

ABOUT THE INSTITUTE

Christian College of Engineering and Technology (CCET) was established by Late Lamented **Bishop H.G. Dr. Stephanos Mar Theodosius in 1998**. It has a world-class campus with lush green and well-manicured lawns spread all around and peaceful atmosphere which provides an ideal setting for an intensive learning experience. It is approved by All India Council for Technical Education and affiliated to Chhattisgarh Swami Vivekananda Technical University, Bhilai (C.G.). **It offers four years UG courses in Mechanical Engineering (Accredited by NBA), Computer Science, Electronics & Telecommunication Engineering, Electrical Engineering; and two years PG courses in CAD/CAM & Robotics in Mechanical Engineering, Nanotechnology in Electronics & Telecommunication Engineering and High Voltage in Electrical Engineering.** The institute always endeavors to be in research, training, collaborations & projects and for opening more avenues for training and employments of its students.

ABOUT THE DEPARTMENT

The Mechanical Engineering Department (**Accredited by NBA**) came into existence in the year 1998. **The department offers B. Tech and M. Tech courses in CAD/CAM & Robotics.** The department is rich in its faculty as well as infrastructure. It has laboratory and workshop facilities with modern sophisticated equipment to carry out the practical and research work. The faculties are actively involved in various prestigious sponsored/consultancy project works from CGCOST, CSVTU under TEQUIP and other reputed government organizations. **The department has been accredited second time for a period of 2018-19 to 2020-21.**

CHIEF PATRON

Dr. Joseph Mar Dionysius

Chairman, CCET

PATRONS

Fr. George C. Varughese

Executive Vice Chairman, CCET

Dr. (Mrs.) Dipali Soren

Principal, CCET

CO-ORDINATOR



Dr. P. Srinivasa Rao

HOD, Dept. of Mech. Engg., CCET

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REGISTRATION: FREE

EXPECTED PARTICIPANTS

Faculty/Research Scholars/Industrials.

ORGANIZED BY

**Mechanical Engineering Department
CCET, Bhilai, CG-490026, India.**



CCET

3rd OLDEST PRIVATE COLLEGE IN CHHATTISGARH

**AICTE TRAINING AND LEARNING
(ATAL) SPONSORED
FACULTY DEVELOPMENT
PROGRAM ON
ALTERNATE FUELS**

FDP DATES

SEPTEMBER, 7 - 11, 2020

ONLINE PLATFORM



REGISTRATION LINK

[https://atalacademy.aicte-india.org/
signup](https://atalacademy.aicte-india.org/signup)

OBJECTIVES OF THE FDP

- To apply principles of thermodynamics to the engine cycle analysis and combustion phenomenon of SI and CI engines
- To develop experimental skills in testing i) engine performance (ii) emission parameters (iii) bio-fuel properties and (iv) performance characteristics of fuel cells in order to integrate them in their teaching
- To teach the concepts of (i) engine emission control techniques and (ii) viable alternate fuel technologies in automobiles
- To learn advances in fuel cells and their application as alternate power source for automobiles.
- To use CONVERGE/STAR-CD software packages for simulation of engine flow processes and apply them in their research pursuits
- To teach effectively courses on (i) Combustion (ii) Alternate fuels for IC engines and (iii) Alternate power sources for automobiles

CONTENTS TO BE COVERED

- Overview of I.C. Engines and the Combustion Phenomenon
- Understanding thermo chemistry and fluid mechanics of IC Engines
- Determination of Performance Characteristics of I.C. Engines and solving the related problems
- Analyzing engine emissions and applying suitable emission control techniques
- Applying emission norms and judging appropriate diesel Particulate Filters
- Modeling of Diesel Engine Combustion
- Using Diesel Engine Modeling Software: STAR- CD/ CONVERGE
- Alternate fuels for IC Engines
- Understanding the new combustion concept: Homogeneous Charge Compression Ignition (HCCI)
- Biodiesel production process and strategies to use Biodiesel in CI engines
- Proton Exchange Membrane Fuel Cell and Direct Methanol Fuel Cell: Fundamentals and applications

RESOURCE PERSONS

Experts are invited from IIT'S/ NIT'S/ Industries and other reputed Organizations.

SCHEDULE

Date/Time	10:00 AM -11:30 AM	12 NOON- 1:30 PM	3:00 PM- 4:30 PM
7/9/2020	SESSION-I	SESSION-II	SESSION-III
8/9/2020	SESSION-I	SESSION-II	SESSION-III
9/9/2020	SESSION-I	SESSION-II	SESSION-III
10/9/2020	SESSION-I	SESSION-II	SESSION-III
11/9/2020	SESSION-I	SESSION-II	SESSION-III

