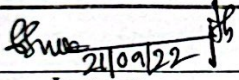
Subject: Concrete and Highway Materials Laboratory

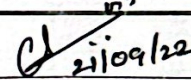
Subject Code: 18CVL58

NBA Code: C308

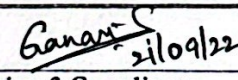
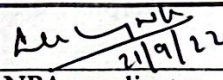
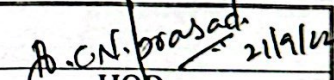
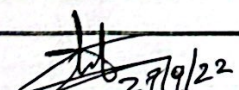
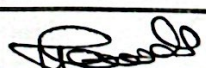
CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C308.1	Demonstrate the process of testing properties of concrete and highway materials as per respective IS code provisions and conduct procedures to collect relevant data.	L3
C308.2	Calculate relevant data from the experiment, analyze it and interpret the results	L4
C308.3	Present comprehensive experiment reports effectively communicating the methodology, results and conclusions through reports and viva.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C308.1	2.0							3.0	2.0			3.0	3.0	3.0
C308.2	3.0	3.0						3.0				2.0	3.0	3.0
C308.3	2.0									3.0				
CO Average	2.33	3.0						3.0	2.0	3.0		2.5	3.0	3.0


21/09/22
Course Instructor


21/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 21/09/22

 21/09/22 Criterion 3 Coordinator	 21/9/22 NBA coordinator	 21/9/22 HOD
 21/9/22 Convener		 Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 22/09/2022

Course Outcome

Subject: Environmental Studies

Subject Code: 18CIV59

NBA Code: C309

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C309.1	Describe the structure, function and conservation of ecosystem and biodiversity.	L2
C309.2	Describe the principles, applications and management of conventional and non-conventional energy sources.	L2
C309.3	Illustrate the concept of environmental pollution, latest pollution mitigation tools and describe the aspects of waste management and public health.	L2
C309.4	Describe the concept, policies of global environmental concerns using case studies.	L2
C309.5	Explain the developments in pollution mitigation concept and its applications through field visits.	L2

CO No	Program Outcomes												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
C309.1							2.0								
C309.2							2.0								
C309.3							3.0					2.0			
C309.4						2.0	3.0					3.0		2.0	
C309.5							3.0	2.0				3.0		3.0	
CO Average						2.0								2.5	

[Signature]
 22/09/22
 Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

<i>[Signature]</i> 22/09/22 Criterion 3 Coordinator	<i>[Signature]</i> 22/09/22 NBA coordinator	<i>[Signature]</i> 22/09/22 HOD
<i>[Signature]</i> 27/9/22 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 22/09/22

Course Outcome

Subject: Quality Surveying and Contract Management

Subject Code: 18CV71

NBA Code: C401

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C401.1	Prepare quantity abstract for buildings using engineering drawings	L5
C401.2	Prepare quantity abstract for various road works and its components, septic tanks and slab culverts	L5
C401.3	Discuss the Engineering specification of works and analyze the rates for various items of work.	L4
C401.4	Describe contract and tender documents for various construction works and the law of contract as per Indian Contract Act	L2
C401.5	Explain the post award of contract management and calculate valuations of buildings.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C401.1	3.0	3.0	3.0									3.0		
C401.2	3.0	3.0	3.0									3.0		
C401.3	3.0	3.0									3.0	3.0	3.0	
C401.4						3.0					2.0	2.0		
C401.5	3.0										2.0	2.0		
CO Average	3.0	3.0	3.0			3.0					2.33	2.6	3.0	

Ch 22/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

<i>Ganani</i> 22/09/22 Criterion 3 Coordinator	<i>Anu</i> 22/9/22 NBA coordinator	<i>Ab. C. Prasad</i> 22/9/22 HOD
<i>Jit</i> 28/9/22 Convener		<i>Prasad</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 20/9/22

Course Outcome

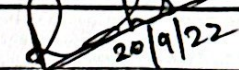
Subject: Design of RCC and Steel Structures

