

Dr. Ashok Guj: Technical Institute's,
Dr.DaulatraoAher College of Engineering, Karod.

Vidyanagar Ext. Banawadi, Tal. Karad 415124, Dist. Satara, Manarashtra INDIA

DACOE/ACADM/COF -FRM-Program: Civil Engineering

COF -FRM- Rev. No: 0 Date:

	ESC-P 104 Basic Civil Engineering	
ESC-P-104.1	Understandthe application of civil engineering and rules and regulations to be followed for building planning.	
ESC-P-104.2	Understand various building components and their functions, types of loads and difference between them.	
ESC-P-104 .3	Recognize the important properties of building material and their suitability.	
ESC-P-104 .4	To use of different surveying and leveling instruments to know the topography of ground.	
ESC-P-104 .5	Know components of roads, railway tracks, water supply scheme and types of dams. ESC-P-204 Basic Civil Engineering	
ESC-P-204.1	Understandthe application of civil engineering and rules and regulations to be followed for building planning.	
ESC-P-204.2	Understand various building components and their functions, types of loads and difference between them.	
ESC-P-204 .3	Recognize the important properties of building material and their suitability.	
ESC-P-204 .4	To use of different surveying and leveling instruments to know the topography of ground.	
ESC-P-204 .5	Know components of roads, railway tracks, water supply scheme and types of dams.	
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Mr. 5. S. Sayyed	(Harrie	Dr. A. M. Zende (HOD, Civil)

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DACOE/ACADM/COF -FRM-

COF -FRM- Rev. No. 0 Date:

	ESC-C-104 Applied Mechanics	
ESC-C-104.1	To study Understand basic concepts of mechanics	
ESC-C-104.2	To study problems on equilibrium of rigid bodies, friction.	
ESC-C-104.3	To study Centroid and moment of inertia, kinematic and laws of motion with problem.	
ESC-C-104.4	To know basic concepts linear and rectilinear motion, Work energy principal, De- Alembert principle	
ESC-C-104.5	To Understand basic concepts of kinetics of linear motion, Impulse - momentum principle,	
ESC-C-104.6	To study of Collision of elastic bodies	

Surveying-I (PCC-CV-302)	
PCC-CV302.1	To obtain a full understanding of the methods of measurement, errors to be expected, and their control.
PCC-CV302.2	To know the basics of levelling and theodolite survey in elevation and angular measurements.
PCC-CV302.3	To find out area and volumes using various instruments.
PCC-CV302.4	To study the significance of plane table surveying in plan making.
PCC-CV302.5	To use of minor instruments with efficiency.
PCC-CV302.6	To understand the importance of surveying in the field of civil engineering.

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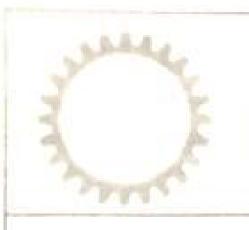
DACOE/ACADM/COF -FRM-

COF -FRM- Rev. No: 0 Date:

Course Outcomes

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Course Outcomes

Engg.Mathematics-III((BSC-CV301)

(BSC-CV301)-01	Make use of Linear Differential Equations to solve the civil engineering problems
(BSC-CV301)-02	Apply knowledge of vector differtiation to find directional derivatives, curl and divergence of vector fields.
(BSC-CV301)-03	Describe the statistical data numerically by using Lines of regression and Curve fittings.
(BSC-CV301)-04	Solve basic problems in probability theory, including problems involving the binomial, Poisson, and normal distributions.
(BSC-CV301)-05	Find Laplace transforms of given functions and use it to solve linear differential equations.

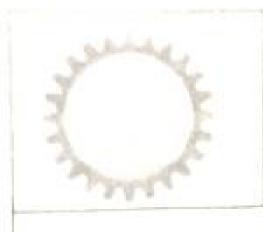
Prapared by:

(Prof. V.D. Apshinge)

Checked by:

(Prof.S.S.Sayyad & Prof.S.P.Chavan)

(Dr.A.M.Zende)



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Course Outcomes

Numerical Method ((ESC-CV306)

(ESC-CV306)-01	Identify, classify & choose the most appropriate numerical method for solving problems.
(ESC-CV306)-02	Illustrate basic theory of correlation & regression.
(ESC-CV306)-03	Form and solve linear programming problems.
(ESC-CV306)-04	Apply skills effectively in the solution of problems in civil engineering.
(ESC-CV306)-05	Develop programs in C and C++ where applications will be drawn from different fields of civil engineering so as to motivate individual interests students and equip them with basic computing tools for civil engineering.

