



Editorial Board

Advisor: -

Prof. (Dr.) K.K. Dwivedi

Chief editor: -

Prof. Priyanka Rai

Editors: -

Dhirendra Shukla

Dr. Sibi Jose

Dr. Manish Joshi

Dr. Ranjeeta Khare

Prof. Sandeep Shukla

Prof. Monika Raghuvanshi

Prof. Pankaj Dixit

About Us

Technocrats Institute of Technology (Excellence) in Bhopal, Madhya Pradesh is a premier educational institution that has been imparting quality and value-based education for the past 16 years. Our vision is to establish ourselves as a center of excellence in engineering education in India, with global standards. Our institute is affiliated with Rajiv Gandhi Proudyogiki Vishwavidyalay, Bhopal for its engineering and management program ensuring that our students receive an education that is recognized nationwide. We are located in Anand Nagar on Raisen Road in Bhopal, which makes us easily accessible and convenient for students from all over central India. Our dedicated faculty and staff ensure that our students receive the best education, and we provide them with state-of-the-art facilities and resources that are essential for their academic and personal growth. We also encourage our students to participate in extracurricular activities and provide them with opportunities to develop their skills and talents. At Technocrats Institute of Technology (Excellence), we are committed to shaping the future of our students by providing them with a world-class education that is grounded in values and ethics.



Vision

To become a “Centre of Excellence” for quality education in the field of engineering, research and management so as to produce globally competent and socially responsible professionals, who can contribute to technological and socio-economic development of the nation as a whole and region in particular.

Mission

- M.1: To educate students with deep professional knowledge through innovative teaching-learning process and to make them aware of cutting-edge technology so as to become capable of understanding and addressing the issues of society, state and the country.
- M.2: To create in-house facilities for research and innovation to provide solution to the industrial problems.
- M.3: To inculcate right human values and professional ethics, leadership qualities, communication and entrepreneurship skills in students to meet the need of society.

Memorandum of understanding (MOU)

Technocrats Institute of Technology (Excellence), Bhopal, Partners with Capgemini India for Center of Excellence. Technocrats Institute of Technology (Excellence), Bhopal, is proud to announce the signing of a Memorandum of Understanding (MoU) with Capgemini India, a global leader in technology and consulting. This collaboration marks a significant step forward in establishing the Center of Excellence at the institute, aimed at fostering innovation and skill development. The MoU signing ceremony took place in the presence of esteemed delegates from Capgemini India, whose confidence in our institution underscores the potential of this partnership. This initiative promises to open new avenues for growth, learning, and professional opportunities for our students and faculty. We are excited to embark on this journey of fruitful collaboration and express our heartfelt gratitude to Capgemini India for their unwavering support and belief in our vision.



Celebrates Placement Achievers' and Annual Day on 10th May 2023

Technocrats Institute of Technology (Excellence), Bhopal, proudly celebrated its Placement Achievers' and Annual Day on 10th May 2023. The event was honored by the presence of **Shri Mangubhai Patel Ji, Hon'ble Governor** of Madhya Pradesh, and **Shri Faggan Singh Kulaste Ji, Hon'ble Union Minister** of State for Rural Development and Steel, Government of India.

The celebration was a momentous occasion, highlighting the achievements of students who secured placements in reputed companies. Their dedication and success reflect the institute's unwavering commitment to academic and professional excellence.



NSS Unit Established

Technocrats Institute of Technology (Excellence), Bhopal, proudly announced the establishment of its National Service Scheme (NSS) Unit and successfully conducted an NSS Orientation Program for students.

The program featured **Dr. Ashok Kumar Shroti**, Regional Director, NSS (MP & CG), as the Chief Guest, and **Mr. Rahul Singh Parihar**, Program Officer, Open Unit-NSS, BU Bhopal, as the Guest of Honour. Both distinguished speakers shared their invaluable insights and experiences, motivating students to embrace the ethos of selfless service and active social contribution.