Subject Code: 18CV72

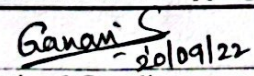
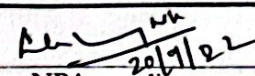
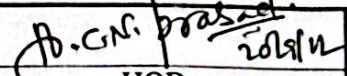
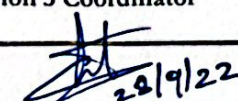
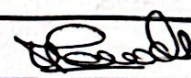
NBA Code: C402

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C402.1	Design retaining walls, combined footings, portal frames and water tanks as per code provisions to arrive at safe structures	L5
C402.2	Design roof trusses, gantry girders & plate girders as per code provisions to arrive at safe structures	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C402.1	3.0	3.0	3.0					3.0				3.0	3.0	3.0
C402.2	3.0	3.0	3.0					3.0				3.0	3.0	3.0
CO Average	3.0	3.0	3.0					3.0				3.0	3.0	3.0


20/9/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 20/09/22

 20/09/22 Criterion 3 Coordinator	 20/9/22 NBA coordinator	 20/9/22 HOD
 20/9/22 Convener		 Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date:

Course Outcome

Subject: Ground Water Hydraulics

Subject Code: 18CV734

NBA Code: C403

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C403.1	Describe the properties of ground water and aquifers.	L2
C403.2	Determine aquifer parameters like Specific yield, Specific retention, Porosity, Storage coefficient, permeability and transmissibility.	L3
C403.3	Calculate aquifer parameters for steady flow, radial flow and unsteady flow by using theis method, Cooper and Jacob method and Chow's method.	L3
C403.4	Illustrate the methods of ground water exploration.	L2
C403.5	Describe types of wells and methods of artificial ground water recharge.	L2

CO No	Program Outcomes												PSO			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2		
C403.1																2.0
C403.2	3.0															3.0
C403.3	3.0															3.0
C403.4												2.0				
C403.5							3.0					2.0				
CO Average	3.0						3.0					2.0				2.67

[Signature]
20/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 20/09/22

<i>[Signature]</i> 20/09/22 Criterion 3 Coordinator	<i>[Signature]</i> 20/09/22 NBA coordinator	<i>[Signature]</i> 20/09/22 HOD
<i>[Signature]</i> 28/9/22 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 21/09/2022

Course Outcome

Subject: Urban Transport Planning

Subject Code: 18CV745

NBA Code: C404

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C404.1	Describe the urban transit system and its planning process	L2
C404.2	Explain the process of data collection and inventories for urban transport planning	L2
C404.3	Apply the knowledge of transportation models and data collection to calculate future trip generation.	L3
C404.4	Apply the knowledge of transportation models and data collection to calculate future trip distribution.	L3
C404.5	Explain the analysis of transport planning model using different techniques	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C404.1	2.0					2.0								2.0
C404.2	2.0													2.0
C404.3	3.0	2.0												2.0
C404.4	3.0	2.0												2.0
C404.5	2.0													2.0
CO Average	2.4					2.0								2.0

A. G. S.
21/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 21/09/22

<i>Ganani</i> 21/09/22 Criterion 3 Coordinator	<i>A. G. S.</i> 21/9/22 NBA coordinator	<i>A. G. S.</i> 21/09/22 HOD
<i>[Signature]</i> 28/9/22 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 22/09/2022

Course Outcome

Subject: Energy and Environment

Subject Code: 18ME753

NBA Code: C405

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C405.1	Summarize the basic concepts of energy, its distribution and general scenario.	L2
C405.2	Understand various methods of energy storage, energy management and economic analysis.	L2
C405.3	Analyze the awareness about environment and eco system.	L3
C405.4	Understand the environment pollution along with social issues and acts.	L2
C405.5	Discuss the social issues of the environment with associated acts.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C405.1	1.0	1.0										1.0		
C405.2	2.0	2.0										1.0		
C405.3	1.0	1.0										1.0		
C405.4	1.0	1.0	2.0			2.0						1.0		
C405.5	1.0	1.0	2.0			2.0		2.0				1.0		
CO Average	1.2	1.2	2.0			2.0		2.0				1.0		

22/09/22
 Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

 Criterion 3 Coordinator	 NBA coordinator	 HOD
 Convener		 Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302



