

ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road, Surampalem

Department of Mechanical Engineering

Innovations by the Faculty in Teaching and Learning

Understanding the instructional models that capture, define, and convey knowledge from faculty members to learners can increase teaching effectiveness. These entail a thorough comprehension of the topic content, planning, classroom instructional tactics, evaluating the students' understanding, and analysing the learning outcomes.

The Department of Mechanical Engineering practices innovative, traditional teaching and learning strategies that include publishing instructional videos and expert lectures in the college website. Critic reviews are taken from stake holders for continuous improvement.

For peer reviews, the faculty's initiatives to adopt novel teaching and learning techniques are amply documented in our files and on the institute website. The implementation of teaching learning practices is shown below.

The innovative teaching learning strategies provide opportunities for students to work in teams, learn from peers, and learn from themselves. Also the students have the opportunities to engage in sophisticated and complex levels of cognitive activity – define, analyse, evaluate, reflect, access, and solve real-world problems. The evaluation suggests that implementation of these methodologies in the engineering courses improve the higher-level skills of the students as well as integrated theory, design and practice.

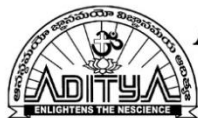
Innovative Teaching Methodologies

To improve the quality of teaching learning and to make the students actively participate in the class environment, the following are the few of the appropriate innovations followed by the faculty in our department. However, our methods are subject to improvement. Some of our cutting-edge techniques are:

- Innovative assignments and real-time problems
- Flipped classroom
- Technical presentation
- Value added courses
- On-site learning
- Inquiry-based learning
- Ask open-ended questions

- Peer learning
- Quiz
- Learning from experts
- Videos demonstration
- Developing digital content materials

Head of the Department



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Innovations by the Faculty in Teaching and Learning:

S. No.	Name of the Faculty	Name of the course	Year & Semester	Topic	Innovative methods	Website
2020-21						
1.	Mr.K.L. Kishore	Metallurgy & Material Science	II & I	Phase Diagrams	Technical presentation	https://www.aec.edu.in/?p=MECH#tab16

Head of the Department

Technical presentation:

Students are encouraged to give presentations on any technical topic in their area of interest which will serve for knowledge transfer and to overcome stage fear. Based on the student competence and recommendations of the review committee, selected students are allowed to participate in technical presentations. Necessary inputs are given for further improvement.

A presentation delivers content through oral, audio and visual channels allowing teacher-learner interaction and making the learning process more attractive. Through presentations, teachers can clearly introduce difficult concepts by illustrating the key principles and by engaging the audience in active discussions.

Objectives of Seminars and Technical Presentations Teaching Learning Method:

- Improved Confidence & Better Communication
- Career Success & Growth Opportunities
- Increased Morale & Staff Retention
- Better Business & Client Success
- Presentation Skills for Employees – What they will learn:
- Preparation
- Delivery

Plan of Execution

The seminar method is the most modern and advanced method of teaching. A seminar is an advanced group technique which is usually used in higher education. It is an instructional technique it involves generating a situation for a group to have a guided interaction among themselves on a theme. The main steps to organise a Seminars and Technical Presentations Teaching Learning Method:

1. Know your goals. Defining the seminar's goals is a critical first step.
2. Define who your attendees are
3. Make budget forecasts
4. Choose the right date.
5. Find a suitable venue
6. Use an online registration solution
7. Organise activities
8. One guiding principle: Communication

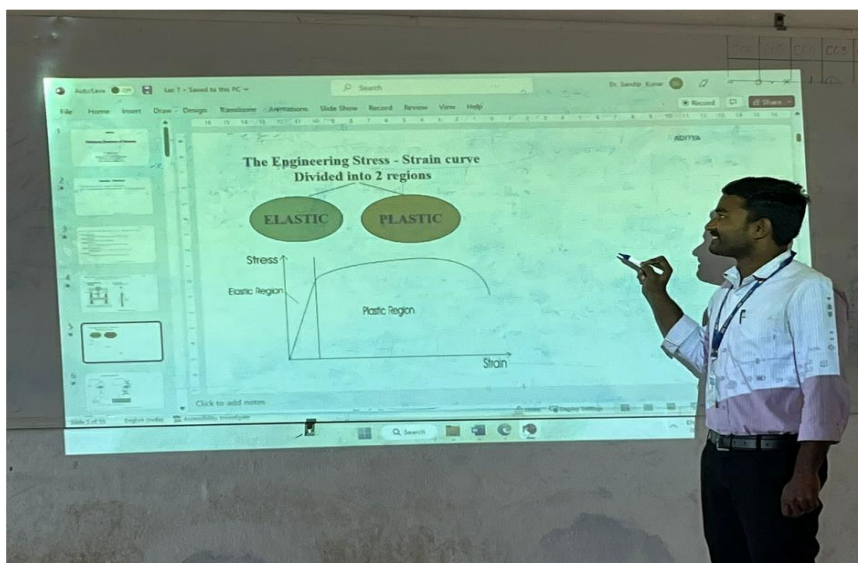
Benefits over Conventional Teaching Methods

Hence our faculty could observe the number of advantages of this innovative teaching over the conventional methods.

- Instructor is able to teach modules that build upon one another
- Users gain more expertise than is possible from a single workshop
- Consolidated block of time helps focus users attention on seminar topic
- Teaching a group (e.g. class, lab group) help builds peer support network
- Users learn skills that they can apply immediately to real information problems

Mapping of Innovative T-L Method to Subject

Name of the Faculty	Name of the course	Year & Semester	Topic	Innovative methods
Mr.K.L. Kishore	Metallurgy & Material Science	II & I	Phase Diagrams	Technical presentation



Technical presentation on Metallurgy and Material Science by the student