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Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

School of Engineering
& Technology



CHANGE.
EXPERIENCE.
LEARN.

Learn the world - Lifelong learning is an extension of classrooms, books and theories.

Experience the world - The perfect balance of knowledge and skills is the key to making a real difference.

Change the world - The university and our students must transform societies – change begins with us.

Shaping Lives.

ABOUT US

Centurion University is a pioneer in 'Skill Integrated Higher Education'. Its unique model lays specific emphasis on creating sustainable livelihoods (aligned to SDGs) in challenging geographies through education that results in employability and ignites entrepreneurship. This model has been recognized by multiple Governments (Central and State), International Organizations such as UNESCO, the World Bank, and Policy Think Tanks like the NITI Aayog.

We strive to excel as the best-in-class human resource development hub that builds employable, enterprising and society centric youth through industry relevant education, skill development, new ventures, production, and technology development.

Living by the value system of Inclusivity, Integrity, Equity, Respect, and Sustainability; our founders, faculty, and staff are fully committed to - **Shaping Lives, Empowering Communities.**

Focusing on experience based and practice-oriented learning to create transformative impact through community-centric innovation and action research, the university has built an ecosystem that includes and integrates communities, industries, entrepreneurs, and other education and research institutions.

The university encourages its students to participate in the WorldSkills Competition, while many students have won gold and silver medals at the national level.

The Centurion curriculum is aligned with the National Occupational Standards (NOS) as per the National Skills Qualifications Framework (NSQF). It is the only university accredited by the Government of India to contribute to the development of NSQF by creating new job roles and Qualification Packs (QP).

Empowering Communities.

WORKFORCE OF THE FUTURE

Centurion University's School of Engineering and Technology (SoET) is an open platform for diverse voices where learning is integrated to the real world and students are groomed to join the global workforce. Students at SoET benefit from the industry domain-based curriculum taught in over 60 industry-sponsored production labs. It focuses on projects, products, and production, fostering a thriving start-up culture. All disciplines are immersed in smart engineering technologies, making them capable of multidisciplinary thinking and problem-solving.

A student-centric pedagogy, project-based approach and design-driven curriculum provide students with an inclination for complex problem solving, design, innovation, and a passion for learning. The university adopts flexible pedagogy, which encourages multidisciplinary thinking with a problem-solving focus. Adopting the cafeteria approach (CBCS) to learning, students can also pick any specialized domain from any discipline based on their passion and interest.

The mission of SoET through its various programs is to build individuals who are technically competent, community-centric, and driven to make transformational change. With the implementation Industry 4.0 and Society 5.0 tools and technologies, students are prepared to be the workforce of the future.



BACHELOR OF TECHNOLOGY IN **COMPUTER SCIENCE AND ENGINEERING**

Course Overview

The Bachelor's degree in Computer Science and Engineering is a study that ranges from topics dealing with the theoretical studies of algorithms and information to the practical issues of implementing computing systems in both hardware and software. Practicing real-time, industry-used tools, languages and algorithms, the curriculum is designed in partnership with the industry and adheres to dynamic syllabus making – AI, ML, Data Science and Warehousing, Cyber Security, Cloud Computing, High Performance Computing, Quantum Computing, Spectral Image Analytics, IIoT, Embedded Systems, Mobile Computing, Edge Computing, SoC, ARVR and Gaming. The department has academic partnerships with Unity, Unreal, AWS, Dassault Systèmes, and many other cutting-edge technology companies. Industry certifications are also integrated into the curriculum, preparing students to be the workforce of the future.

Duration

Four years

Scope/Job Opportunity

- Software Developer
- Cloud Computing Engineer
- Database Administrator • Data Architect
- Data Visualizer • Data Engineer
- Data Ecologist • Data Science Consultant
- Financial Modeler • Web Developer
- Clinical and Pharmaceutical Analyst
- Data Technologies Specialist
 - Full-Stack Developer
 - Metaverse Programmer
- Digital Manufacturing Engineer

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score

DATA SCIENCE AND MACHINE LEARNING

Course Overview

Bachelor in Data Science and Machine Learning provides the language and techniques necessary for understanding and dealing with data. Data science involves the design, collection, analysis, and interpretation of numerical data, with the aim of extracting patterns and other useful information. The course empowers students to collect, store, and process real-time data, by connecting the shop floor to the top floor. It also makes students competent in OPC/MQTT protocols, big data tools like HADOOP, ETL tools and processes, visualization of data using Python and proprietary software, Spectral Image Analysis, and AI/ML applications for data analysis and inference.

Scope/Job Opportunity

- Data Scientist
- Data Analyst
- Data Engineer
- Data Mining Engineer
 - Data Architect
 - Data Statistician
 - Project Manager
- Machine Learning Engineer
 - Software Developer



CYBER SECURITY

Course Overview

This specialization helps students learn how to protect computer operating systems, networks and data from cyber-attacks, and how to monitor systems and mitigate threats when they happen. Remote Infrastructure Management (RIM) is a key component of the syllabus, and it enables students to set up and manage computer networks using wired and Wi-Fi protocols. Aligned to CISCO certifications (CCNA and CCNP) and EC-Council certifications, this domain prepares students to be industry-ready.

Scope/Job Opportunity

- Network Security Engineer
- Cyber Security Analyst
- Cyber Security Architect
- Cyber Security Manager
- Chief Information Security Officer (CISO)
- Information Security Manager
 - Cyber Security Engineer
- Application Security Engineer
 - Incident Manager
- Cyber Security Consultant
- Cloud Security Engineer

CLOUD TECHNOLOGY

Course Overview

Cloud Computing is a practice of using a network of remote servers hosted on the internet rather than a local server or a personal computer to store, manage and process data. With rapid changes in technology, Cloud Computing has become the driving force of business in recent years and has impacted nearly every aspect of the Information Technology landscape – including data analytics, information security, and project management. The course enables students to set up and manage various kinds of enterprise software management in a cloud environment. AWS being the partner in practice, the course syllabus is aligned with the four certifications of AWS, making students industry-ready. The university also operates its own data center to equip students with the knowledge of setting up and managing the same.