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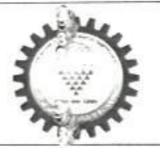
(Prof.A.A.Panaskar)

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(Prof.S.S.Sayyad & Prof.S.P.Chavan)

HOD

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	ESC-CV304 Fluid Mechanics I
ESC-CV304.1	Study the basic properties of fluids and their behavior under application of various force systems.
ESC-CV304.2	Discuss the basic concepts and principles in fluid statics, fluid kinematics and fluid dynamics with their applications in fluid flow problems.
ESC-CV304.3	Recognize the principles of continuity, momentum and energy as applied to fluid in motion.
ESC-CV304.4	Apply the equations to analyze problems by making proper assumptions and learn systematic engineering methods to solve practical fluid mechanics problems.

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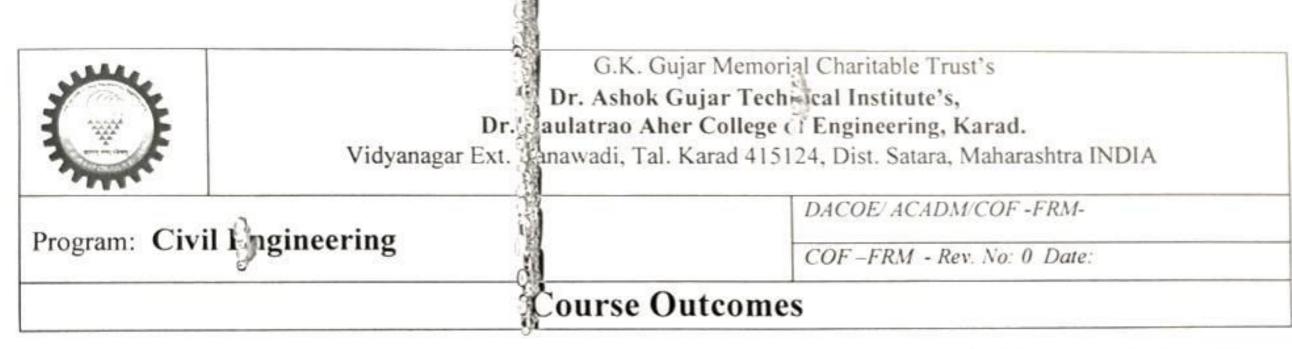
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Course Outcomes

	PCC-CV402 Surveying II	
PCC-CV402.1	Adopt the principles of advanced surveying instruments.	
PCC-CV402.2	Formulate triangulation stations, Flight planning and Ground control points (GCPs).	
PCC-CV402.3	Apply GIS and GPS concepts to civil engineering problems.	
PCC-CV402.4	Design and setout curves by different methods.	

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	PCC- CV403 Concrete Technology	
CV403.1	Impart knowledge of physical properties of ingredients of concrete and their effect on strength and durability	
CV403.2	Explain the fundamentals of process of making good quality concrete and its elastic properties	
CV403.3	Understand and memorizing the factors affecting properties of concrete	
CV403.4	Design the concrete mix proportion as per Indian standard code of practice	
CV403.5	Demonstrate Non Destructive Testing (NDT) and evaluate quality of existing concrete	
CV403.6	Estimating different types of concrete and their applications.	

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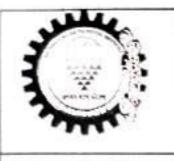
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	63347 Fluid Mechanics- II		
CV 210.1	Apply knowledge of fluid mechanics in addressing problems in open channels and to design hydraulically most efficient channel sections. (Level 3)		
CV 210.2	Calculate surface profile for a specified, gradually varied, non-uniform open channel flow problems and hydraulic jump phenomenon in open channel flows. (Level 3)		
CV 210.3	Analysis rate of flow in notches & Weir. (Level 3)		
CV 210.4	Apply the impulse momentum theorem as it applies to the impact of a water jet on vanes with different geometrical shapes. (Level 3)		
CV 210.5	Study different hydraulic machines with their working principles.(Level1)		

	ESC-CV 404 Fluid Mechanics- II		
ESC-CV404.1	Provide student to basic knowledge of fluid properties and utilizing principles develop in fluid mechanics.(Level 3)		
ESC-CV404.2			
ESC-CV404.3	Provide the students with analytical knowledge of pressure and velocity distribution in an open channel in order to solve practical problems.(Level3)		
ESC-CV404.4	Illustrate and develop the equation and design principles for open channel flows, including sanitary and storm sewer design and flood control hydraulics. (Level 4)		

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Ms. P. M. Kamble		W/3-3	Dr. A. M. Zende (HOD, Civil)
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PCC-CV305 Building Construction and Ma	
PCC-CV305.1	Know the building Materials.
PCC-CV305.2	Describe properties and suitability of various building materials
PCC-CV305.3	State the different building components
PCC-CV305.4	Demonstrate different bonds in brick masonary
PCC-CV305.5	Produce drawings of different building components
PCC-CV305.6	Explain different types of roof coverings & types of flooring.