Department of Civil Engineering

Date: 21/9/22

Course Outcome

Subject: Computer Aided Detailing of Structures

Subject Code: 18CVL76

NBA Code: C406

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C406.1	Exhibit essential software skills for Civil engineering drawings and detailing	L3
C406.2	Prepare detailed drawing of RCC and Steel structures using code provisions.	L5
C406.3	Submit precise printouts of Civil engineering drawings adhering to code standards	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C406.1					3.0				3.0			3.0	3.0	
C406.2	3.0	3.0			3.0			3.0	3.0			3.0	3.0	
C406.2					3.0			2.0	2.0	3.0		3.0	3.0	
CO Average	3.0	3.0			3.0			2.5	2.67	3.0		3.0	3.0	

21/09/22
Course Instructor

21/9/22
Course Coordinator

Approval of the COs and their mapping with POs and PSOs was given on 21/09/22

 21/09/22 Criterion 3 Coordinator	 21/9/22 NBA coordinator	 21/9/22 HOD
 29/9/22 Convener		 Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 22/09/22

Course Outcome

Subject: Geotechnical Engineering laboratory

Subject Code: 18CVL77

NBA Code: C407

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C407.1	Demonstrate the process of testing index and engineering properties of soil as per respective IS code provisions and conduct procedures to collect relevant data.	L3
C407.2	Calculate relevant data from the experiment, analyze it and interpret the results	L4
C407.3	Present comprehensive experiment reports effectively communicating the methodology, results and conclusions through reports and viva.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C407.1	2.0							3.0	2.0			3.0	3.0	2.0
C407.2	3.0	3.0						3.0				2.0	3.0	2.0
C407.3	2.0									3.0				
CO Average	2.33	3.0						3.0	2.0	3.0		2.5	3.0	2.0

Maheshwari N
22/09/22
Course Instructor

Ganani S
22/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 22/09/22

<i>Ganani S</i> 22/09/22 Criterion 3 Coordinator	<i>Arun M</i> 22/09/22 NBA coordinator	<i>A. G. N. Prasad</i> 22/09/22 HOD
<i>J. H.</i> 28/9/22 Convener		<i>R. S.</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302

Department of Civil Engineering



Date: 20/09/22

Course Outcome

Subject: Project Work Phase - 1

Subject Code: 18CVP78

NBA Code: C408

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C408.1	Analyze complex problems to suggest feasible solutions with clear objectives and defined methodology with literature review and effectively report the same.	L4
C408.2	Present the problem statement and proposed solution effectively.	L2
C408.3	Exhibit technical knowledge to clearly explain and defend the problem statement and the proposed solution.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C408.1	3.0	3.0			2.0				3.0	3.0		3.0	3.0	3.0
C408.2	3.0				3.0				3.0	3.0		3.0		
C408.3	3.0	3.0							3.0	3.0		3.0		
CO Average	3.0	3.0			2.5				3.0	3.0		3.0	3.0	3.0

A. G. N. Prasad
20/09/22
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 20/09/22

<i>Ganesh</i> 20/09/22 Criterion 3 Coordinator	<i>A. G. N. Prasad</i> 20/09/22 NBA coordinator	<i>A. G. N. Prasad</i> 20/09/22 HOD
<i>[Signature]</i> 20/09/22 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 07/02/23

Course Outcome

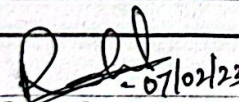
Subject: Fluid Mechanics and Hydraulics

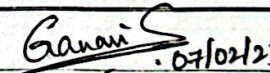
Subject Code: 21CV42

NBA Code: C211

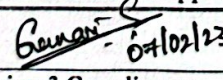
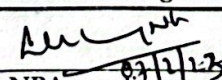
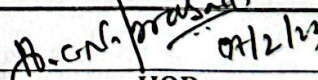


CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C211.1	Demonstrate fundamental properties of fluids and solve problems on Hydrostatics	L3
C211.2	Apply principles of mathematics to solve problems on kinematics and principles of Bernoulli's to compute discharge through pipes	L3
C211.3	Compute discharge through channels and losses in pipes	L3
C211.4	Design open channels of various cross sections using the concept of uniform and non-uniform flow.	L5
C211.5	Understand the concept of curved vanes and velocity triangles to describe the working principles of hydraulic machines and design them.	L5
C211.6	Conduct tests to determine the parameters of hydraulic devices and machines.	L4

