



Honors and Double Minor Programmes:

Students are eligible to register for the **Honors** or **Double Minor** Programme from the **Third Semester**, and the programme shall continue up to the **Seventh Semester**, subject to the applicable academic regulations.

A student may opt for **either one Honors Programme or Double Minor Programme**, as offered by the department.

To avail Honors or Minors certification, students need to acquire an additional 18 credits. The choice rests with the learners to undertake the Honors /Minors, rendering the scheme totally voluntary.

Honors Programme

Students may opt for an **Honors Programme** offered by their **parent department/discipline**. The Honors Programme enables students to pursue additional advanced courses or industry-relevant specialization tracks within their own discipline, leading to an Honors specialization.

Example: A student enrolled in **B.Tech. Mechanical Engineering** who successfully completes the **Advanced Thermal Engineering** Honors track offered by the Department of Mechanical Engineering shall be awarded the degree:

B.Tech. in Mechanical Engineering with Honors in Advanced Thermal Engineering.

Minor Programme

Students who wish to develop expertise in a discipline other than their parent programme may opt for a **Minor Programme** offered by another department. The Minor Programme consists of additional courses or industry-relevant specialization tracks in the chosen discipline.

Example: A student enrolled in **B.Tech. Mechanical Engineering** who successfully completes the **Data Science** Minor Programme offered by the Department of Computer Science and Engineering shall be awarded the degree:

B.Tech. in Mechanical Engineering with Minor in Data Science.

➤ Students are advised to refer to the detailed syllabi and evaluation schemes of the **Honors** and **Double Minor** programmes, available on the respective department pages of the college website, before submitting their registration.

➤ The detailed **Academic Rules and Regulations** for the **Honors** and **Double Minor** programmes are available on the college website. Students are advised to read them carefully before registering.



The following Honors and Double Minor Programmes are offered by the respective departments of the Institute

| Offering Department | Eligible Students | Honors & Double Minors Degree Programme | 3 rd Semester | 4 th Semester | 5 th Semester | 6 th Semester | 7 th Semester |
|---|--|--|--|---|---|-------------------------------------|--------------------------|
| Computer Science and Engineering | Honors: AD/CS/IT/ET Minors: CE/ ME | Artificial Intelligence and Machine Learning | Artificial Intelligence | Machine Learning | Deep Learning | Generative AI | Capstone Project |
| Information Technology | Honors: AD/CS/IT/ ET Minors: CE/ ME | Data Science | Foundations of Data Science | Statistics for Data Science | Data Science for Health and Social Care | AI for Data Analytics | Capstone Project |
| Civil Engineering | Honors: CE | Structural Engineering | Advanced Concrete Technology | Advanced Structural Analysis | Advanced Design of RCC Structures | Prestressed Concrete | Capstone Project |
| | Honors: CE | Water Resources Engineering | Hydrology | Irrigation Engineering | Flow Irrigation | Dam Engineering | Capstone Project |
| | Minors: CS/ IT / ET/ ME / AD | Building Construction | Building Materials | Interior Designing and Drafting | Estimating & Costing | Building Construction Management | Capstone Project |
| | Minors: CS/ IT/ ET/ ME / AD | Environmental Management | Environmental Policies & Practices | Environmental Impact Assessment | Solid & Hazardous Waste Management | E-Waste & Plastic Waste Management | Capstone Project |
| Mechanical Engineering | Honors: ME Minors: AD/ CE/CS/ET/IT | Advance Thermal Engineering | Applied Thermodynamics | Fluid Dynamics | Transfer & Heat Exchanger Design | Advance R&AC | Capstone Project |
| | Honors: ET/ ME Minors: AD/ CE/CS/IT | Robotics & Automation | Principles of Robotics | Robot Programming and Simulation | Industrial Automation | Artificial Intelligence in Robotics | Capstone Project |
| | Honors: ME Minors: AD/ CE/CS/ET/IT | Additive Manufacturing | Fundamentals of Additive Manufacturing | Design for Additive Manufacturing | 3D printing | Metal Additive Manufacturing | Capstone Project |
| | Honors: ET/ME Minors: AD/ CE/CS/IT | Electric Vehicle | Basics of Automobile & EV | Battery Management & Fuel Cell Technologies | Hybrid & Autonomous Vehicle | Charging Infrastructure | Capstone Project |
| | Honors: ME Minors: AD, CE, CS, ET, IT | Business Development Marketing & Finance | Business Environment | Business Law & Ethics | Marketing Management & Analytics | Logistic Operations | Capstone Project |
| | Honors: ME Minors: AD/ CE/CS/ET/IT | Logistic Management | Inventory Management | Demand Planning & Forecasting | Supply Chain Management | Industrial Costing & Finance | Capstone Project |
| Electronics and Telecommunication Engineering | Honors: ET Minors: AD/CE/CS/ IT/ME | Semiconductor Technologies | Devices and CMOS Technology | Introduction to VLSI design | Logic Synthesis and Optimization | VLSI Chip Design | Capstone Project |
| | Honors: ET Minors: AD/ CE/CS/IT/ME | Advance Communication Network | Communication Network | Advanced Communication Networks | Cloud Computing | Advance Network Security | Capstone Project |
| Artificial Intelligence (AI) and Data Science | Honours: AD/CS/ IT/ ET Minors: CE/ME | Deep Learning | Foundations of Deep Learning | Deep Learning Architecture | Advanced Deep Learning | AI Ethics and Fairness | Capstone Project |