With the establishment of its NSS Unit, Technocrats Institute of Technology (Excellence) is committed to empowering students with opportunities to engage in community service, build leadership skills, and drive social change.



Department of Computer Science & Engineering

Vision of the Department

To produce technically and ethically competent, socially responsible and innovative Computer Science & Engineering professionals through quality education, who can contribute to techno and socio-economic development of the nation as a whole and region.

Mission of the Department

M1: To create an academic ambience for achieving academic excellence by imparting in depth. Domain knowledge to the students through effective teaching learning, conceptual and practical exposure with the latest tools and technologies.

M2: To provide an environment & opportunity for students to utilize their potential and technical skills required for overall development through collaborative and professional development activities.

M3: To inculcate innovative research skills, promote professional ethics & entrepreneurship skills amongst the students to cater to the needs of Society.

Program Educational Objectives (PEOs)

PEO1: Graduate will become an established professional in the field of Computer Science & Engineering and related fields.

PEO2: Graduates will acquire a well-built foundation to pursue higher studies and research.

PEO3: Graduates will be able to inculcate effective communication skills, teamwork, ethics and leadership skills required to become an innovative and successful entrepreneur.

Program Specific Outcomes (PSOs)

PSO1: Graduate will develop ability to design and develop computer-based applications of moderate complexity in the areas of database system, web technology and machine learning.

PSO2: Graduates will be able to apply standard software project management practices and methods to deliver quality projects.

PSO3: Graduates will be able to analyze and develop cost effective algorithms for real time engineering/social applications.

PATENTS

Dr. Yogadhar Pandey published a patent on 'Automatic Salt Segmentation with UNET in python using Deep Learning' with the application number 202141061638.

Dr. Rachna Kamble published a patent on 'Method and System for developing efficient load balancing using priority algorithm in cloud computing' with the application number 202121061160.

Ms. Bhavna Choubey published a patent on 'AUTOMATED HYDROPONICS SYSTEM USING IOT DEVICES' with the application number 202221009360.

Mr. Ram Sahu published a patent on 'Artificial Intelligence and Machine Learning approaches for forecasting and prediction of Covid-19 Pandemic' with the application number 202221002366.

12th IEEE International Conference on Communication Systems and Network Technologies (CSNT-2023)

Technocrats Institute of Technology (Excellence), Bhopal, proudly hosted the 12th IEEE International Conference on Communication Systems and Network Technologies (CSNT-2023) from 8th to 9th April 2023. Sponsored by MPCST, Bhopal, the two-day conference brought together leading experts, researchers, and academicians to explore advancements in communication systems and network technologies.

The conference was inaugurated amidst the gracious presence of esteemed dignitaries:

- **Chief Guest:** Shri Manu Shrivastava, IAS, Additional Chief Secretary, Department of Technical Education, Skill Development & Employment, Government of Madhya Pradesh.
- **Guest of Honour:** Dr. Sunil Kumar, Vice-Chancellor, RGPV, Bhopal; Dr. Anil Kothari, Director General, MPCST, Bhopal; and Dr. G.S. Tomar, Chairman, IEEE MP & CG Sections.
- **Special Guest:** Dr. Subhasish Banerjee, Chairman, Institute of Town Planners India.
- **Keynote Speaker:** Dr. Anupam Sharma, Scientist H, DRDO, Hyderabad.

The event was further enriched by the presence of the Hon'ble leadership of Technocrats Group:

- Ms. Sadhana Karsoliya, Chairperson.
- Dr. R.R. Karsoliya, Chief Patron.
- Mr. Sourabh Karsoliya, Vice Chairman.

The conference featured insightful keynote addresses, technical sessions, and research paper presentations, fostering knowledge exchange and collaboration in cutting-edge technologies.

CSNT-2023 was a resounding success, reinforcing the institute's commitment to academic excellence and innovation in technology.