Scope/Job Opportunity

- Cloud Engineer
- Cloud Architect
- Cloud Consultant
- DevOps Cloud Engineer
- Cloud Security Engineer
 - Data Engineer
 - Full-Stack Developer
- Cloud System Administrator
 - UI Developer



METaverse TECHNOLOGIES

Course Overview

AR, VR, MR, game development, and asset launching on online marketing platforms are the main highlights of this course. Blockchain technology being an embedded part of the course, students also learn about Nonfungible Tokens (NFT) and Cryptocurrencies. Tools like Dreamweaver, Maya 3D Graphics, Unity, Blender, Unreal, and Dassault Systèmes, also help students become adept at managing production line for 3D asset making.

Scope/Job Opportunity

- Metaverse Programmer
- 3D Asset Designer • Software Designer
- Quality Assurance Engineer
- Software Engineer • Product Manager
- UI & UX Design Engineer
- VR Game Engineer
- Virtual Reality Designer • Game Developer
- VR Sound Effects Specialist
- Design Architect

SOFTWARE AS A SERVICE (SAAS)

Course Overview

Focusing on developing professional programmers for SaaS (Software as a Service), this course helps students learn software engineering and project management skills using CMS tools – from writing SRS (Software Requirement Specification) to testing and deployment of software. The technology stacks keep changing depending on the industry trends, and some of the software platforms presently used are Java with Spring, Java Script, AngularJS , HTML 5 , MySQL, and Android.

Scope/Job Opportunity

- Applications Developer
- Cyber Security Analyst
- Game Developer
- Information Systems Manager
- IT Consultant
- Multimedia Programmer
- Web Developer
- Web Designer
- Software Programmer



BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING

Course Overview

The Department of Mechanical Engineering has strategic alliances with over 30 corporations, which include Dassault Systèmes, Ashok Leyland, HAL, Vedanta, RSB Global, other than CTTC, CIPET, IIW & NSIC, to provide the best theoretical and practical training, as well as placement opportunities. The focus is on design (CAD) to manufacturing, CNC production, new materials, and automobile engineering, it has a record 20 Cr+ production (including ICAT approved e-vehicles) every year. With access to industry sponsored labs, toolrooms (Odisha Govt. approved), state-of-the-art welding and BDT testing labs. The students also undertake composite manufacturing using FRP. Emphasising on Digital Manufacturing, Robotic Welding and Additive Manufacturing, the department also designs, manufactures, and sells 3D printers. With its product and manufacturing focus, the department is truly a jewel in the crown of SoET.

Duration
Four years

Scope/Job Opportunity

- Aerospace Industry
- Automobile Industry
 - Thermal Plants
 - Steel Plants
- Shipping Industry
- Mechatronics Robotics
- Auto Parts Manufacture
- Welding and Fabrication

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score

AUTOMOBILE ENGINEERING (In collaboration with Ashok Leyland / Hyundai / Yamaha / Eicher / Volvo)

Course Overview

Automobile Engineering is one of the major strength areas of the university. The university works with all major OEMs (two-wheel, four-wheel and earth-moving equipment) in India. With the focus on understanding the latest available IC and electric vehicle technology, the university has authorized service technician training centers of Ashok Leyland and Eicher Motors, and labs that are equipped with dynamic cut sections of 6-stroke engines complying with Bharat 6 emission norms. With this specialization, students learn electric vehicle technology (two, three, and four wheels) through simulation and assembly, and complete vehicle diagnostics using Bosch tools through robust industry partnerships.

Scope/Job Opportunity

- Executive and Managerial Positions
 - Senior Production Engineer
 - Automotive Sales Engineer
 - Quality and Service Engineer
- Automotive Developer and Technician
 - Automotive Technician



WELDING AND INSPECTION

Course Overview

To ensure the quality and safety of connections between metals, certified welding inspectors play an intrinsic role in the welding industry. With this specialization, students are trained in TiG, MiG, Gas Welding, Submerged Arc Welding, Butt Welding, Pressure Welding, Plasma Cutting and NDT procedures. They can also do parallel industry certifications from IIW leading to AMIE in welding. The curriculum is fully aligned with NSQF and IIWs Level 1 and 2 with an option of obtaining a Level 4 certification from IIW. The department has a corporate support from Badve Group and Vedanta, which has enabled state-of-the-art welding labs including robotic welding.

Scope/Job Opportunity

- Welding Engineers
- Welding Inspector
- Site Quality Engineer
- Quality Control Inspector

COMPUTATIONAL FLUID DYNAMICS

Course Overview

Computational Fluid Dynamics (CFD) is the analysis of fluid flows using numerical solution methods. Using CFD, students can analyse complex problems involving fluid-fluid, fluid-solid or fluid-gas interaction. Engineering fields that frequently use CFD analyses are aerodynamics and hydrodynamics, where quantities such as lift and drag or field properties like pressures and velocities are obtained. This specialization equips students with the necessary skills to work as a professional and provides hands-on experience in top OEMs. Grounded in the concepts of FEA and FVM, students learn multibody physics simulation and get to work on real-time industry problems using proprietary machines and analysis tools like SIMULIA, HyperMesh and Ansys. Application areas include aerospace engineering, marine engineering, and the automotive industry.

Scope/Job Opportunity

- Safety Simulator Engineer
- Aerodynamics Engineer
- Computational Fluid Dynamics Engineer
- Computational Fluid Dynamics – Research Associate