Honors/Double Minor Degree Programmes Applicable to Students at Institute Level

| Offering Department | Honors/Double Minors degree Program | Computer Science and Engineering | Information Technology | Electronics and Telecommunication Engineering | Civil Engineering | Mechanical Engineering | Artificial Intelligence (AI) and Data Science |
|---|--|----------------------------------|------------------------|---|-------------------|------------------------|---|
| Computer Science and Engineering | Artificial Intelligence and Machine Learning | Honors | Honors | Honors | Minor | Minor | Honors |
| Information Technology | Data Science | Honors | Honors | Honors | Minor | Minor | Honors |
| Civil Engineering | Structural Engineering | - | - | - | Honors | - | - |
| | Water Resources Engineering | - | - | - | Honors | - | - |
| | Building Construction | Minor | Minor | Minor | - | Minor | Minor |
| | Environmental Management | Minor | Minor | Minor | - | Minor | Minor |
| Mechanical Engineering | Advance Thermal Engineering | Minor | Minor | Minor | Minor | Honors | Minor |
| | Robotics & Automation | Minor | Minor | Honors | Minor | Honors | Minor |
| | Additive Manufacturing | Minor | Minor | Minor | Minor | Honors | Minor |
| | Electric Vehicle | Minor | Minor | Honors | Minor | Honors | Minor |
| | Business Development Marketing & Finance | Minor | Minor | Minor | Minor | Honors | Minor |
| | Logistic Management | Minor | Minor | Minor | Minor | Honors | Minor |
| Electronics and Telecommunication Engineering | Semiconductor Technologies | Minor | Minor | Honors | Minor | Minor | Minor |
| | Advance Communication Network | Minor | Minor | Honors | Minor | Minor | Minor |
| Artificial Intelligence (AI) and Data Science | Deep Learning | Honors | Honors | Honors | Minor | Minor | Honors |

The following are the syllabi for the Honors and Double Minor programs :

- 1. Computer Science & Engineering**
[Sem III & IV](#)
[Sem V & VI](#)
- 2. Electronics & Telecommunication Engineering**
[Sem III & IV](#)
[Sem V & VI](#)
- 3. Information Technology**
[Sem III & IV](#)
[Sem V & VI](#)
- 4. Civil Engineering**



[Sem III & IV](#)

[Sem V & VI](#)

5. **Mechanical Engineering**

[Sem III & IV](#)

[Sem V & VI](#)

6. **Artificial Intelligence (AI) and Data Science**

[Sem III & IV](#)

[Sem V & VI](#)

** The guidelines related to the Honors/Minor degree Certification are provided as separate document: Rules and Regulations of Honors and Minors.*

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