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C211.1	3.0											3.0		3.0
C211.2	3.0	3.0										3.0	2.0	3.0
C211.3	3.0	3.0										3.0	3.0	2.0
C211.4	3.0	3.0	3.0				2.0					3.0	3.0	2.0
C211.5	3.0	3.0	3.0									3.0	3.0	
C211.6	3.0	3.0							3.0	2.0		3.0	3.0	
CO Average	3.0	3.0	3.0				2.0		3.0	2.0		3.0	2.8	2.5


07/02/23
Course Instructor


07/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

 07/02/23 Criterion 3 Coordinator	 07/02/23 NBA coordinator	 07/02/23 HOD
 13/2/23 Convener		 Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 07/02/23

Course Outcome

Subject: Public Health Engineering

Subject Code: 21CV43

NBA Code: C212

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C212.1	Calculate average and peak water demand for a community	L3
C212.2	Analyze water quality and environmental significance of various parameters and plan suitable treatment system.	L4
C212.3	Describe the concept of tertiary water treatment method and characteristics of wastewater.	L2
C212.4	Design preliminary, primary and secondary magnitude of wastewater treatment components.	L5
C212.5	Design the attached growth of biological treatment units and low-cost wastewater treatment methods.	L5
C212.6	Conduct experiments and estimate the concentration of different parameters based on concerned guidelines and regulations.	L4

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C212.1	3.0					3.0						2.0		2.0
C212.2	3.0	3.0				2.0	2.0	2.0				3.0		3.0
C212.3	2.0					2.0	3.0					2.0		3.0
C212.4	3.0	3.0	3.0											
C212.5	3.0	3.0	3.0				2.0					2.0		
C212.6	3.0	3.0				3.0	2.0		3.0	2.0		3.0		3.0
CO Average	2.83	3.0	3.0			2.5	2.25	2.0	3.0	2.0		2.4		2.75

[Signature]
07/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

<i>[Signature]</i> 07/02/23 Criterion 3 Coordinator	<i>[Signature]</i> 7/2/23 NBA coordinator	<i>[Signature]</i> 7/2/23 HOD
<i>[Signature]</i> 13/2/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 09/02/23

Course Outcome

Subject: Analysis of Structures

Subject Code: 21CV44

NBA Code: C213

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C213.1	Analyze beams to determine slope and deflections using geometrical methods.	L3
C213.2	Analyze trusses and frames to determine deflections using energy principles	L3
C213.3	Analyze arches and cables for stress resultants.	L3
C213.4	Apply slope deflection method to analyze indeterminate structures and draw bending moment diagram.	L3
C213.5	Analyze continuous beams, frames and trusses using stiffness matrix method of analysis.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C213.1	3.0	3.0											3.0	2.0
C213.2	3.0	3.0											3.0	2.0
C213.3	3.0	3.0											3.0	2.0
C213.4	3.0	3.0										2.0	3.0	2.0
C213.5	3.0	3.0										2.0	3.0	2.0
CO Average	3.0	3.0										2.0	3.0	2.0

[Signature]
09/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/02/23

<i>[Signature]</i> 09/02/23 Criterion 3 Coordinator	<i>[Signature]</i> 9/2/23 NBA coordinator	<i>[Signature]</i> 9/2/23 HOD
<i>[Signature]</i> 13/2/23 Convener		<i>[Signature]</i> Principal



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THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302

Department of Civil Engineering



Date: 09/02/23

Course Outcome

Subject: Earth Resources and Engineering Lab

Subject Code: 21CVL46

NBA Code: C215

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C215.1	Describe the properties of rocks and minerals in terms of their physical characteristics, the strength of the building materials, and the required groundwater and geological investigations.	L2
C215.2	Analyze relevant data from the observations and experiment to interpret the results	L4
C215.3	Present comprehensive experiment reports effectively communicating the methodology, results and conclusions through reports and viva.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C215.1	2.0											2.0		
C215.2	3.0	3.0										2.0		
C215.3	2.0									3.0				
CO Average	2.0	3.0								3.0		2.0		