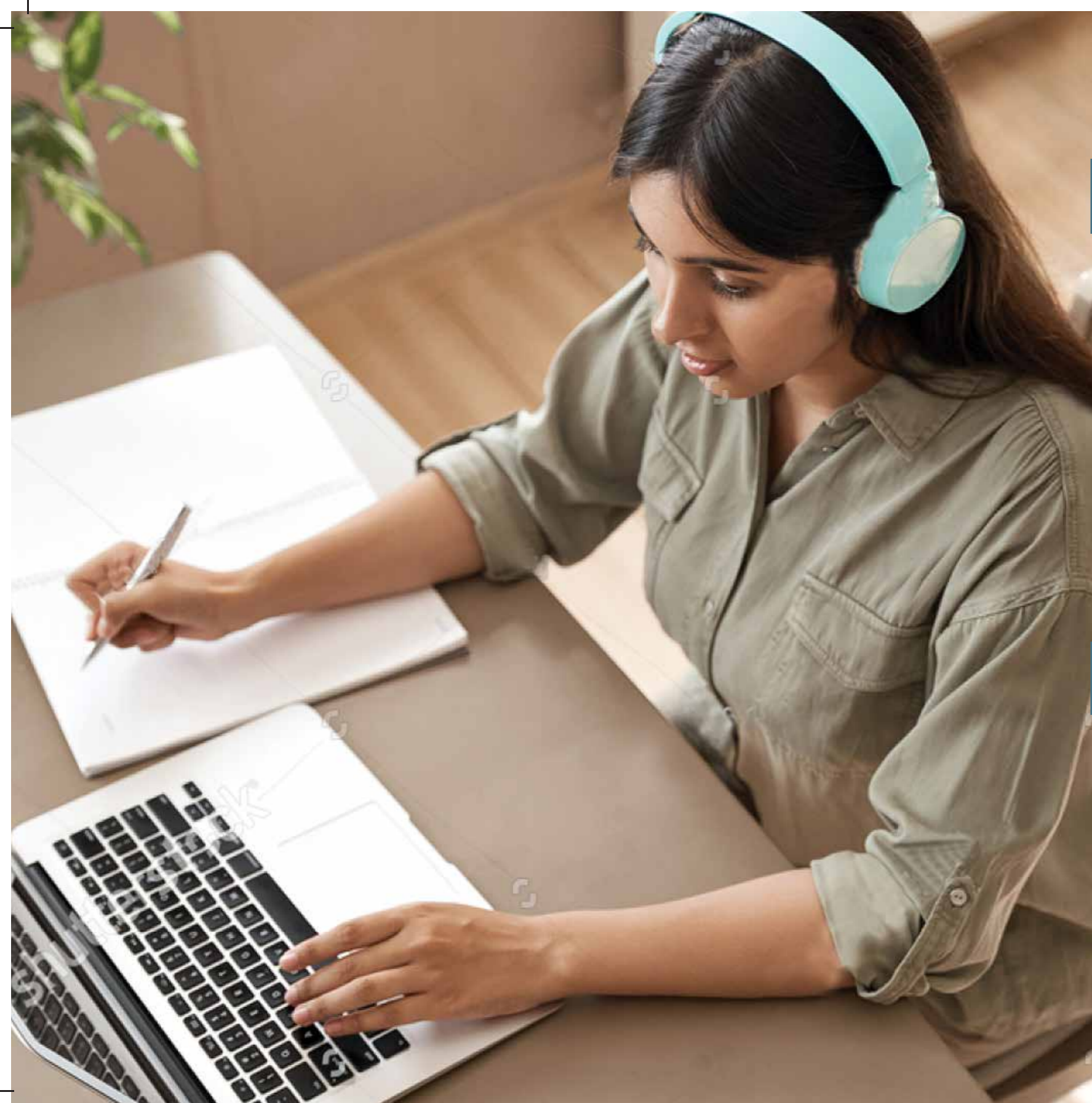
MANUFACTURING (CONVENTIONAL AND CNC MACHINE, ADDITIVE)

Course Overview

Conventional machining can be defined as a process using mechanical energy. The CNC (Computer Numerical Control) course involves taking digitized data, a CAD and CAM program to control, automate, and monitor the movements of a machine. The machine can be a milling machine, lathe, router, welder, grinder, laser or waterjet cutter, sheet metal stamping machine, robot, or many other types of machines. Additive Manufacturing is a new addition of this course where manufacturing is done by layers. The university has designed its own 3D printer and manual machines, Bfw and ACE company production CNC machines (3, 4 and 5 axis) as well as plastic and metal 3D printing machines. Coupled with Dassault's 3D experience platform, the university has the capability to conceptualise digitally designed test and make a physical prototype of any idea or product. Trained in industrial production processes, quality control, digital design, BOM preparation, vendor selection, manufacturing planning and manufacturing execution system (MES), students are competent to make a design of any product by reverse engineering as well as make a product from any idea. The university also does contract manufacturing for many national and international clients, giving students a chance to work on industry production orders.

Scope/Job Opportunity

- Production Engineer
- Quality Control Engineer
- CNC Machine Operator
- CNC Cylindrical Grinding Machine Operator
- CNC Online Inspector



AUTOMOTIVE DESIGN

Course Overview

Automotive Design is a program that trains students in designing, manufacturing, and maintenance of an automobile. The main interest of Automotive Design Engineers is creating ideas and concepts via rough sketches and computer-aided design (CAD). This specialization gives students a visual appearance as they learn the functional performance before developing the actual vehicle. Students also get to work on Dassault's 3D experience tools such as CATIA, SIMULIA DELMIA, and ENOVIA, and learn system optimization using Matlab and Dymola tools. Failure analysis and testing is done using SIMULIA, HyperMesh and Ansys. The special focus is on automotive sub-domains like BIW, electric wire harness, interiors and exteriors.

Scope/Job Opportunity

- Automotive Designer
- Aerospace Designer • Vehicle Inspector
- Auto Body Repair Technician
- Auto Sales Manager
- Auto Engineer • Auto Designer
- Quality Testing Engineer

