

H.K.E. Society's Sir M. Visvesvaraya College of Engineering

UG Course Outcomes for 2023-24 Courses	
Department of Civil Engineering	
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Mathematics – I for Civil Engineering
Course Code	BMATS101
Course Outcome #	Course Outcome
CO1	Apply the knowledge of calculus to solve problems related to polar curves and learn the notion of partial differentiation to compute rate of change of multivariate functions
CO2	Analyze the solution of linear and nonlinear ordinary differential equations
CO3	Get acquainted and to apply modular arithmetic to computer algorithms
CO4	Make use of matrix theory for solving the system of linear equations and compute eigenvalues and eigenvectors
CO5	Familiarize with modern mathematical tools namely MATHEMATICA/MATLAB/PYTHON/ SCILAB
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Chemistry for Civil Engineering stream
Course Code	BCHEC102
Course Outcome #	Course Outcome
CO1	Identify the terms processes involved in scientific and engineering applications
CO2	Explain the phenomena of chemistry to describe the methods of engineering processes
CO3	Solve for the problems in chemistry that are pertinent in engineering applications
CO4	Apply the basic concepts of chemistry to explain the chemical properties and processes
CO5	Analyze processes associated with chemical substances in properties and multidisciplinary situation
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Computer Aided Engineering Drawing
Course Code	BCEDK103
Course Outcome #	Course Outcome
CO1	Draw and communicate the objects with definite shape and dimensions
CO2	Recognize and Draw the shape and size of objects through different views
CO3	Develop the lateral surfaces of the object

CO4	Create a Drawing views using CAD software.
CO5	Identify the interdisciplinary engineering components or systems through its graphical representation.
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Introduction to C Programming
Course Code	BESCK104E
Course Outcome #	Course Outcome
CO1	Elucidate the basic architecture and functionalities of a Computer
CO2	Apply programming constructs of C language to solve the real-world problems
CO3	Explore user-defined data structures like arrays, structures and pointers in implementing solutions to problems
CO4	Design and Develop Solutions to problems using modular programming constructs such as functions and procedures
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Waste Management
Course Code	BETCK105F
Course Outcome #	Course Outcome
CO1	Apply the basics of solid waste management towards sustainable development
CO2	Apply technologies to process waste and dispose the same
CO3	Design working models to convert waste to energy
CO4	Identify and classify hazardous waste and manage the hazard
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Communicative English
Course Code	BENGK106
Course Outcome #	Course Outcome
CO1	Understand and apply the Fundamentals of Communication Skills in their communication skills.
CO2	Identify the nuances of phonetics, intonation and enhance pronunciation skills.
CO3	To impart basic English grammar and essentials of language skills as per present requirement
CO4	Understand and use all types of English vocabulary and language proficiency
CO5	Adopt the Techniques of Information Transfer through presentation.
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I

Course Name	Indian Constitution
Course Code	BICOK107
Course Outcome #	Course Outcome
C01	Analyse the basic structure of Indian Constitution.
C02	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution.
C03	Know about our Union Government, political structure & codes, procedures
C04	Understand our State Executive & Elections system of India.
C05	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	I
Course Name	Scientific Foundation for Health
Course Code	BSFHK158
Course Outcome #	Course Outcome
C01	To understand and analyse about Health and wellness (and its Beliefs) & It's balance for positive mindset.
C02	Develop the healthy lifestyles for good health for their better future
C03	Build a Healthy and caring relationships to meet the requirements of good/social/positive life.
C04	To learn about Avoiding risks and harmful habits in their campus and outside the campus for their bright future.
C05	Prevent and fight against harmful diseases for good health through positive mindset.
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Mathematics – II for Civil Engineering
Course Code	BMATC201
Course Outcome #	Course Outcome
C01	Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing area and volume.
C02	Understand the applications of vector calculus refer to solenoidal, and irrotational vectors. Orthogonal curvilinear coordinates
C03	Demonstrate the idea of Linear dependence and independence of sets in the vector space, and linear transformation
C04	Apply the knowledge of numerical methods in analysing the discrete data and solving the physical and engineering problems.
C05	Get familiarize with modern mathematical tools namely MATHEMATICA/ MATLAB /PYTHON/ SCILAB
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II