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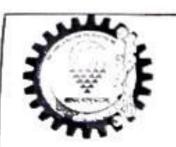
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	PCC-CV405 Building Design and Drawing
PCC-CV405 .1	Know principles of building planning.
PCC-CV405 .2	Describe Building Bye-Laws and regulations
PCC-CV405 .3	Plan and draw residential building considering principle of planning and Building ByeLaws and regulations.
PCC-CV405.4	Explain techniques of maintenance, repair and rehabilitation of structure
PCC-CV405.5	Draw the working drawing of foundation detail, plumbing and electrification of building
PCC-CV405.6	Illustrate the concept of ventilation, air conditioning and thermal.
PCC-CV405.7	Describe different types of building finishes



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	PCC-CV505 Building Planning and Design
PCC-CV505.1	Specify dimensions and space requirements for various elements of the building in relation to human body measurements.
PCC-CV505 .2	Plan, design public building considering principles of planning and Building Bye- Laws and regulations
PCC-CV505.3	Prepare the submission and working drawings of public building.
PCC-CV505.4	Illustrate the procedures for preparing perspective drawings of various objects as well as buildings
PCC-CV505.5	Apply knowledge of architectural composition and terms for betterment of aesthetic view

T.Y. B.Tech (2020-21)

	PCC-CV 501 Water Resource Engineering- I
PCC-CV 501.1	Apply the knowledge of estimation of hydro-meteorological parameters
PCC-CV 501.2	Estimate direct runoff and peak discharge using hydrograph techniques
PCC-CV 501.3	
PCC-CV 501.4	Illustrate different methods of efficient irrigation and minor irrigation works
PCC-CV 501.5	Identify different methods of efficient irrigation by applying basics of irrigation techniques with calculation and assessment of water

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Mr. V. P. Kumbhar	12/3/21	(ASP My.	Dr. A. M. Zende (HOD, Civil

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	PCC-CV502 Design of Steel Structures
PCC-CV502.1	Understand the design philosophy, behavior of steel structure and failure mechanism. (Level 2)
PCC-CV502.2	Analyze and design different types of bolted & welded connections.(Level 3)
PCC-CV502.3	Understand the strength of structural members as per Indian Standards. (Level 3)
PCC-CV502.4	Analyze and design members subjected to tensions, compression and flexure. (Level 3)

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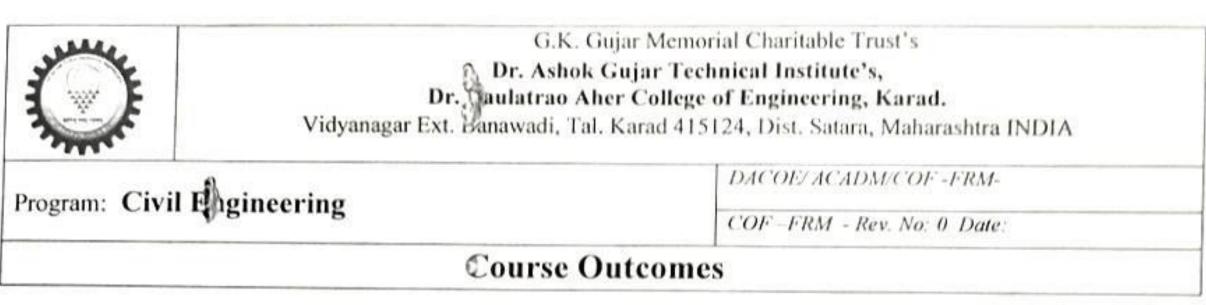


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Program: Civil Engineering

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	(PCC-CV503)- Environmental Engineering – I
PCC-CV503.1	Grading and Describe the various sources of water with respect to quality and quantity of water.
PCC-CV503.2	Design the various water treatment units.
PCC-CV503.3	Illustrate the special water treatments and sequencing of treatment for various qualities of surface & ground water.
PCC-CV503.4	Describe the various components related to transmission and design of distribution of water.
PCC-CV503.5	Summarize the different water supply appurtenances.



	OE – I (OEC-CV506) Open Elective – Energy and Environment
CV 506.1	Compare conventional and renewable energy resources
CV 506.2	Identify scope and potential of renewable energy
CV 506.3	Analyze suitability of renewable energy resource.
CV 506.4	Explain energy management principles and strategies

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Course Outcomes

	PCC-CV707 Report on Field Training	
PCC- CV707.1	Understanding the various key roles and responsibility of Civil Engineer.	
PCC-CV707.2	Remembering the steps involved in infrastructure development.	
PCC-CV707.3	Know materials, equipments and their properties that are involved in construction.	
PCC-CV707.4	Preparing report for Field Training.	