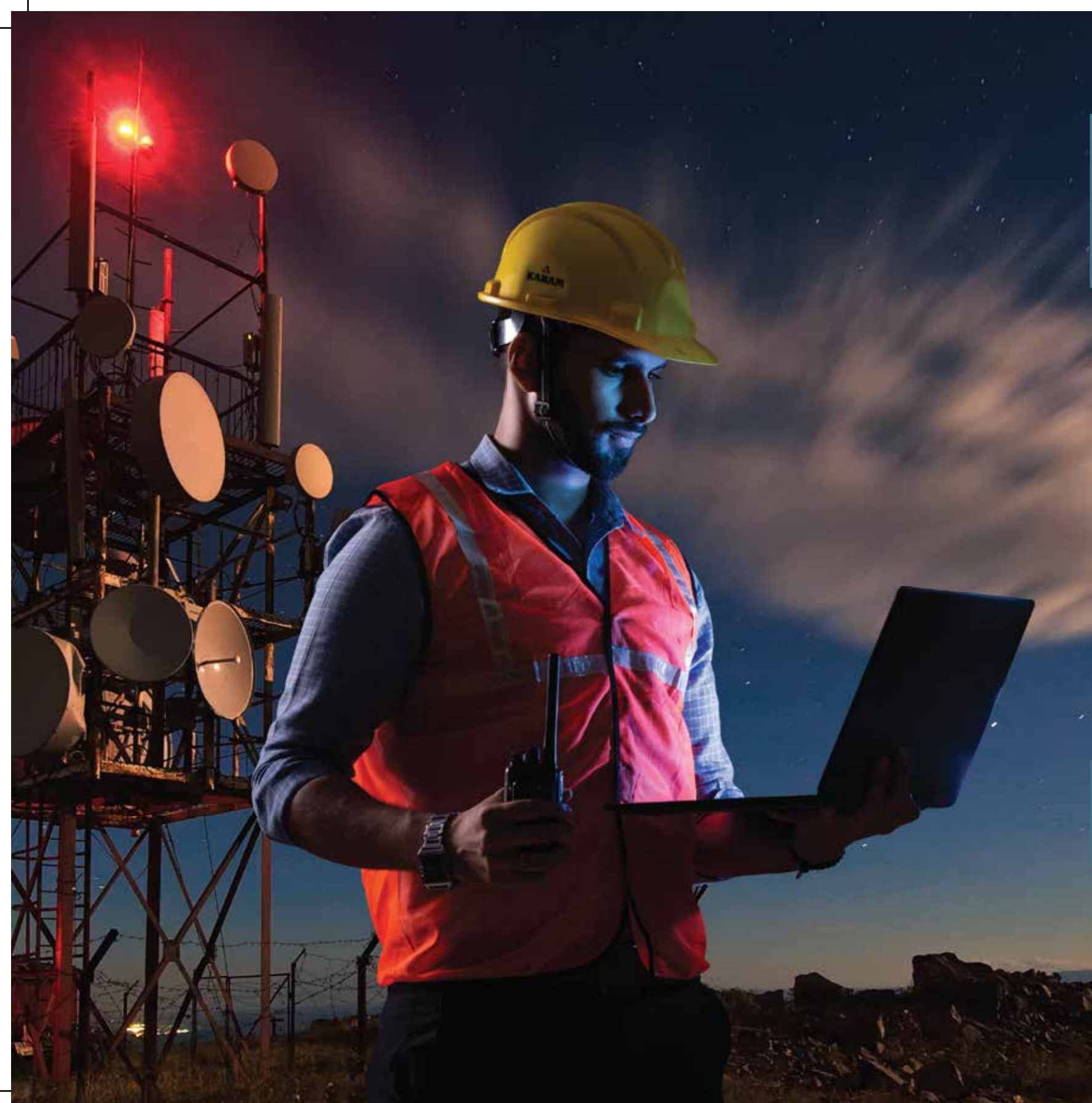
DIGITAL MANUFACTURING

Course Overview

Digital manufacturing is the application of computer systems to manufacturing services, supply chains, products and processes. Digital manufacturing technologies link systems and processes across all areas of production to create an integrated approach to manufacturing. This specialization teaches modern technologies for transforming industrial processes and driving values using digital tools and techniques. Students are equipped to connect the shop floor to the top floor and implement a manufacturing execution system using tools like Apriso and Ortems. The special partnership with Dassault Systèmes helps the university possess the unique advantage of using real-time industry tools in this emerging area.

Scope/Job Opportunity

- MES Engineer
- Production Manager
- Quality Control Engineer
- Systems Engineer
- Design Electronics Manager
- Hardware & Network Engineer
- Digital Manufacturing
- Manufacturing Unit Manager
- Manufacturing Engineer



BACHELOR OF TECHNOLOGY IN **ELECTRONICS AND COMMUNICATION ENGINEERING**

Course Overview

The Department of Electronics and Communication Engineering strives for excellence in teaching, research, and professional services, to achieve eminence in selected niche areas viz. Embedded Systems and IoT, Chip Design using VLSI and Communication Systems. In collaboration with industry partners such as Tessolve Semiconductor, Dassault Systèmes, Sunmoksha Power and Electronics Center of Excellence (Bhubaneswar), it gives students a plethora of opportunities to work on exciting projects based on real-time applications. Equipped with the latest hardware like ARM Cortex processors, FPGA boards, Raspberry Pi, and Arduino boards, students also get to work on processor design as well as System on Chip (SoC) design and testing. The university is participating in the Chromite SoC project of the indigenous Shakti Processor, and its faculty are also working on Bio Medical instrumentation as well as digital manufacturing and chip making with Marquee Semiconductors, as well as ECU for e-vehicles. With a focus on product development using Fab Lab technologies, the required labs and industry partnerships exist to design, fabricate, and test a board level or PCB level solution as a precursor to chip development. In communication, students get to work on HFSS tools for antenna design and BTS installation and maintenance.

Duration
Four years

Scope/Job Opportunity

- Automotive Electronics Engineer
 - Acoustics Engineer
 - Network Planning Engineer
 - Field Test Engineer
- Customer Support Engineer
- Research & Development Software Engineer
- Electronics and Communications Consultant
 - Embedded System Programmer
 - VLSI engineer

