

# Learn Experience Change

Transformers  
manufactured at  
Centurion



**Centurion**  
**UNIVERSITY**  
*Shaping Lives...  
Empowering Communities...*

**School of Vocational  
Education and Training**





**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. Centurion University's School of Vocational Education and Training has been recognized as a Center of Excellence by Ministry of Skill Development and Entrepreneurship, Government of India.

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...*

## **VOCATIONAL EDUCATION AND TRAINING**

Centurion is the only university in India where vocational education is part of the University Act and Statutes, and it plays a very important link in the chain of lifelong learning. It is based on the famous TAFE model of Australian University and Community College Systems of the USA. As a skill university, Centurion promotes multiple entries and exits for learning paths. The diplomas offered by the university are all aimed at producing workforces of the future. Students are trained in over 50 production labs, which also offer placement support. With specializations in Computer Science, Automobile Engineering, Mechanical Engineering, Civil Engineering, Mining Engineering and others, students can also transfer credits if they wish to pursue higher learning. The School of Vocational Education and Training is embodied with the School of Engineering and Technology (SoET). Offering seamless pathways into the credo of project, product, and production, students also earn while they learn by doing production work. The school is also recognised as a Centre of Excellence by the Ministry of Skill Development, Govt of India. Partnering with NSDC, all its curriculum is aligned with NSQFs (job roles and NOS). The task of integrating skills into education mandated by National Education Policy (NEP) is done by Centurion University through this school. The production labs include transformer manufacturing, apparel manufacturing, wood engineering, auto parts manufacturing, Fab Lab with reverse engineering facilities and e-vehicle production. With at least 40 Cr worth of production every year, the labs have partnerships with RSB Global, Uniparts Group, Tata Group, Motherson Group, TATA Technologies, and various other leading companies.

**CUTM diploma students will be allowed to appear in CITS exams, and will be eligible to get four certificates – ITI & Diploma, CITS and Plus-2.**

Auto  
TRAINING SCHOOL  
Mobility Training Services Pvt Ltd



# **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



# 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.

## Scope/Job Opportunity

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



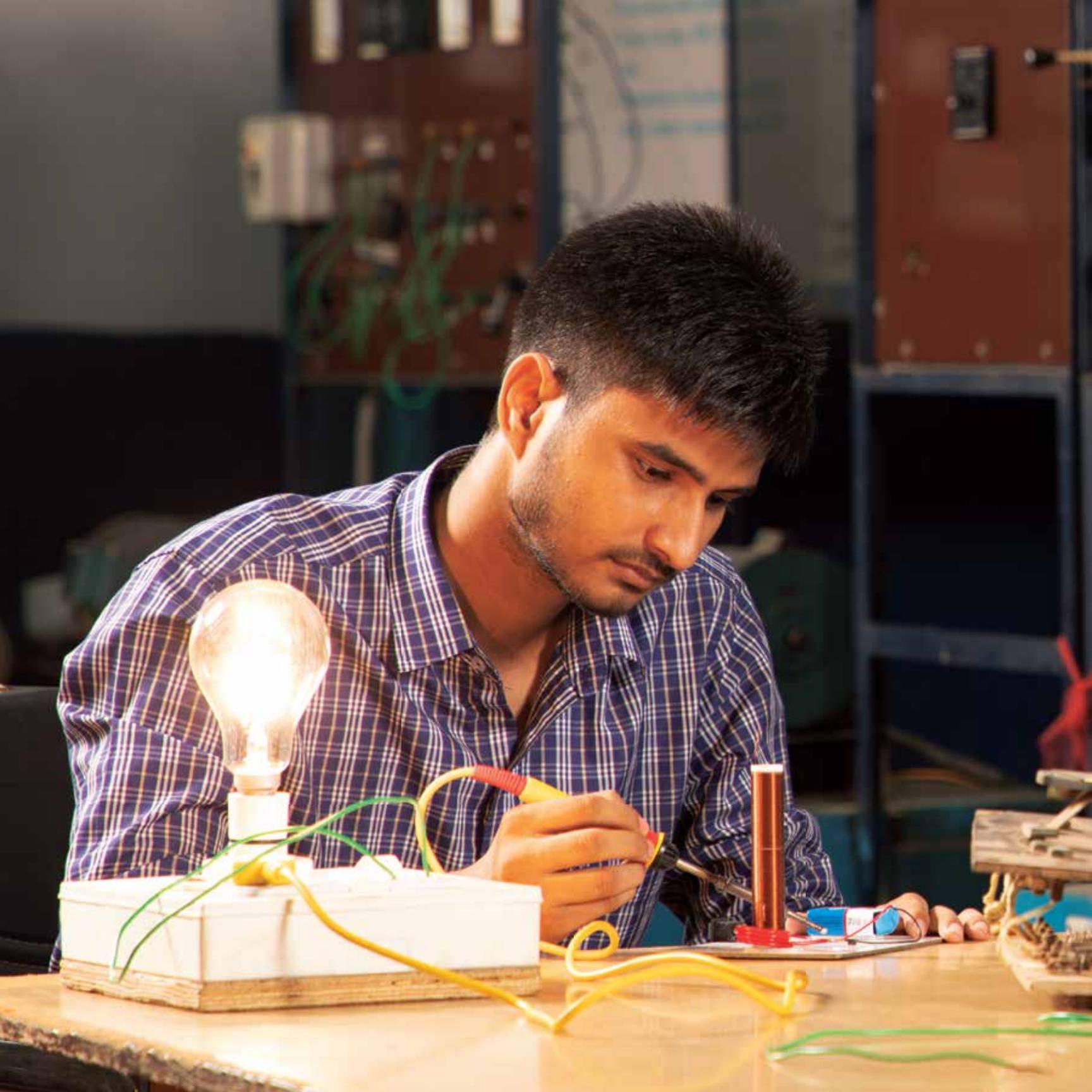
# COMPUTER SCIENCE AND ENGINEERING

## Course Overview

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.

## Scope/Job Opportunity

- | Software Developer
- | Cloud Computing Engineer
- | Database Administrators
  - | Data Architect
  - | Data Visualizer
  - | Data Engineer
  - | Data Ecologist
- | Data Science Consultant
  - | Financial Modeler
  - | Web Developer
- | Data Technologies Specialist
  - | Full-Stack Developer
  - | Metaverse Programmer
- | Digital Manufacturing Engineer



# ELECTRICAL AND ELECTRONICS ENGINEERING

## Course Overview

Electrical and Electronics Engineering imparts fundamental knowledge in core disciplines such as control systems communications, radio frequency, Digital 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 System Engineer
  - | System Analyst
  - | Network Engineer
  - | System Developer
- | Renewable System Engineer
  - | Energy Auditor



# 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.

## Scope/Job Opportunity

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



# 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.

## Scope/Job Opportunity

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

# 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”

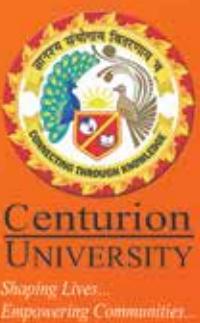
| Participated in the Dassault Systèmes and awarded one of the **best projects** – Living Heritage Project - developed model of Konark Sun temple in the 3D Experience Platform.



“...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.**



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Campuses: Paralakhemundi | Bhubaneswar | Vizianagaram | Rayagada | Balangir | Balasore

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**For admissions, Call: 82600 77222**

**CUTM Odisha – Website – [www.cutm.ac.in](http://www.cutm.ac.in)**

**CUTM Andhra Pradesh – Website – [www.cutmap.ac.in](http://www.cutmap.ac.in)**