[Signature] 09/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/02/23

<i>[Signature]</i> 09/02/23 Criterion 3 Coordinator	<i>[Signature]</i> 09/02/23 NBA coordinator	<i>[Signature]</i> 09/02/23 HOD
<i>[Signature]</i> 13/2/23 Convener		<i>[Signature]</i> 9/12 Principal



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THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 07/02/2023

Course Outcome

Subject: Green Buildings

Subject Code: 21CV485

NBA Code: C217

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C217.1	Describe concept and objectives of cost-effective construction and green building.	L2
C217.2	Explain different environment and cost-effective techniques in construction.	L2
C217.3	Illustrate the problems due to global warming and explain the concept of embodied energy.	L2
C217.4	Explain the green building rating systems and characteristics of sustainable construction.	L2
C217.5	Recognize alternate sources of energy and describe effective use water.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C217.1							3.0					3.0	3.0	
C217.2							3.0					3.0	3.0	
C217.3						2.0	3.0					2.0	3.0	
C217.4							3.0					3.0	3.0	
C217.5	2.0					3.0	3.0					3.0	3.0	
CO Average	2.0					2.5	3.0					2.8	3.0	

CA
07/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

<i>Garani S</i> 07/02/23 Criterion 3 Coordinator	<i>A. S. S. S. S.</i> 07/02/23 NBA coordinator	<i>A. G. N. S. S. S.</i> 07/02/23 HOD
<i>[Signature]</i> 13/2/2023 Convener		<i>[Signature]</i> Principal



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 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 07/02/23

Course Outcome

Subject: Design of Steel Structures

Subject Code: 18CV61

NBA Code: C310

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C310.1	Describe the knowledge of steel structures, its pros and cons, code provisions and demonstrate the plastic behavior of structural steel.	L3
C310.2	Develop bolted and welded connections for simple members.	L5
C310.3	Design compression members, built-up columns and columns splice for given loading conditions.	L5
C310.4	Design tension members, simple slab base and gusseted base with suitable connections.	L5
C310.5	Design laterally supported and un-supported steel beams as per code provisions.	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C310.1	3.0							2.0				2.0		
C310.2	3.0	3.0	3.0					2.0				3.0	3.0	2.0
C310.3	3.0	3.0	3.0					2.0				3.0	3.0	2.0
C310.4	3.0	3.0	3.0					2.0				3.0	3.0	3.0
C310.5	3.0	3.0	3.0					2.0				3.0	3.0	3.0
CO Average	3.0	3.0	3.0					2.0				2.8	3.0	2.5

Rao 07/02/23
 Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

<i>Banani</i> 07/02/23	<i>A. C. N.</i> 07/02/23	<i>A. C. N.</i> 07/02/23
Criterion 3 Coordinator	NBA coordinator	HOD
<i>[Signature]</i> 14/2/23		<i>[Signature]</i>
Convener		Principal



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Department of Civil Engineering



Date: 09/02/23

Course Outcome

Subject: Applied Geotechnical Engineering

Subject Code: 18CV62

NBA Code: C311

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C311.1	Describe the geotechnical site investigation program for different civil engineering projects.	L2
C311.2	Analyze the soil for stress distribution and resulting settlement beneath the loaded footings.	L4
C311.3	Compute lateral pressure distribution behind earth retaining structures and factor of safety against failure of slopes.	L3
C311.4	Determine bearing capacity of soil in shallow foundations by Terzaghi's and IS code methods.	L3
C311.5	Calculate load carrying capacity of single and group of piles.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C311.1	2.0											3.0	2.0	
C311.2	3.0	3.0						2.0				2.0	2.0	3.0
C311.3	3.0	2.0										2.0	2.0	2.0
C311.4	3.0							2.0				3.0	3.0	3.0
C311.5	3.0	2.0											2.0	
CO Average	2.8	2.33						2.0				2.5	2.2	2.67

Ganant
09/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/02/23

<i>Ganant</i> 09/02/23 Criterion 3 Coordinator	<i>A. N. Prasad</i> 09/12/23 NBA coordinator	<i>A. N. Prasad</i> 09/12/23 HOD
<i>[Signature]</i> 14/2/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 07/09/23