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score

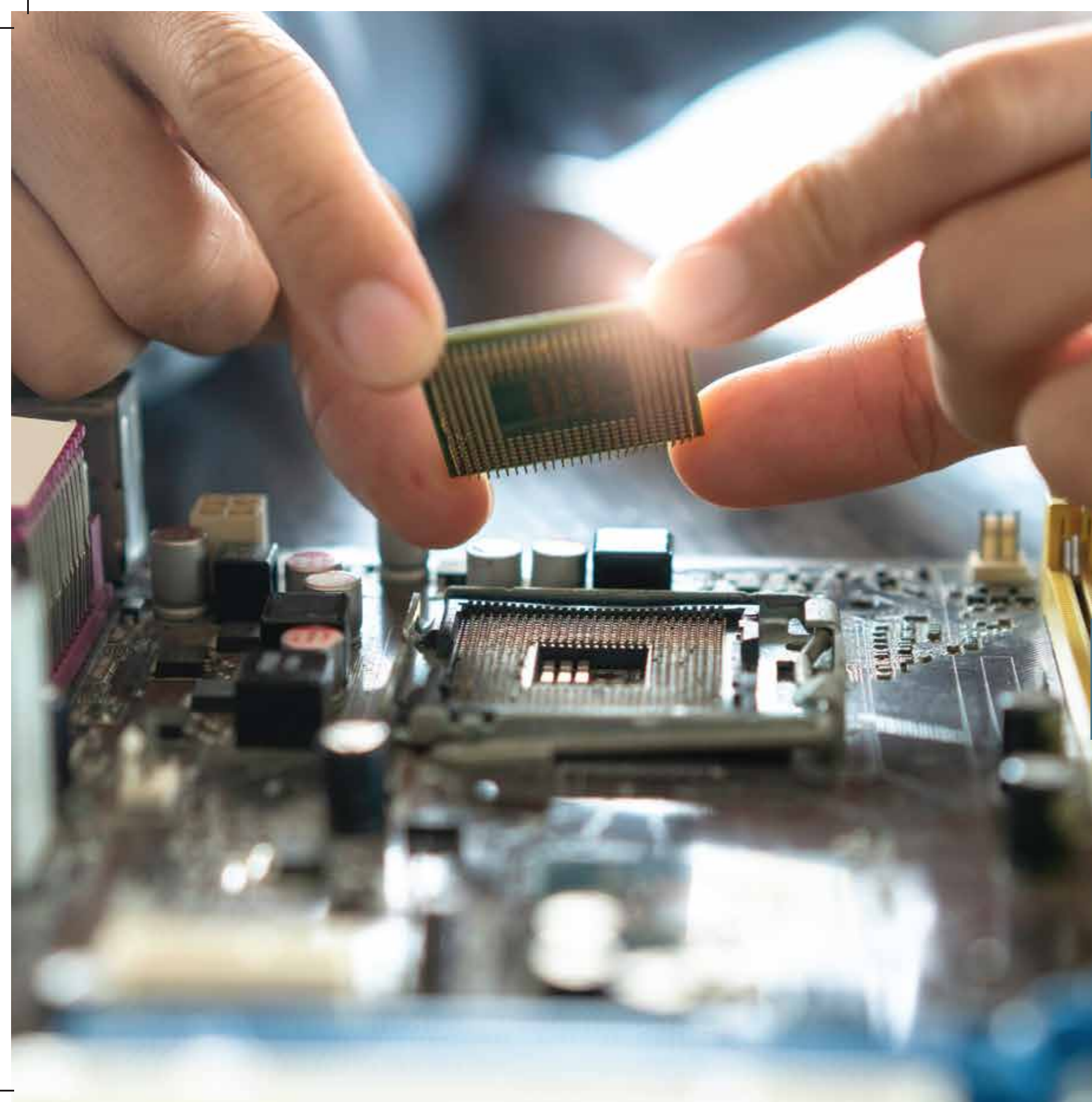
EMBEDDED SYSTEMS AND IoT

Course Overview

The ever-growing network of technologies connecting and communicating via the internet to send and receive data in the absence of human-to-human or human-to-computer interaction. IoT consists of a network of smart devices, sensors, and actuators interconnecting with each other over the internet.

Scope/Job Opportunity

- Embedded Systems Engineer (RTOS)
- Firmware Engineer – Industrial IoT
- IoT / Telematics Integration Engineer
 - Embedded & IoT Engineer (Development, Integration, Training)
- Embedded Software Development Engineer



CHIP FABRICATION

Course Overview

Chip Fabrication course is a blended learning program, which includes both online theory sessions along with lab practicals, offline projects, and internship programs. It is carefully designed, based on the industry requirements, and it trains electronics engineers extensively on both the design and verification methodologies like RTL design and UVM methodologies. With this course, students become proficient in Cadence tools for VLSI design and verification, and get to develop applications using Chromite SoC. They also get to work with FPGA board, and learn the fundamentals of SoC design and fabrication. Understanding of the blocks in SoC design, gives students the confidence to think of executing Chip Design. The university works with companies like Tessolve and Marquee Semiconductors; and aims to produce industry-ready manpower for the semi-conductor industry in India.

Scope/Job Opportunity

- AMS & ASIC Verification Engineer
 - Physical Design Engineer
- Application Engineer Technical Support
- Corporate Application Engineer (CAE)
 - EDA/CAD Engineer
- Field Application Engineer (FAE)
 - IP Verification Engineer
- Product Application Engineer (PAE)
 - Reliability Engineer

