



GOVERNMENT COLLEGE OF ENGINEERING AMRAVATI

(An Autonomous Institute of Govt. of Maharashtra)

"Towards Global Technological Excellence"

Phone: 0721-2531930

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Website: www.gcoea.ac.in

Email: principal@gcoea.ac.in



Date -17 May 2025

Action Taken

With regard to suggestions/observation from the action taken on the minutes of IQAC meeting held on 12.07.24

Sr.	Action suggested in the meeting	Action Taken
1	Point No.4 a) For updation of the Multidisciplinary Tracks if possible as per the latest technologies b) Faculty with the specialisation in the specific MDM track is given preference for effective teaching If possible for MDM allotment the app may be developed in the institute	Action is Completed
2	Point No.5 The Academic Audit should be planned preferably for only one academic year AY 2023-2024 in the annual year. Accordingly plan the Academic audit of 2023-2024 in the month of Oct-Nov 24	Action is Completed [Academic Audit is held on 25 October 2024]
3	Point No.5 The students contribution and achievement in the research and start-up innovation should be considered while evaluation of the Academic audit of the concerned department	Action Completed
4	Point No 9 Organisation of the Interdisciplinary Faculty development program under the Quality Assurance cell in collaboration with one/two the departments in coming near future.	Action is in progress One session of Dr B.N.Chaudhari with Heads and Deans is conducted regarding the accreditation process and requirements
5	Point No 10 The committee members suggested for inclusion of First and second year students in Design Thinking kind of workshops as they can implement the design thinking concept in the projects	Action Completed



Principal
Government College of Engineering
Amravati



सत्यमेव जयते
महाराष्ट्र शासन

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DEGREES OFFERED UNDER NATIONAL
EDUCATION POLICY 20 20



VISION

Towards Global Technological Excellence

MISSION

- Creating Human resource of global competence.
- Providing excellent academic and research environment.
- Striving For development through technology transfer.
- Inculcating the attitude of entrepreneurship.

Government College of Engg., Amravati, VMV Road, Kathora Naka, Amravati, M.S. - 444604



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0721-2531930



GOVERNMENT COLLEGE OF ENGINEERING AMRAVATI

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SALIENT FEATURES OF NEP 2020

- 1. Multidisciplinary Education:** Foster creativity through cross disciplinary learning in engineering and beyond.
- 2. Holistic and Flexible Curriculum:** Experience a well-rounded education with flexible course options.
- 3. Multiple Entry and Exit Points:** Enjoy flexibility with multiple entry and exit points for certificates, diplomas, and degrees.
- 4. Focus on Research and Innovation:** Engage in cutting-edge research and innovation with robust support

KEY FEATURES OF CURRICULUM

- 1. Multiple entry and exit option after every year.**
- 2. Provision for Open Electives (OE), Vocational and Skill Enhancement Courses (VSE), Ability Enhancement Courses (AE), Indian Knowledge System (IKS), Value Education Courses (VE), CoCurricular Courses (CC) in addition to program core courses.**
- 3. Mandatory internship of one semester.**
- 4. Credits for Value education courses, Ability Enhancement Courses, Co-Curricular Curricular Activities.**
- 5. Mandatory Non-Credit Courses.**
- 6. Interdisciplinary and multidisciplinary education through single and double minors and open electives.**
- 7. Skill based courses and multiple exit level.**
- 8. Provision for learning in online mode through Swayam / NPTEL etc courses**
- 9. Provision for B.Tech. Honors with Research degree through research project.**
- 10. Opportunity for learner to choose courses of their interest in all disciplines.**
- 11. Provision of Skill Based Courses and internship/Field project/mini projects for exit options at each level.**
- 12. Flexibility for all types of learners i.e. Good, Normal and Exit**

DEGREES OFFERED BY THE INSTITUTE

B. Tech. Major with Multidisciplinary Minor (167 CREDITS)

OPPORTUNITIES FOR STUDENTS IN ADDITION TO B.TECH MAJOR WITH MINOR	Exit
B. Tech. Honors and Multidisciplinary Minor (167+18 = 185 CREDITS)	Additional 08 credits in the form of skill-based courses / labs, internship, mini projects shall be offered in 8 weeks.
B. Tech. Honors with Research and Multidisciplinary Minor (167+18 = 185 CREDITS)	
B. Tech. with Double Minor (167+18 = 185 CREDITS) (Multidisciplinary and Specialization Minor)	

Note:-STUDENTS WITH CGPA of 7.5 without backlog courses at the end of fourth semester and should have earned 84 credits are eligible for admission to the UG Bachelor's Degree with Honours/ Research/ Double Minor.