Department of CSE-Artificial Intelligence & Machine Learning

Vision of the Department

To equip students with the skills and knowledge needed to become leaders in AI and ML, fostering innovation in the industry and creating a positive societal impact through advanced technologies.

Mission of the Department

M.1: To build a strong foundation in Artificial Intelligence and Machine Learning, empowering students to tackle real-world challenges with innovative solutions.

M.2: To develop resilient professionals by encouraging them to create applications for industry innovation.

M.3: To foster a research-driven mindset in students, inspiring them to develop practical applications that contribute positively to society.

Program Educational Objectives (PEOs)

PEO1: Apply appropriate theory, practices, and tools of machine intelligence to the specification, design, implementation, maintenance, and evaluation in the workplace or in higher education.

PEO2: Adapt, contribute and innovate new technologies in their computing profession by working in teams to design, implement, and maintain in the key domains of Artificial Intelligence & Machine Learning.

PEO3: Function effectively in the work place as competent Artificial Intelligence & Machine Learning Professionals, Entrepreneurs or Researchers or maintain employment through lifelong learning such as professional conferences, certificate programs or other professional educational activities, ethics, and societal awareness.

Program Specific Outcomes (PSOs)

PSO1: The ability to understand, analyze, and develop computer programs across diverse areas such as algorithms, system software, multimedia, web design, big data analytics, and networking, enabling the efficient design of complex computer-based systems.

PSO2: The ability to understand the evolution of computing, apply best practices in software project development, and utilize open-ended programming environments to deliver high-quality solutions that address real-world challenges, drive business success, and meet future demands.

PSO3: The ability to leverage modern programming languages, environments, and platforms to create innovative career opportunities, pursue entrepreneurship, engage in lifelong learning, and foster a passion for advanced studies, while also instilling moral values and ethics to nurture responsible citizenship.

Department of Electrical & Electronics Engineering

Vision of the Department

To impart quality education in various fields of engineering, technology & management and to develop the institute into a center of academic excellence.

Mission of the Department

To mold the students into competent technocrats to become professionally skilled, intellectually adept and socially responsible, to contribute to society through quality teaching and providing the conducive learning environment.

Program Educational Objectives (PEOs)

PEO 1: Graduates will become established professionals in the field of Electrical & Electronics Engineering and related fields with sound ethical values.

PEO 2: Graduates will demonstrate all necessary engineering and scientific competence to become an entrepreneur in the field of Electrical & Electronics Engineering and allied fields considering social and environmental issues.

PEO 3: Graduates will possess a solid foundation in the field of Electrical & Electronics Engineering to be applied in their higher studies and research.

Program Specific Outcomes (PSOs)

PSO 1: Graduates will show ability to analyze, design, and implement electrical machines, power electronics, instrumentation, control systems for the overall electrical power system.

PSO 2: Graduates will show the ability to apply appropriate techniques and modern engineering hardware and software tools in power systems and power electronics in the field of Electrical & Electronics Engineering.

PSO 3: Graduates will show ability to

MoU with CRISP, Bhopal

Technocrats Institute of Technology (Excellence), Bhopal, has entered into a strategic partnership with CRISP India (Centre for Research and Industrial Staff Performance), an esteemed organization under the Department of Technical Education and Skill Development, Government of Madhya Pradesh.

Through this Memorandum of Understanding (MoU), the institute aims to facilitate the exchange of expertise for conducting industrial research projects, providing consultancy services, and advancing skill

upgradation initiatives. This collaboration reflects a shared commitment to fostering innovation, industry-academia synergy, and enhancing professional competencies.

Technocrats Institute of Technology (Excellence) is delighted to collaborate with CRISP India and is confident that this partnership will empower students and faculty with transformative opportunities in industrial research and skill development.



Industrial Visit to Vardhman Agro Fresh

The Department of Electrical Engineering, Technocrats Institute of Technology (Excellence), organized an insightful industrial visit to Vardhman Agro Fresh on 15th April 2023.