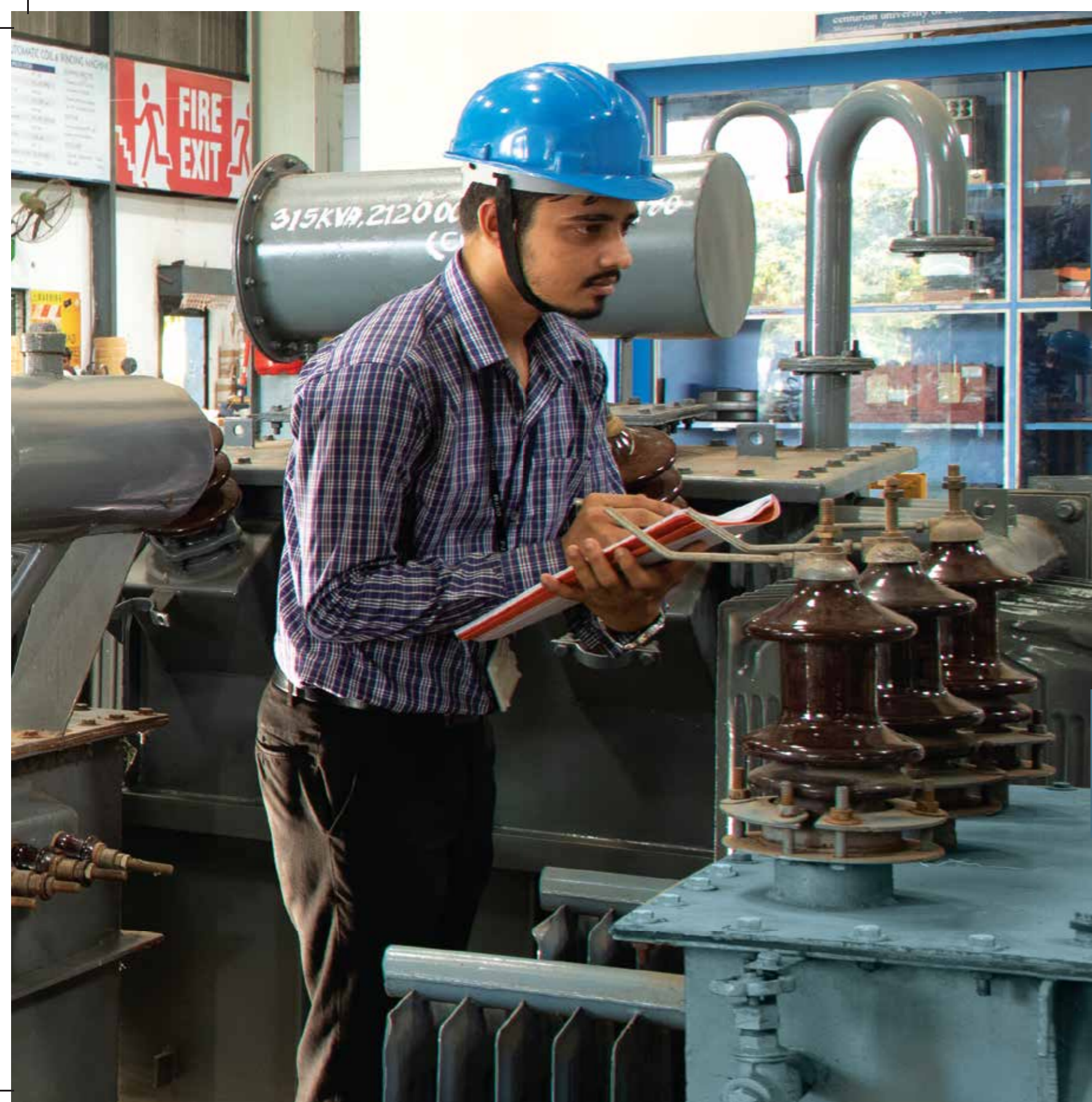
COMMUNICATION SYSTEMS

Course Overview

Communication Engineering is a field that focusses on designing electronic devices and circuits. Students study reception of data, antenna and wave progression, IoT, optic fibre and its use in communication, etc. Application areas include varied industries ranging from agriculture to defense. The course also teaches antenna design (including 5G technology) using HFSS/CST, and BTS installation and testing. Students use MATLAB analysis and ANSYS electronic suit to design communication links and implement OFDM. Post completion of the course, students are equipped with the knowledge to develop a self-configured and infrastructure-less wireless network.

Scope/Job Opportunity

- Communications Engineer
 - Technical Director
- Network Planning Engineer
- Desktop Support Engineer
 - Field Test Engineer
- Electronics Device and Development Engineer
 - Service Engineer



BACHELOR OF TECHNOLOGY IN ELECTRICAL AND ELECTRONICS ENGINEERING

Course Overview

B.Tech in Electrical and Electronics Engineering is an undergraduate program imparting fundamental knowledge in core disciplines such as control systems, communications, radio frequency, design signal processing, microelectronics, microprocessors, power generation and electrical machines. The curriculum includes subjects like Application based Programming in Python, Digital System Design, Microprocessor and Microcontroller with Interfacings and Network Analysis & Synthesis. With a balanced combination of theory and practical, this course prepares students to design and test electronic circuits. Students also gain a good understanding of design techniques and electronics systems, along with their uses in areas such as control telecommunications and consumer products. They can choose from various industry domains like Embedded Systems, Transmission System Maintenance, Bio Medical Instrumentation, Smart Engineering (DSM), Renewable Energy Systems including Hybrid Power Control and Microgrids. With this course, students get proficient in both grid-based and off grid power generation and distribution as well as smart energy management for DSM. As part of the curriculum, they also learn SCADA and industry automation using Siemens, FANUC, ABB, and PLC.

Scope/Job Opportunity

- Control and Instrumentation Engineer
 - Broadcast Engineer
 - IT Consultant
 - Electrical Engineer
 - Electronics Engineer
- Manufacturing Systems Engineer
- Systems Analyst Network Engineer
 - Systems Developer
- Renewable Systems Engineer
 - Energy Auditor

OPERATION AND MAINTENANCE OF ELECTRICAL GRID SYSTEM AND TRANSFORMERS

Course Overview

To create technically trained manpower for the Power/Energy Companies and Transformer Manufacturing Firms in the Electrical Sector, the university provides hands-on experience in manufacturing of commercially used distribution transformer, operation and maintenance procedures carried out on T&D system and apparatus, real-time testing of T&D system and apparatus, and transformer maintenance and testing. Students also gain knowledge on management of LT distribution networks and sub-station maintenance including DT manufacturing and maintenance.

Scope/Job Opportunity

- Electrical Engineer
- Electrical Maintenance Engineer
- Electrician Electrical Maintenance (ITI Electrical)
- Electrical Maintenance Manager



RENEWABLE ENERGY APPLICATIONS

Course Overview

This specialization is for students wanting a thorough understanding of renewable energy concepts, tools, and applications. New technologies, new market structures, and new business models make renewable energy a dynamic, entrepreneurial, and exciting field. The course focuses on pragmatic and fact-based information approach including real-world costs, technical performance, and market trends. The industry partners for this course are OPTCL, SELCO and Schneider Electric. With this course, students learn various applications of PV based solar energy, installation of PV electricity generation and maintenance of such systems, and they get to work on microgrid hybrid power systems using Schneider sponsored industry labs. Students also get certified as Suryamitra on MNES.