Course Name	PHYSICS FOR CIVIL ENGINEERING
Course Code	BPHYC202
Course Outcome #	Course Outcome
C01	Elucidate the concepts in oscillations, waves, elasticity and material failures
C02	Summarize concepts of acoustics in buildings and explain the concepts in radiation and photometry
C03	Discuss the principles photonic devices and their application relevant to civil engineering.
C04	Describe the various natural hazards and safety precautions.
C05	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Engineering Mechanics
Course Code	BCIVC203
Course Outcome #	Course Outcome
C01	Compute the resultant of a force system and resolution of a force
C02	Comprehend the action for forces, moments, and other types of loads on rigid bodies and compute the reactive forces
C03	Analyse the frictional resistance offered by different planes
C04	Locate the centroid and compute the moment of inertia of sections
C05	Analyze the bodies in motion
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Introduction to Mechanical Engineering
Course Code	BESCK204D
Course Outcome #	Course Outcome
C01	Explain the concepts of Role of Mechanical Engineering and Energy sources.
C02	Describe the Machine Tool Operations and advanced Manufacturing process.
C03	Explain the Working Principle of IC engines and EV vehicles.
C04	Discuss the Properties of Common Engineering Materials and various Metal Joining Processes.
C05	Explain the Concepts of Mechatronics, Robotics and Automation in IoT
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Introduction to Phyton Programming
Course Code	BPLCK205B

Course Outcome #	Course Outcome
C01	Demonstrate proficiency in handling loops and creation of functions.
C02	Identify the methods to create and manipulate lists, tuples and dictionaries.
C03	Develop programs for string processing and file organization
C04	Interpret the concepts of Object-Oriented Programming as used in Python
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Professional Writing Skills in Engineering
Course Code	BPWSK206
Course Outcome #	Course Outcome
C01	To understand and identify the Common Errors in Writing and Speaking.
C02	To Achieve better Technical writing and Presentation skills
C03	To read Technical proposals properly and make them to Write good technical reports.
C04	Acquire Employment and Workplace communication skills.
C05	To learn about Techniques of Information Transfer through presentation in different level.
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	II
Course Name	Innovation and Design Thinking
Course Code	BIDTK258
Course Outcome #	Course Outcome
C01	Appreciate various design process procedure
C02	Generate and develop design ideas through different technique
C03	Identify the significance of reverse Engineering to Understand products
C04	Draw technical drawing for design ideas
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	VII
Course Name	Energy and Environment
Course Code	18ME751
Course Outcome #	Course Outcome
C01	Understand energy scenario, energy sources and their utilization.
C02	Understand various methods of energy storage, energy management and economic analysis.
C03	Analyse the awareness about environment and eco system
C04	Understand the environment pollution along with social issues and acts
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	VII

Course Name	Computer Aided Detailing of Structure
Course Code	18CVL76
Course Outcome #	Course Outcome
C01	Prepare detailed working drawing
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	VII
Course Name	Geotechnical Engineering Laboratory
Course Code	18CVL77
Course Outcome #	Course Outcome
C01	Physical and index properties of the soil
C02	Classify based on index properties and field identification
C03	To determine OMC and MDD, plan and assess field compaction program
C04	Shear strength and consolidation parameters to assess strength and deformation characteristics
C05	In-situ shear strength characteristics (SPT-Demonstration)
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	VIII
Course Name	Design of Pre-Stress Concrete
Course Code	18CV81
Course Outcome #	Course Outcome
C01	Understand the requirement of PSC members for present scenario.
C02	Analyse the stresses encountered in PSC element during transfer and at workin
C03	There will be two full questions (with a maximum of four sub- questions) from each module
C04	Each full question will have sub- question covering all the topics under a module
C05	The students will have to answer five full questions, selecting one full question from each module
Table 1: Course Outcomes	
Class	CIVIL ENGINEERING
Semester	VIII
Course Name	Pavement Design
Course Code	18CV825
Course Outcome #	Course Outcome
C01	Systematically generate and compile required data's for design of pavement (Highway & Airfield).
C02	Analyze stress, strain and deflection by boussinesq's, bur mister's and westergaard's theory

C03	Design rigid pavement and flexible pavement conforming to IRC58-2002 and IRC37-2001.
C04	Evaluate the performance of the pavement and also develops maintenance statement based on site specific requirements.

Table 1: Course Outcomes

Class	CIVIL ENGINEERING
Semester	VIII
Course Name	Project Work Phase-II
Course Code	18CVP83

Course Outcome #	Course Outcome
C01	Describe the project and be able to defend it.
C02	Develop critical thinking and problem solving skills
C03	Learn to use modern tools and techniques.
C04	Communicate effectively and to present ideas clearly and coherently both in written and oral forms.
C05	Develop skills to work in a team to achieve common goal
C06	Develop skills of project management and finance.
C07	Develop skills of self learning, evaluate their learning and take appropriate actions to improve it.
C08	Prepare them for life-long learning to face the challenges and support the technological changes to meet the societal needs.

Table 1: Course Outcomes

Class	CIVIL ENGINEERING
Semester	VIII
Course Name	Technical Seminar
Course Code	18CVS84

Course Outcome #	Course Outcome
C01	Develop knowledge in the field of Civil Engineering and other disciplines through independent learning and collaborative study.
C02	Identify and discuss the current, real-time issues and challenges in engineering & technolog
C03	Develop written and oral communication skills
C04	Explore concepts in larger diverse social and academic contexts.
C05	Apply principles of ethics and respect in interaction with others.
C06	Develop the skills to enable life-long learning