During the visit, Mr. Abhijeet Banerjee, Cold Storage Manager, provided students with a comprehensive understanding of the theoretical and practical aspects of cold chamber control using PLC (Programmable Logic Controller).

Students explored various sections of the facility, including the CA Controller, Machine Room, Control Room, and Nitrogen Chamber, gaining valuable insights into their functionality and operations.

This hands-on experience offered students a deeper understanding of industrial processes and the critical role of automation in modern cold storage systems. The visit was a significant step in bridging academic knowledge with real-world applications.



Industrial Visit to EV Cosmos

The Department of Electrical Engineering, Technocrats Institute of Technology (Excellence), organized an enriching industrial visit to EV Cosmos, Govindpura, Bhopal, on 12th April 2023.

The visit began with an insightful session by Mr. Amitabh Shivpuri, Managing Director of EV Cosmos, who introduced students to the latest advancements in electric vehicles and discussed opportunities in entrepreneurship within the EV industry.

Ms. Versha Kumari, HR Manager, provided a detailed demonstration of EV charging modules, including 7.7 kWh, 11 kWh, 22 kWh, 30 kWh, and 60 kWh systems. Her presentation highlighted the importance of advanced charging solutions in the growing EV ecosystem.

Mr. Shiv Kumar, Technical Expert, offered hands-on technical exposure, explaining the workings, maintenance, and practical aspects of EV charging stations. The interactive session allowed students to engage and clarify their queries, enhancing their understanding of the EV technology landscape.

A total of 30 students, accompanied by Mr. Jitendra Kumar, visited the facility, making the event a valuable learning experience that bridged theoretical knowledge with industry practices.



Department of Electronics & Communication Engineering

Vision of the Department

To become a “center of excellence” in the field of Electronics and Communication Engineering by transforming the students into competent professionals with high ethical values and fulfilling societal needs.

Mission of the Department

M.1: To create an academic ambience for achieving academic excellence and producing competent graduates through effective teaching learning process.

M.2: To provide exposure of modern tools and cutting-edge technologies in the field of Electronics and Communication Engineering.

M.3: To develop adequate and appropriate facilities and provide an environment to stimulate multidisciplinary interaction.

M.4: To enhance employability by inculcating problem-solving abilities, team spirit, leadership qualities and professional ethics.

Program Educational Objectives (PEOs)

PEO 1: Graduates will become established professionals in the field of Electronics and Communication Engineering, software development and other related fields, who are adaptable in any environment and can practice the ethics of their professions, consistent with a sense of social responsibility.

PEO 2: Graduates will possess all necessary engineering and scientific competence to become an innovative entrepreneur in the fields related to Electronics and Communication Engineering and allied disciplines, with due consideration to social and environmental issues.

PEO 3: Graduates will continue to develop professionally through lifelong learning, higher studies and research expertise in multidisciplinary areas to meet the expectations of their organization and society.

Program Specific Outcomes (PSOs)

PSO1: Graduates will be able to solve complex engineering problems and propose solution in the field of electronics and signal processing as per industry requirement.

PSO2: Graduates will be able to design and develop solutions for the realistic problems of society using VLSI and embedded systems.

PSO3: Graduates will adapt modern tools and technology to develop wireless communication projects in context of societal need and environment issues.

Internet of Things (IOT) using Arduino Workshop sponsored by the IETE Student Chapter

Department of Electronics and Communication Engineering, Technocrats Institute of Technology & Science and Technocrats Institute of Technology, Bhopal organized Four days workshop on the topic " Internet of Things (IOT) using arduino workshop " for B.Tech students on date 06/02/2023- 10/02/2023. This is a hands-on workshop, where you'll learn how to create a Bluetooth remote or monitoring device, following a step-by-step learning structure.