Scope/Job Opportunity

- Energy Transition Technical Specialist
- Energy Analyst Energy Law Associate
- Energy Efficiency Consultant Renewable
- Energy Designer Renewables Estimator
 - Microgrid/Off-Grid Installation and Maintenance Engineer

INDUSTRIAL AUTOMATION

Course Overview

Factories of the future require intelligent manufacturing systems with automated controls and robotic manufacturing processes, and a high amount of digitization of all production processes. As PLCs and robotics play a big role in such factories, the university trains its students with the help of FESTO, Siemens and Dassault Systèmes. Students get to use programming with Siemens/ ABB/ FANUC controllers and work on process automation. Getting to practice on RSLinx Software of Rockwell Automation (USA), and HMI and two drives, students get the know-how to build practical applications, which include Boom Barriers, Liquid Dispensers, and simulation of automated production processes using FESTO industry lab.

Scope/Job Opportunity

- Automation Product Manager
- Automation Project Manager
- Automation Controls Engineer
- Automation Application Engineer
 - PLC Programmer
 - Automation Technician



BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

Course Overview

The university teaches smart civil engineering practices, and it has completely revised its content by making 3D modelling with CAD tools, Rivet, and other software. Well-versed in the latest Survey Tools and Equipment like Total Station, DGPS and GPR, students learn satellite and aerial based surveying that includes LiDAR survey as well as satellite image processing. The construction management includes project management, and it is aligned with NSQF Level-6 curriculum for the profession. Students get to design and plan construction projects, and they are familiarised with Smart City Planning, BIM modelling up to LoD 5. They also learn solid and sewage treatment as part of environmental engineering, and modern facade making using CATIA xGenerative Design app of Dassault Systèmes.

Duration
Four years

Scope/Job Opportunity

- Planning Engineer • Site Engineer
- Project Engineer • Quality Control Engineer
 - Project Manager
- City and Town Planning Model
 - Survey Engineer

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score

SMART CITY

Course Overview

With this specialization, students learn about smart cities within the context of urban infrastructure management. The introduction of smart urban technologies into legacy infrastructures has resulted in numerous challenges and opportunities for contemporary cities and will continue to do so. Equipped with Dassault tools, students are enabled to build digital twins of cities/towns using OSM and drone based aerial survey maps. appreciating the challenges of optimising smart city planning in legacy environments, they also learn to simulate shading analysis, flood analysis, seismic analysis on 3D models. With the opportunity to work on challenging real-time projects, using point cloud data and converting it into 3D LOD 3 maps, students have excelled in remodelling and simulation of Amravati City in Andhra Pradesh and Jaipur Smart City.

Scope/Job Opportunity

- SMART City Planner
 - 3D Modeler
- Engineering Consultant



SURVEY, DESIGN AND CONSTRUCTION MANAGEMENT

Course Overview

Having access to the latest survey equipment like Total Station, DGPS and GPR, students learn satellite and aerial based surveying, which includes LiDAR survey as well as satellite image processing. In construction, management students get to plan, optimize, and implement a construction project. Learning various QC procedures in large infrastructure projects with a mandatory internship in such construction sites, students get to design multi-storied structures, bridges, stadiums and other such large infrastructure projects using advanced software tools. Students are familiarised with new state-of-the-art construction materials (including composites), and they also learn to waterproof and repair damaged concrete structures using specialty building chemicals.

Scope/Job Opportunity

- Survey Engineer
- Design Engineer
- Service Engineer



BACHELOR OF TECHNOLOGY IN **AEROSPACE ENGINEERING**

Course Overview

Aerospace Engineering is the primary field of engineering concerned with the design, development, testing, and production of aircraft, spacecraft, propulsion systems, satellites, missiles, and related systems and equipment. With in-depth skills and understanding of aerodynamics, materials and structures, propulsion, vehicle dynamics, and software, aerospace engineers develop leading-edge technologies and integrate them into aerospace vehicle systems used for transportation, communications, exploration, and defense applications. The core areas of specialization for a team of aerospace engineers include aerodynamics, thermodynamics, control system, propulsion, celestial mechanics, and electronics. The University has all the required labs like Wind Tunnel for testing and design tools by Dassault Systèmes.

Duration

Four years

Scope/Job Opportunity

- Aerospace Designer Checker
- Aircraft Production Manager
- Mechanical Design Engineer
- Assistant Technical Officer
- Aerospace Engineer

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score



BACHELOR OF TECHNOLOGY IN **BIOTECHNOLOGY ENGINEERING**

Course Overview

Biotechnology is a highly interdisciplinary field that combines biological sciences with engineering technologies to produce products that advances healthcare, medicine, agriculture, food, pharmaceuticals, and environment control. Best known for its role in medicine and pharmaceuticals, biotechnology is also applied in other areas such as genomics, food production, and the production of biofuels. Equipped with Oxford Nanopore Sequencing Technologies, BIOVIA's Pipeline Pilot, and SAS JMP genomics software, the university's focus is on genomic data analysis – in vivo and in vitro, dry lab and wet lab facilities, for both animal and plant cell culture. The labs contain PCR, RTPCR, tissue culture facilities and sequencing facilities for academic work. At present, the labs are getting ready for NABL and DBT certifications.

