Teaching Learning Process

1. Curriculum Design and Development

- Curriculum is designed by the **Board of Studies (BoS)** of each department.
- Approved by the **Academic Council** of the autonomous institute.
- Curriculum is **industry-oriented and updated every 3–4 years**.
- Includes:
  - Core courses
  - Program electives
  - Open electives
  - Skill-based and interdisciplinary courses
  - MDM Multidisciplinary minor Courses
- Aligned with **Program Outcomes (POs), Program Specific Outcomes (PSOs), and Course Outcomes (COs)**.

2. Academic Planning

- **Academic calendar** prepared before the semester begins.
- Includes:
  - Teaching schedule
  - Continuous Internal Evaluation (CIE)
  - Mid-semester tests (MSE)
  - End semester examinations (ESE)
  - Holidays and academic events.

3. Teaching Methodologies

Autonomous institutes use **modern and innovative teaching methods**, such as:

- Chalk and Talk method
- ICT-enabled teaching (Smart classrooms, LMS)
- PowerPoint presentations
- Flipped classroom
- Project-based learning
- Problem-based learning
- Case studies
- Simulation and virtual labs
- Industry-based assignments.
- Skill Development courses
- ADD-ON Courses

4. Continuous Internal Evaluation

Student performance is evaluated continuously through:

- Unit tests / Mid-semester exams
- Assignments
- Tutorials
- Quizzes
- Lab performance
- Mini projects
- Presentations and seminars.

Typical evaluation structure:

- **Internal assessment: 30–40%**
- **End semester examination: 60–70%**

5. Outcome-Based Education (OBE)

Teaching-learning process follows **Outcome Based Education**.

- Each course defines **Course Outcomes (COs)**.
- COs are mapped with **Program Outcomes (POs)**.
- Attainment is measured using:
    - Internal exams
    - External exams
    - Projects
    - Lab performance.

6. Use of ICT Tools

Autonomous institutes promote **technology-enabled learning**, including:

- Learning Management System (LMS)
- Google Classroom / Moodle
- NPTEL and SWAYAM courses
- Online quizzes and assignments
- Digital library resources.

7. Laboratory and Practical Learning

Practical exposure through:

- Well-equipped laboratories
- Mini and major projects
- Industry-based problem solving
- Internship programs
- Virtual labs and simulation tools.

8. Student-Centered Learning

Focus on **active student participation**, including:

- Hackathons
- Technical competitions
- Project exhibitions
- Research and innovation activities
- Entrepreneurship development.

9. Mentoring and Academic Support

- **Mentor–Mentee system** for academic guidance.
- Remedial classes for slow learners.
- Advanced learning opportunities for **fast learners**.

10. Feedback and Quality Improvement

Continuous improvement through:

- Student feedback on courses and teachers.
- Alumni feedback.
- Industry expert feedback.
- Academic audit and review.

11. Examination and Assessment

Autonomous institute conducts its **own examinations**:

- Internal assessments
- End semester exams
- Question paper setting by internal/external experts
- Transparent evaluation and moderation.

Outcome:

The teaching–learning process in an autonomous engineering institute focuses on the holistic development of students. It helps students gain strong academic knowledge along with practical and professional skills. Autonomous curriculum design ensures flexibility and industry relevance in education. The curriculum is aligned with Course Outcomes (COs), Program Outcomes (POs), and Program Specific Outcomes (PSOs). This alignment helps students develop analytical thinking and problem-solving abilities. Students learn to apply theoretical knowledge to real-world engineering problems. Modern teaching methods such as project-based learning and internships enhance practical learning. Laboratory work and industry-based assignments improve technical competence. Exposure to multidisciplinary projects encourages innovation and creativity among students. Skill-based courses and certifications improve students' employability skills. Interaction with industry experts helps students understand professional work environments. Activities like hackathons, competitions, and project

exhibitions promote research and innovation culture. Outcome-Based Education (OBE) ensures continuous monitoring and improvement of learning outcomes. Regular assessment and feedback help improve teaching methods and curriculum quality. As a result, graduates become skilled, confident, and socially responsible professionals ready for employment, entrepreneurship, and higher education.

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