Course Outcome

Subject: Hydrology and Irrigation Engineering

Subject Code: 18CV63

NBA Code: C312

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C312.1	Describe the concept of hydrological components, precipitation and interpret rainfall data problems.	L3
C312.2	Calculate precipitation data and losses in precipitation.	L3
C312.3	Calculate runoff and illustratedata from unit hydrographs.	L3
C312.4	Calculate water requirement of crops and describebenefits&ill-effects of irrigation.	L3
C312.5	Design canals using Lacey's and Kennedy's methods and calculate reservoir capacity.	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C312.1	3.0													
C312.2	3.0						2.0							
C312.3	3.0	2.0												
C312.4	3.0						2.0					2.0		
C312.5	3.0	3.0	3.0										2.0	
CO Average	3.0	2.5	3.0				2.0					2.0	2.0	

Mahesh N 07/09/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/09/23

<i>Ganesh S</i> 07/09/23 Criterion 3 Coordinator	<i>Arun M</i> 7/9/23 NBA coordinator	<i>A.G.N. Prasad</i> 7/9/23 HOD
<i>[Signature]</i> 14/2/23 Convener		<i>[Signature]</i> Principal



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THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302

Department of Civil Engineering



Date:

Course Outcome

Subject: Alternative building materials

Subject Code: 18CV643

NBA Code: C313

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C313.1	Describe the problems of Environmental issues concerned to building materials and cost-effective building technologies	L2
C313.2	Design Structural Masonry Elements under Axial Compression and identify appropriate type of masonry unit and mortar for civil engineering constructions	L5
C313.3	Describe the applications of industrial and agricultural wastes in building construction.	L2
C313.4	Interpret alternative building technologies that can be used in energy efficient building by considering climatic conditions and building materials.	L2
C313.5	Describe new technologies for manufacture of alternative building materials and cost saving techniques in planning, design and construction.	L2

CO No	Program Outcomes												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
C313.1	2.0					2.0	3.0					2.0	2.0	3.0	
C313.2	3.0	3.0	3.0									2.0	3.0		
C313.3	2.0						2.0								2.0
C313.4	2.0						2.0					2.0	3.0		
C313.5							2.0					2.0	3.0		
CO Average	2.25	3.0	3.0			2.0	2.25					2.0	2.0	3.0	2.0

[Signature]
9/9/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/09/23

<i>[Signature]</i> 09/09/23 Criterion 3 Coordinator	<i>[Signature]</i> 9/9/23 NBA coordinator	<i>[Signature]</i> 9/9/23 HOD
<i>[Signature]</i> 11/2/23 Convener		<i>[Signature]</i> Principal



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 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 7/9/23

Course Outcome

Subject: Software Application Laboratory

Subject Code: 18CVL66

NBA Code: C315

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C315.1	Exhibit essential software skills for structural analysis, planning and design of Civil engineering structures	L3
C315.2	Conduct analysis of structural members and structures, planning of a project, calculation of quantities using relevant software and provided data.	L5
C315.3	Submit precise reports of analysis, project planning, quantity calculation.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C315.1					3.0				3.0			3.0	3.0	
C315.2	3.0	3.0	3.0		3.0			3.0	3.0			3.0	3.0	
C315.3					3.0				2.0	3.0		3.0	3.0	
CO Average	3.0	3.0			3.0			3.0	2.67	3.0		3.0	3.0	

[Signature]
 7/9/23
 Course Instructor

[Signature]
 7/9/23
 Course Coordinator

Approval of the COs and their mapping with POs and PSOs was given on 09/09/23

<i>[Signature]</i> 07/09/23 Criterion 3 Coordinator	<i>[Signature]</i> 7/9/23 NBA coordinator	<i>[Signature]</i> 7/9/23 HOD
<i>[Signature]</i> 14/2/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