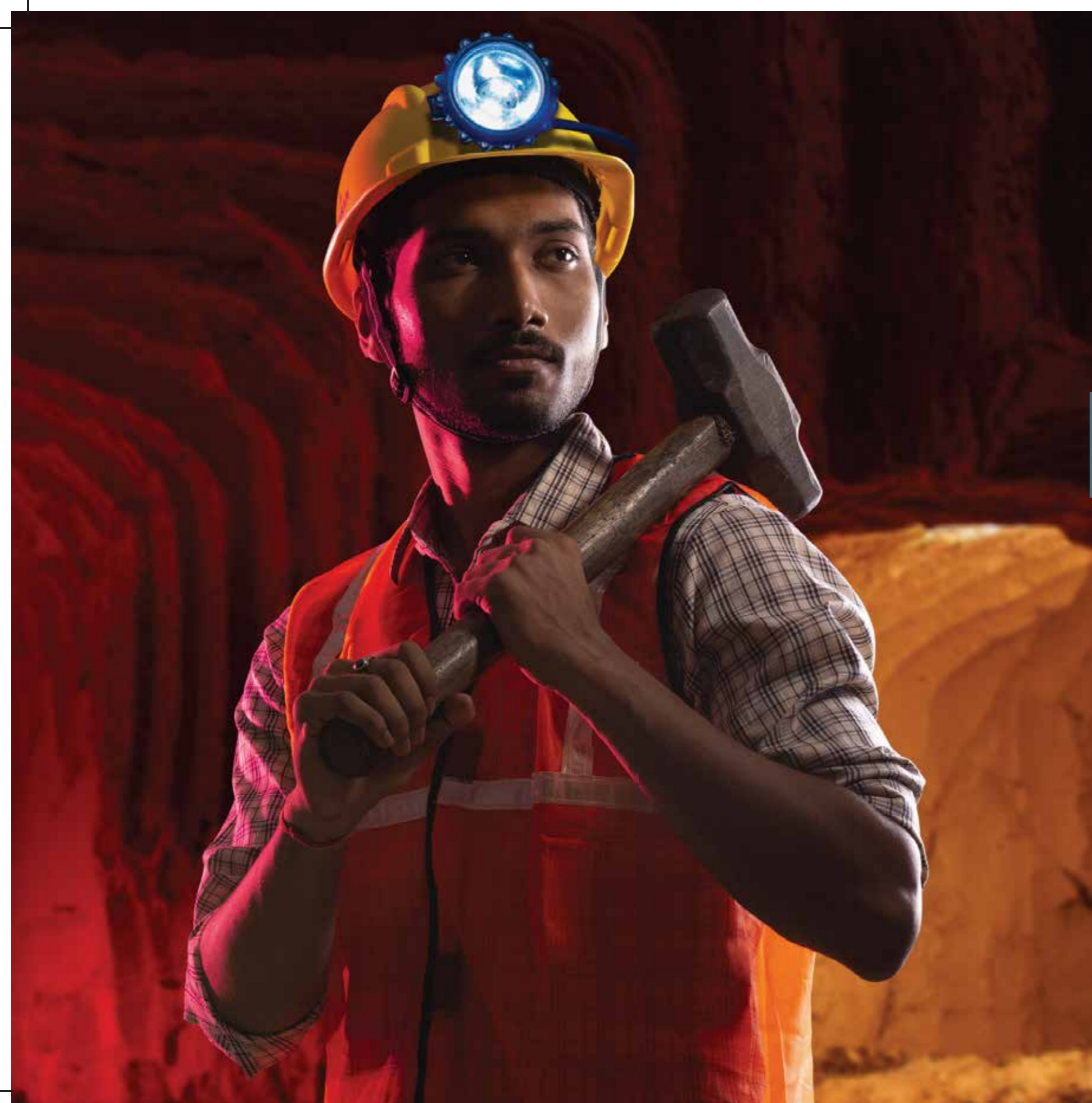
Duration
Four years

Scope/Job Opportunity

- Biotech Food and Pharmaceutical Companies
- Research Laboratories and Hospitals
- Universities/Institutes
- Agriculture Sector

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score



BACHELOR OF TECHNOLOGY IN MINING ENGINEERING

Course Overview

The program is industry oriented, and students are facilitated to get a lamp license as they have to undergo a mandatory one-year mining internship with leading mines in Eastern India. Students also use software tools like Geovia for prospecting quantity and quality of material availability, mine planning, scheduling, and logistics planning. From geological prospecting to evacuation of the minerals, they also get a holistic view of the mines. The university is presently focused on digitalization of mines as a key specialization area.

Duration

Four years

Scope/Job Opportunity

- Mining Engineer
- Lead Engineer
- Site Manager
- Deputy Manager
- Lecturer

Eligibility Criteria

- 10+2 (Physics, Chemistry, Maths) 50% and 5% relaxation for reserved category
- Centurion University Entrance Exam (CUEE) Score

PRODUCTS MANUFACTURED AT CENTURION



AWARDS & ACCOLADES

Student Achievements

WorldSkills at National Level

- Gold medal in Health and Social Care (For the first time in Odisha)
- Gold in CNC Turning ● Bronze in Joinery (Wood works)
- Received a **Patent** for “Automated Elephant Detection System to desist Railway accidents by unifying AI and IoT”
- Participated in the Dassault Systèmes and awarded one of the **best projects** – Living Heritage Project - developed model of Konark Sun temple in the 3D Experience Platform.



“...In India, the Centurion University of Technology and Management (Odisha) ... the only State-enacted University in the private sector with its strong industrial linkage through its Social Entrepreneurship Outreach (Gram Tarang) and its focus on community – has excelled in providing skills to students from rural areas.”

Government of Odisha, after careful consideration, have been pleased to accord recognition to the Centurion University of Technology and Management as Skill University.

- Research Report of Ernst and Young title, “Role of Higher Education in Creating Sustainable Livelihoods and Social Enterprises” is on the Model of Centurion University, published on 24th November 2016.
- NITI Aayog named Centurion University - Gram Tarang as the best practice reference point in the State of Odisha in their report titled, “State Forward: Best Practices from our States” released by the Honourable Prime Minister on 29th September 2016.
- Cited by name as a model in the debate of the General Assembly of United Nations on Right to Education. CUTM has been eloquently mentioned in the UN Secretary General Report on Right to Education (67th General Assembly, 2012)
- Acknowledged by the United Nations for works done in reaching out to the underprivileged through employment linked skill development.
- Case study by UNESCO, “Centurion University model of skilling” in the UNESCO – PROSPECTS: Volume 44, Issue 2 (2014).
- Case study of Wharton University of Pennsylvania, “Startups Spot Opportunity in Training India’s Informal Workforce” for people living in the Naxalite-infested regions in Odisha and Andhra Pradesh in June 2013.
- In Australia India Institute Report, titled “A Very Short Policy Brief: Sustainable Skill Development” in November 2016, the first reference of the policy brief is of Gram Tarang.
- Showcasing of Centurion University’s “Social Enterprise: A Global Outlook” in the Going Global Conference at Cape Town by the British Council in its international research report with a sample size of 200+ Universities where Centurion is the only reference from Indian subcontinent.
- Centurion University has become “Dassault Systèmes Academy Member” and it is the 1st Academy Member of Dassault Systems in India.
- Citation by The World Bank in its report (August 2015) on, “Governance for Quality in Higher Education in Odisha, India” as a unique model reiterating the significant edge in the domain of higher education.
- **The University has published 70 Patents, 7 Copyrights, 2 Design Patents and 2 patents granted.**