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MULTIDISCIPLINARY MINOR DEGREES OFFERED BY THE INSTITUTE

B.TECH MAJOR IN INSTRUMENTATION ENGINEERING

CIVIL ENGINEERING DEPARTMENT

- BUILDING CONSTRUCTION & MANAGEMENT (TRACK-I)
- BUSINESS ECONOMICS (TRACK-II)

MECHANICAL ENGINEERING

- MECHANICAL ENGINEERING (TRACK-I)
- AUTOMATION & ROBOTICS (TRACK-II)
- INDUSTRIAL MANAGEMENT (TRACK-III)

INSTRUMENTATION ENGINEERING

- BANKING AND FINANCE (TRACK-II)

COMPUTER ENGINEERING

- DATA SCIENCE (TRACK-I)
- AI (TRACK-II)

INFORMATION TECHNOLOGY

- MACHINE LEARNING (TRACK-I)
- SOFTWARE ENGINEERING (TRACK-II)

ELECTRICAL ENGINEERING

- ENERGY ENGINEERING (TRACK-I)
- ELECTRICAL MOTORS & DRIVES (TRACK-II)

ELECTRONICS & TELECOMMUNICATION ENGINEERING

- INTERNET OF THINGS (TRACK-I)
- ELECTRONICS & TELECOMMUNICATION ENGG (TRACK-II)

OPTIONS FOR MINOR



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MULTIDISCIPLINARY MINOR DEGREES OFFERED BY THE INSTITUTE



B.TECH MAJOR IN COMPUTER SCIENCE & ENGINEERING

ELECTRONICS & TELECOMMUNICATION ENGINEERING

- INTERNET OF THINGS (TRACK-I)
- ELECTRONICS & TELECOMMUNICATION ENGG (TRACK-II)

CIVIL ENGINEERING DEPARTMENT

- BUILDING CONSTRUCTION AND MANAGEMENT (TRACK-I)
- BUSINESS ECONOMICS (TRACK-II)

MECHANICAL ENGINEERING

- MECHANICAL ENGINEERING (TRACK-I)
- AUTOMATION & ROBOTICS (TRACK-II)
- INDUSTRIAL MANAGEMENT (TRACK-III)

INSTRUMENTATION ENGINEERING

- INSTRUMENTATION AND CONTROL (TRACK-I)
- BANKING AND FINANCE (TRACK-II)

ELECTRICAL ENGINEERING

- ENERGY ENGINEERING (TRACK-I)
- ELECTRICAL MOTORS & DRIVES (TRACK-II)

OPTIONS FOR MINOR

ELECTRONICS & TELECOMMUNICATION ENGINEERING

- INTERNET OF THINGS (TRACK-I)
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B.TECH MAJOR IN ELECTRONICS & TELECOMMUNIC ATION ENGINEERING

CIVIL ENGINEERING DEPARTMENT

- BUILDING CONSTRUCTION AND MANAGEMENT (TRACK-I)
- BUSINESS ECONOMICS (TRACK-II)

MECHANICAL ENGINEERING

- MECHANICAL ENGINEERING (TRACK-I)
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B.TECH MAJOR IN INFORMATION TECHNOLOGY

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Minor in Computer Science & Engineering		Minor in Information Technology	
Data Science (TRACK-I)	AI (TRACK-II)	Machine Learning (TRACK-I)	Software Engineering (TRACK- II)
CS1315- Fundamentals of data science	CS1316 - Introduction to Artificial Intelligence	IT1315- Essential math for machine learning	IT1316- Data Structure & Algorithms
CS1415- Computational Data Analytics	CS1416- Data Mining	IT1415- Artificial Intelligence	IT1416- Software Engineering
CS1515- Natural Language Processing	CS1516- Introduction to Machine Learning	IT1515- Machine Learning	IT1516-Object Oriented Design & Programming
CS1615- Application of data science	CS1616- Optimization Methods in Machine Learning	IT1615- Deep Learning	IT1616 - Software Testing
CS1715 - Marketing Analytics for Big Data	CS1716- Human Applications of AI	IT1715- Minor Project	IT1716- Minor Project

Minor in Civil Engineering		Minor in Mechanical Engineering		
Building Construction and Management (TRACK-I)	Business Economics (TRACK-II)	Mechanical Engineering (TRACK-I)	Automation & Robotics (TRACK-II)	Industrial Management (TRACK-III)
CE1315 Basics of Civil Engineering	CE1316 Principles of Macroeconomics	ME1315 Production Technology	ME1316 Hydraulics and Pneumatics	ME1317 Organizational Behaviour
CE1415 Building Construction	CE1416 Principles of Microeconomics	ME1415 New and Renewable Energy Sources	ME1416 Automation in Manufacturing	ME1417 Human Resource Management
CE1515 Building Planning & Drawing	CE1516 Business Statistics	ME1515 Automobile Engineering	ME1516 Mechatronic Systems	ME1517 Material Management
CE1615 Building Estimates & Tendering	CE1616 Financial Accounting	ME1615 Basic of Product Design	ME1616 Industrial Robotics	ME1617 Marketing Management
CE1715 Construction Management	CE1716 Minor Project	ME1715 Industrial Management and Quality Control	ME1716 Computer Integrated Manufacturing	ME1717 Corporate Financial Reporting and Analysis