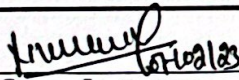
Date: 07/02/23

Course Outcome


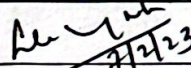
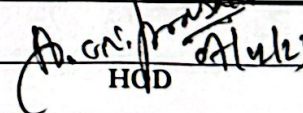
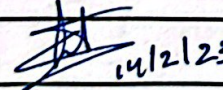
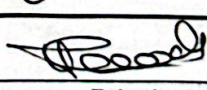
Subject: Environmental Engineering laboratory Subject Code: 18CVL67 NBA Code: C316

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C316.1	Demonstrate the process of testing water and wastewater as per respective IS code provisions and conduct procedures to collect relevant data	L3
C316.2	Calculate relevant data from the experiment analyze it and interpret the results based on standards.	L4
C316.3	Present comprehensive experiment reports effectively communicating the methodology, results and conclusions through reports and viva.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C316.1	2.0						3.0	3.0	2.0			3.0	3.0	2.0
C316.2	3.0	3.0					3.0	3.0				2.0	3.0	2.0
C316.3	2.0									3.0				
CO Average	2.33	3.0					3	3	2	3		2.5	3.0	2.0


Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

 07/02/23 Criterion 3 Coordinator	 07/02/23 NBA coordinator	 07/02/23 HOD
 14/2/23 Convener		 Principal



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 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date: 09/09/23

Course Outcome

Subject: Extensive Survey Project

Subject Code: 18CVEP68

NBA Code: C317

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C317.1	Apply Surveying knowledge and tools effectively to execute the projects.	L3
C317.2	Draw and submit drawings adhering to standards using data collected from the surveying.	L4
C317.3	Design components related to tanks, highways and water supply.	L5
C317.4	Communicate effectively and to present the executed work clearly and coherently both in written and oral forms.	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C317.1	3.0	2.0			3.0				3.0		2.0		3.0	
C317.2	3.0				3.0				3.0				3.0	
C317.3	3.0	3.0	3.0			2.0		3.0				2.0	3.0	
C317.4					3.0					3.0				
CO Average	3.0	2.5	3.0		3.0	2.0		3.0	3.0	3.0	2.0	2.0	3.0	

C. S. 09/09/23
 Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/09/23

<i>Ganani 09/09/23</i> Criterion 3 Coordinator	<i>A. S. 09/09/23</i> NBA coordinator	<i>J. C. S. 09/09/23</i> HOD
<i>[Signature] 14/2/23</i> Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
 THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
 Department of Civil Engineering



Date:

Course Outcome

Subject: Design of Pre-stressed Concrete

Subject Code: 18CV81

NBA Code: C409

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C409.1	Determine stresses in prestressing members from the knowledge of concepts of prestressing.	L3
C409.2	Analyze PSC members to find losses in prestress, deflection and cracking.	L4
C409.3	Design prestressing members for flexure	L5
C409.4	Develop prestressing members for shear	L5
C409.5	Design end blocks with the knowledge of different anchorage systems	L5

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C409.1	3.0													
C409.2	3.0	3.0											2.0	
C409.3	3.0	3.0	3.0					3.0					2.0	2.0
C409.4	3.0	3.0	3.0					3.0					2.0	2.0
C409.5	3.0	3.0	3.0											2.0
CO Average	3.0	3.0	3.0					3.0					2.0	2.0

[Signature]
 7/9/23
 Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/09/23

<i>[Signature]</i> 07/09/23 Criterion 3 Coordinator	<i>[Signature]</i> 7/9/23 NBA coordinator	<i>[Signature]</i> 7/9/23 HOD
<i>[Signature]</i> 15/2/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302

Department of Civil Engineering



Date: 09/09/2023

Course Outcome


Subject: Rehabilitation and Retrofitting

Subject Code: 18CV824

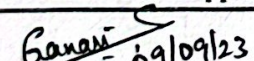

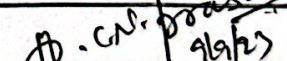
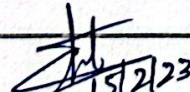
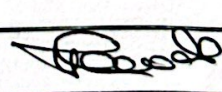
NBA Code: C410

