



TULSIRAMJI GAIKWAD-PATIL COLLEGE OF ENGINEERING & TECHNOLOGY

Wardha Road, Nagpur - 441108

Accredited with NAAC A+ Grade & NBA Accredited (EE & ME)

Approved by AICTE, New Delhi, Govt. of Maharashtra

(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)



Civil Engineering Department

B.Tech Fourth Sem (NEP)

BCE32401: Structural Analysis

	Course Outcomes
BCE32401.1	Apply knowledge to determine the forces in determinate structures and indeterminate structures
BCE32401.2	Analyze the slope and deflection of beams and frames under structural loading conditions and use the approximate method for analysis of multistoried frame structures
BCE32401.3	Apply knowledge of Influence Line structural members for rolling loads
BCE32401.4	Apply stiffness method to analyze beams and plane frames.
BCE32401.5	Apply direct stiffness method to formulate, stiffness matrix, transformation matrix, load matrix to analyze plane truss.



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Civil Engineering Department

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BCE32402: Surveying

	Course Outcomes
BCE32402.1	Discuss the basic concepts of surveying and use of conventional surveying equipment
BCE32402.2	Implement the basic principles, operation, handling & uses of advanced surveying equipment
BCE32402.3	Sketch the location map, contour map using surveying equipment
BCE32402.4	Interpret linear and angular measurements and elevations using Theodolite surveying
BCE32402.5	Interpret survey data for preparing drawings, plans or maps & to calculate their areas & volumes



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BCE32403: Concrete Technology

	Course Outcomes
BCE32403.1	Determine the test on cement and aggregate which is used on the construction site.
BCE32403.2	Analyze workability tests on fresh concrete and various tests on hardened concrete.
BCE32403.3	Understand working of Nondestructive testing equipment.
BCE32403.4	Apply the knowledge of prepare mix design at different grade of concrete and understanding of application of admixture and its effect on properties of concrete.
BCE32403.5	Predict the effect of process of manufacturing on different properties of concrete.



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BEC32406: Instrumentation & Sensor Technologies for Engineering Applications

	Course Outcomes
BEC32406.1	Analyze the components, working of a measurement system and sensors.
BEC32406.2	Assess key characteristics of transducers, including sensitivity and accuracy.
BEC32406.3	Relate practical experience in integrating, testing, digital and smart sensors.



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BCE32406: Plastic Waste Management (Open Elective-II)

	Course Outcomes
BCE32406.1	Identify types of plastics, their applications, and the global trends in plastic production & consumption.
BCE32406.2	Interpret the impact of plastic waste on environmental entities and the relevant regulations governing plastic waste management.
BCE32406.3	Evaluate plastic waste management practices, and propose alternative materials that can reduce plastic pollution.



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BCE32404: Project Management

	Course Outcomes
BCE32404.1	Analyze the characteristics of projects and identify the tools & techniques used in project management.
BCE32404.2	Apply project organizational structures and contract management principles to real-world scenarios.
BCE32404.3	Analyze project networks & identify critical paths using PERT and CPM techniques.