1. Arduino Programming
2. Bluetooth AT Command Configuration
3. Arduino Hardware Control and Sensor Reading
4. Android App Development with MIT App Inventor
5. Data Conversion from Arduino to Android App
6. Bluetooth Control Hardware and Deliver Sensor Data
7. Local WiFi setup for smart IoT devices. IoT platform to create data loggers



Department of Civil Engineering

Vision of the Department

To develop technically competent and socially responsible Civil Engineering professionals with up-to-date knowledge and innovative ideas for contributing in techno and socio-economic development of the country as a whole and region in particular.

Mission of the Department

M1: To achieve academic excellence in Civil Engineering by imparting in-depth technical knowledge to the students through conceptual and practical exposure on latest tools and technologies.

M2: To provide an environment & opportunity for students to grow and bring out their inherent talents for their overall development through collaborative and professional activities and prepare them for lifelong learning in global perspectives.

Program Educational Objectives (PEOs)

PEO 1: Graduate will become an established professional in the field of Civil Engineering and related fields with proven teamwork and leadership records in their workspace and the society.

PEO 2: Graduate will continue to develop professionally through lifelong learning, higher studies and research expertise in multidisciplinary areas to meet the expectations of their organization and the society.

PEO 3: Graduate will possess all necessary engineering and scientific competence to become an innovative entrepreneur in the fields related to Civil Engineering and allied disciplines, with due consideration to social and environmental issues.

PEO 4: Graduate will be able to adapt any environment and practice the ethics of their professions, consistent with a sense of social responsibility.

Program Specific Outcomes (PSOs)

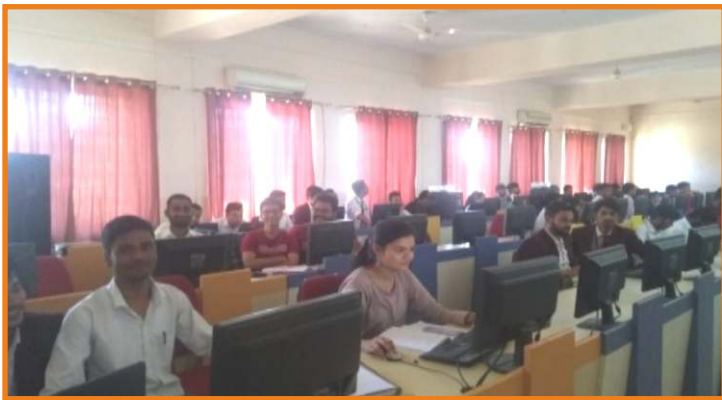
PSO 1: Graduates will be able to apply the knowledge of analysis and design to cater the infrastructural need of the society in Structural, Hydraulic, Transportation and Irrigation related fields.

PSO 2: Graduates will be able to execute quality construction work within the stipulated period of time and resources with due consideration of energy conservation and surrounding ecology.

PSO 3: Graduates will be able to plan and execute civil engineering projects applying relevant codes of practice for materials and techniques.

STADD PRO Training

A 7 days training program was organised for VIth semester students on STADD PRO with a view to introduce students about design of civil engineering structures using software.



SITE VISIT Kolar Water Treatment Plant Visit

On January 18, 2023, 6th-semester students embarked on a significant educational journey with a site visit to the Kolar Water Treatment Plant. Immersed in practical learning, students delved into the intricacies of water treatment processes. They gained insights into various treatment methods, including coagulation and sedimentation tanks, as well as rapid sand filters.

Exploring each element of the plant, students observed firsthand the application of theoretical knowledge in real-world scenarios. The visit not only broadened their understanding of water treatment but also underscored the importance of environmental stewardship and sustainable practices in ensuring access to clean and safe water.



Department of Mechanical Engineering

Vision of the Department

To become a center of excellence in the field of Mechanical Engineering by enabling students to attain domain knowledge, lifelong learning skills and ethical values to serve the nation.