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Minor in Electrical Engineering		Minor in Electronics and Telecommunication Engineering	
Energy Engineering (TRACK- I)	Electrical Motors & Drives (TRACK-II)	Internet of Things (TRACK-I)	Electronics and Telecommunication Engg. (TRACK-II)
EE1315 Introduction to Renewable Energy	EE 1316 Electrical Motors	ET1315 Introduction to internet of things	ET1316 Digital Circuits
EE1415 Energy Resources, Environment and Economics	EE 1416 Special Electrical Machines	ET1415 IoT Architecture & Protocols	ET1416 Communication Engineering
EE1515 Energy Efficiency in Electrical Utilities	EE 1516 Power Electronics	ET1515 Programming with Arduino and Raspberry-Pi	ET1516 Microprocessor & Embedded System
EE1615 Energy Management	EE 1616 Electrical Drives and Control	ET1615 Industrial Internet of Things	ET1616 Wireless Communication
EE1715 - Project	EE 1716- Project	ET1715- Project	ET1716 Project

Minor in Instrumentation Engineering	
Instrumentation and Control (TRACK-I)	Banking and Finance (TRACK-II)
IN1315 Industrial Measurement I	IN1316 Bank operations Management
IN1415 Industrial Measurement II	IN1416 Strategic management and innovation in banking
IN1515 Control system Engineering	IN1516 Security analysis and portfolio management
IN1615 Industrial Automation	IN1616 Spreadsheet based data analysis
IN1715 Programming for PLAC, DCS & SCADA	IN1716 IT operations & Management

Report on Interaction Program of BoG chairman with Students on ‘Design Thinking’

On 17th May 2024, Dr. Sachin Mandavgane Chairman, Board of Governance Government College of Engineering Amravati. interacted with students and took the introductory session on ‘Design Thinking: Need, Aspects’, etc. Teaching staff and students from all branches including first year were present.

The program was chaired by respected Principal Dr. A. M. Mahalle. The Session was started with the felicitation of Hon’ble Chairman Dr. Mandavgane by Hon Principal Dr.Mahalle .Dr. M. V. Jape, Dean Student Welfare gave preamble for organizing this .



After, the session started Dr Mandavgane sir explained the concept of DESIGN THINKING in very simple words as follows, Design Thinking is a method for practical, creative resolution of problems, and creation of solutions. It is a form of solution-based or solution-focused thinking with the intent of producing a much needed/required solution for a problem.

While the approach to teach DT may be different, we can find similarities in the way it is practiced. It doesn't differ much from the scientific method which is taught and used in schools

under various subjects. Just like a science or a math's problem, DT also begins by stating a hypothesis and then, through various inputs, suggestions, and permutations and combinations that move toward forming a model or theory. The main difference is that inputs/suggestions in a DT process are all aimed towards solving the identified problem or filling the identified gap in a service/model/product etc. It includes “building up” ideas, with few, or no, limits at a stretch during a brainstorming session. This helps reduce fear of failure in the participant(s)/students and encourages the process of input and participation from all. The outcome of such a brainstorming phase is what we commonly refer to as “thinking out of the box”. For the purposes of tinkering & innovating toward the objectives of ATLs, the DT process can be defined through five distinct stages: empathize, define, ideate, prototype and test.



Stage 1: Empathy Empathy is the ability to put yourself in someone else's shoes to start “seeing” things through his/her eyes.

Stage 2: Define The Point of View (POV) statement helps transition into the Define stage in Design Thinking. Guide students in understanding the three elements that make up Point of View - the user, need and insight.

Stage 3: Ideate Using different ideation techniques, help students brainstorm, explore their creative potential and come up with solutions to challenges.

Stage 4: Prototype Students now need to validate the ideas generated. Help them trim things down, or marry thoughts and customize. The idea needs to become tangible.

Stage 5: Test

At the end, Dr Mandavgane sir also showed the different videos of students and innovative minds who have worked on different questions and found problem. Rather than only focusing on the idea, we also have to focus on the tangibility of that idea.

After this exciting session, the felicitation of meritorious students of Institute was also done.



Madhurya Thakare from 1st Year Civil won the contest organised for making Diamond Jubilee logo. He was felicitated by Hon'ble Chairman. Also, Team NAYAN for their new and exciting startup, The Robo tech Forum and Janvi Alekar from CSE final Year for website designing was also felicitated and praised by Hon'ble chairman. Also, Parimal Deshmukh was also felicitated for efficient organization and conduction of Diamond Jubilee lecture series. This program was organised on the advice of IIC. The program received good response from students. The deans, professors from all departments and students from first to final year were also present. The Vote of Thanks was delivered by Dr M. V. Jape dean Student Welfare. After that program was ended.