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C410.1	Explain the causes for structural (Concrete) deterioration	L2
C410.2	Demonstrate the destructive, non-destructive and semi-destructive testing systems related to type and extent of damage	L3
C410.3	Interpret the influence of damages due to climate, temperature, chemicals, wear, erosion and corrosion on durability and serviceability of structures.	L3
C410.4	Illustrate the maintenance techniques of structure by appropriate method of repair and rehabilitation.	L2
C410.5	Discuss materials for repair and retrofitting techniques based on structural conditions	L2

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C410.1	2.0											2.0		2.0
C410.2	3.0											2.0		
C410.3	3.0											2.0		2.0
C410.4	2.0											2.0		
C410.5	2.0											2.0		
CO Average	2.4											2.0		2.0


09/09/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/09/23

 09/09/23 Criterion 3 Coordinator	 09/09/23 NBA coordinator	 09/09/23 HOD
 15/2/23 Convener		 Principal



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THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 07/02/23

Course Outcome

Subject: Project Work Phase - 2

Subject Code: 18CVP83

NBA Code: C411

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C411.1	Evaluate problems creatively through sustained critical investigation and research to develop solutions beneficial to the society and effectively report the same.	L6
C411.2	Present the problem statement and executed solution effectively	L2
C411.3	Exhibit technical knowledge to clearly explain and defend the problem statement and the solution.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C411.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0
C411.2	3.0				3.0				3.0	3.0		3.0		
C411.3	3.0	3.0		3.0					3.0	3.0		3.0		
CO Average	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0

A. G. N. Prasad
07/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 07/02/23

<i>Ganesh</i> 07/02/23 Criterion 3 Coordinator	<i>A. G. N. Prasad</i> 07/02/23 NBA coordinator	<i>A. G. N. Prasad</i> 07/02/23 HOD
<i>[Signature]</i> 15/2/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 09/09/23

Course Outcome

Subject: Technical Seminar

Subject Code: 18CVS84

NBA Code: C412

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C412.1	Identify and describe the current, real-time issues and challenges in Civil engineering & technology and effectively report the same.	L3
C412.2	Present the concept effectively with oral communication skills.	L2
C412.3	Exhibit comprehensive knowledge to clearly explain the concept.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C412.1	3.0								3.0	3.0		2.0		
C412.2	2.0				3.0				3.0	3.0		2.0		
C412.3	3.0								3.0	3.0		2.0		
CO Average	2.67				3.0				3.0	3.0		2.0		

J. K. K.
09/09/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/09/23

<i>Ganav S</i> 09/09/23 Criterion 3 Coordinator	<i>A. S. M.</i> 09/09/23 NBA coordinator	<i>A. C. N. Prasad</i> 09/09/23 HOD
<i>[Signature]</i> 15/12/23 Convener		<i>[Signature]</i> Principal



MAHARAJA INSTITUTE OF TECHNOLOGY THANDAVAPURA
THANDAVAPURA Village, NANJANGUD Taluk, MYSORE-571302
Department of Civil Engineering



Date: 09/02/23

Course Outcome

Subject: Internship

Subject Code: 18CVI85

NBA Code: C413

CO's	DESCRIPTION OF THE OUTCOMES	RBT Level
C413.1	Demonstrate enhanced practical skills, deepened understanding of industry practices, ability to apply theoretical knowledge to real-world scenarios and report the same.	L4
C413.2	Present the acquired knowledge and skills effectively with oral communication skills.	L2
C413.3	Exhibit comprehensive knowledge of the work to clearly explain the concepts.	L3

CO No	Program Outcomes												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
C413.1	3.0	3.0	3.0						3.0	3.0	2.0	2.0	3.0	
C413.2	2.0				3.0				3.0	3.0		2.0		
C413.3	3.0								3.0	3.0		2.0		
CO Average	2.67	3.0	3.0		3.0				3.0	3.0	2.0	2.0	3.0	

Mahedy N 09/02/23
Course Instructor

Approval of the COs and their mapping with POs and PSOs was given on 09/02/23

<i>Ganani</i> 09/02/23 Criterion 3 Coordinator	<i>Ally</i> 09/02/23 NBA coordinator	<i>A. G. Prasad</i> 09/02/23 HOD
<i>[Signature]</i> 15/2/23 Convener		<i>[Signature]</i> Principal