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COF -FRM- Rev. No: 0 Date:

Course Outcomes

	CV305 Transportation Engineering I	
CV305.1	Design features such as super-elevation sight distance section of road in cutting and filling	
CV305.2	Design flexible and rigid pavement as per IRC	
CV305.3	Carryout quality control for WBM, BBM, and concrete pavements	
CV305.4	Design and plan airport, runways terminals buildings, hangers and aprons.	
CV305.5	Plan different methods of tunneling in soft and hard rock's	

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Course Outcomes

	CV403 Quantity Surveying And Valuation	
CV-403.1	Understand the fundamentals of quantity survey	
CV-403.2	Prepare rate analysis.	
CV-403.3	Estimate Cost of construction site	
CV-403.4	Calculate the material required for construction site.	
CV-403.5	Student will Demonstrate the ability to prepare tender & valuation of buildings.	

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	CV-404 PROJECT MANAGEMENT AND CONSTRUCTION EQUIPMENTS
CV-404.1	Understand the importance of Project Management tools.
CV-404.2	Plan and Schedule the Project by using CPM, PERT and MSP
CV-404.3	Understand the working of various construction equipments
CV-404.4	Know the importance of Safety and Risk Management in Construction

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	CV405 G Remote Sensing and GIS in Civil Engineering
CV405G.1	Understand the basic concept of Remote Sensing and GIS
CV405G.2	Adopt the principles of physics of Electromagnetic radiations as applied to Remote Sensing.
CV405G.3	Discuss and learns the interrelationship of civil, environmental and geological studies.
CV405G.4	Formulate and apply remote sensing and GIS concepts to engineering problems.

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	CV401 Design of Concrete Structure- I	
CV401.1	Define the concepts of structural design procedure	
CV401.2	Analysis Singly and doubly reinforced beam	
CV401.3	Apply the limit state of collapse and serviceability	
CV401.4	Solve problem on Slab and staircase	
CV401.5	Solve problem on Column and Footing	

Γ		CV407 Design of Concrete Structure- II
1	CV407.1	Apply limit state collapse to design rectangular beam for torsional behaviour in conjunction with flexural and shear (Level 3)

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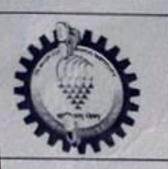
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B.E. Civil (up to 2019-20)

	CV408 Water Resource Engineering- II	
CV408.1	Choose the right type of dam depending on the site conditions.	
CV408.2	Analyze a gravity dam for stability.	
CV408.3	Solve numerical on stability analysis of earthen.	
CV408.4	Explain different parts and components of hydraulic structures like spillway, diversion head work and canals.	
CV408.5	Develop river training solutions for rivers.	

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	CV409 Transportation Engineering- II	
CV409.1	Explain importance of town planning and its past trends.	1000
CV409.2	Make use of different types of urban strategies and management for sustainable urban growth.	WAR.
CV409.3	Explain importance and design parameters of railway engineering.	
CV409.4	Choose different factors and various parameters for construction of bridge structure.	

	CV407 Design of Concrete Structure- II
CV407.1	Apply limit state collapse to design rectangular beam for torsional behaviour in conjunction with flexural and shear (Level 3)
CV 207.2	Solve problem on design two span and three span continuous beam using limit state Method.(Level 3)
CV#07.3	Make use of working state method to design rectangular and circular water tank (Level 3)
CV\$07.4	Illustrate the concept of prestressed concrete(Level 2)
CV407.5	Apply knowelde to identify losses in prestr ss and to design prestressed concrete section (Level 3)

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Course Outcomes

	CV-410E Design of bridges
CV-410E.1	Select the suitable type of bridges according to the site condition.
CV-410E.2	Understand IRC load considerations and its distribution To the load flow mechanism and identify loads on bridges
CV-410E.3	Utilize fundamental concepts for analysis and design of bridge structures.
CV- 410E.4	Design different types of foundations, piers and abutments, and their methods of construction.
CV-410E.5	Select various types of bearings and their suitability for bridges.

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	CV307 Theory of Structure
CV307.1	Know the concept of determinacy and indeterminacy (level 1)
CV307.2	Apply appropriate solution techniques to the problem. (level 2)
CV307.3	Analyze indeterminate structures by using different methods.(level 3)
CV307.4	Interpret the output of different methods(level 2)
CV307.5	Aware of the limitations of the methods of solution.(level 2)