Mission of the Department

M1: To create an academic ambience through competent faculty and encouraging multidisciplinary interaction.

M2: To establish state of the art infrastructure facilities that will pave the dissemination of technical knowledge in the field of Mechanical Engineering.

M3: Exposing students to new tools and technologies of Mechanical Engineering.

M4: Providing an environment to actively participate in enhancing problem solving and leadership qualities and team spirit.

Program Educational Objectives (PEOs)

PEO 1: Graduates will become an established professional in the field of Mechanical Engineering and related fields with sound ethical values.

PEO 2: Graduates will demonstrate all necessary engineering and scientific competence to become an entrepreneur in the field of Mechanical Engineering and allied fields considering social and environmental issues.

PEO 3: Graduates will possess a solid foundation in the field of Mechanical Engineering to be applied in their higher studies and researches.

Program Specific Outcomes (PSOs)

PSO1: Graduates will be able to apply knowledge of Mechanical Engineering for analyzing and designing projects in the fields of Thermal, Industrial and Production engineering.

PSO2: - Graduate will design and develop Mechanical Engineering projects concerning environment, energy conservation and safety.

PSO3: Graduates will be able to plan and execute Mechanical Engineering projects applying relevant codes of practice materials and techniques.

Industrial Visit to CRISP, Bhopal

The Department of Mechanical Engineering at Technocrats Institute of Technology (Excellence) organized an industrial visit to CRISP India on 20th March 2023 for its Mechanical Engineering students.

During the visit, Mr. Atul Vishwakarma, Design Expert, provided a comprehensive session on the application of advanced design software, including AutoCAD, CATIA, SolidWorks, and PLM (Product Lifecycle Management), emphasizing their significance in modern mechanical design processes.

Mr. Avinendra Bartriya, Senior Manager at CRISP, demonstrated the operational aspects of CNC (Computer Numerical Control) and EDM (Electrical Discharge Machining) machines, offering students practical insights into precision machining and advanced manufacturing techniques.

The visit proved to be an invaluable experience, bridging the gap between classroom learning and real-world industrial applications. Such initiatives reflect the institute's commitment to equipping students with the skills and knowledge required for successful careers in mechanical engineering.



Industrial Visit to CIPET, Bhopal

The Department of Mechanical Engineering at Technocrats Institute of Technology (Excellence), Bhopal, organized an educational industrial visit to CIPET Bhopal on 21st March 2023 for its Mechanical Engineering students.

Mrs. Anjali Prajapati, Design Expert, provided an in-depth explanation of the injection molding machine section, highlighting its functionality and applications in manufacturing.

Mr. Rahul, a technical expert, introduced students to the processes involved in mold preparation and demonstrated the operation of conventional machines such as lathe machines, turret ram milling machines, and advanced systems like CNC Wire Cut and CNC EDM machines (5-axis). He also showcased the workings of a 3-axis CNC Milling Machine, providing a hands-on perspective of modern machining techniques. This visit enriched the students' understanding of advanced manufacturing technologies, bridging the gap between theoretical knowledge and industrial practices. Such initiatives reflect the department's commitment to fostering practical learning and industry readiness among its students.



Program Outcomes

- PO 1 Engineering Knowledge
- PO 2 Problem Analysis
- PO 3 Design/Development of Solutions
- PO 4 Conduct Investigations of Complex Problems
- PO 5 Modern Tool Usage
- PO 6 The Engineer and Society
- PO 7 Environment and Sustainability
- PO 8 Ethics
- PO 9 Individual and Team Work
- PO 10 Communication
- PO 11 Project Management and Finance
- PO 12 Life-long Learning.

Correspondence Address :
Director

Technocrats Institute of Technology (Excellence)

Opp. Hathaikheda Dam, BHEL, Anand Nagar
Bhopal - 462021. Phone : 0755-2685977

Contact us at : director_tit@titexcellence.net;

website: www.titexcellence.net