



MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

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Department of Computer Science and Engineering

2.3.2. Use of Various instructional methods and pedagogical initiatives:

MLEW is a student centric institution. To improve the quality of teaching and learning process, the faculty in the department follows different course delivery methods such as; lecturing, tutorials, assignments, remedial classes, quiz, presentations, experimental laboratory work, project work, etc. to deliver the course.

➤ **Classroom Teaching (ICT methods)**


The lecture delivery by the faculty is through a set of educational technology/tools such as

- i. Chalk and Board
- ii. Power point presentation (PPT)
- iii. E-Learning
- iv. Multimedia

The faculty use chalk and board and audio visual aids in teaching. Students are also encouraged to actually interact during the lecture hour by getting the doubts clarified in the same class. The college has required number of computers, printers, LCD projectors, application software and system software. These are effectively used for teaching.

The following innovative teaching methods are adopted by the faculty:

- i. Computing devices with Internet facility are used for teaching purposes by the faculty to show Power Point presentations, Animations, Videos, Pictures etc., so that the students can easily understand the topic.
- ii. Faculty members are advised to avail the higher learning resources such as NPTEL, and Centre of Excellence for e-Resource and Development (CoEeRD) of JNTUK and other credible Internet sources for effective teaching.
- iii. Smart Classrooms with LCD and Internet connection are used for teaching purposes.


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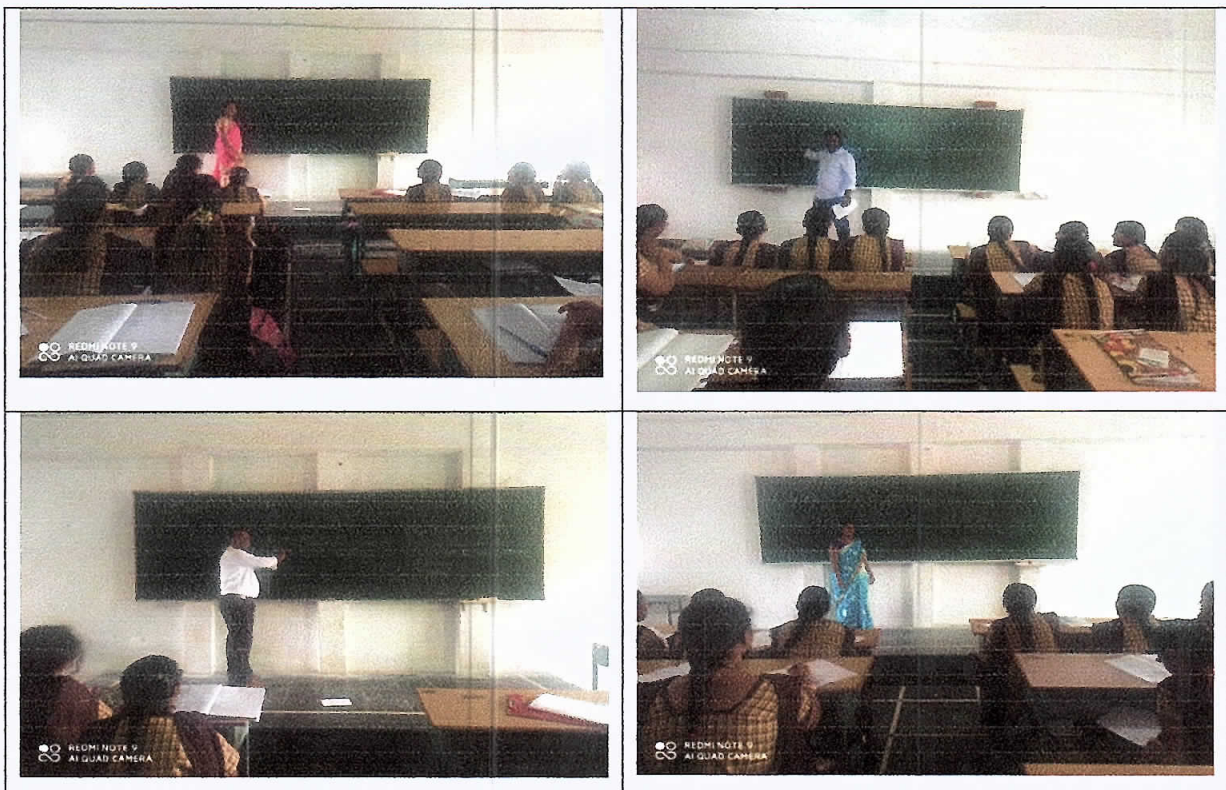
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- iv. Well-structured course handouts are prepared for all theory and practical courses. It includes Syllabus, course outcomes, mapping of course outcomes with program outcomes, lesson plan, question bank and available resources for respective courses.
- v. The faculty are now oriented towards Outcome Based Education (OBE) and are more actively utilizing the OBE to cater the learning needs of students through innovative methodologies. Orientation programs are conducted for the newly joined faculty to make them aware of the OBE frame work to practice the regular activities in the department.
- vi. Each faculty prepares lecture notes and after completion of each unit of instruction, the material and soft copy will be shared with students.
- vii. All the faculty maintains attendance registers and course files.
- viii. Internal question paper and Assignment Questions are prepared based on Bloom's taxonomy and Bloom's score will be calculated to identify the level of difficulty in the questions.

i.Chalk and Board





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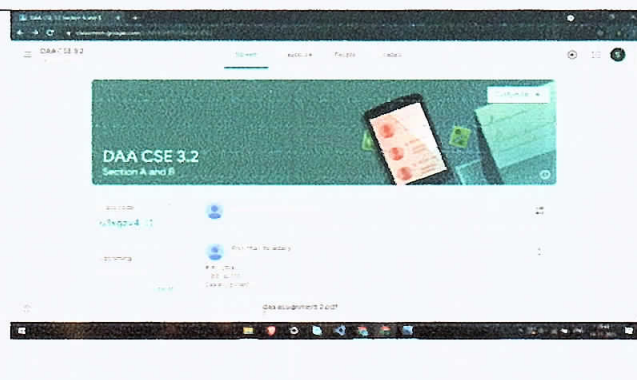
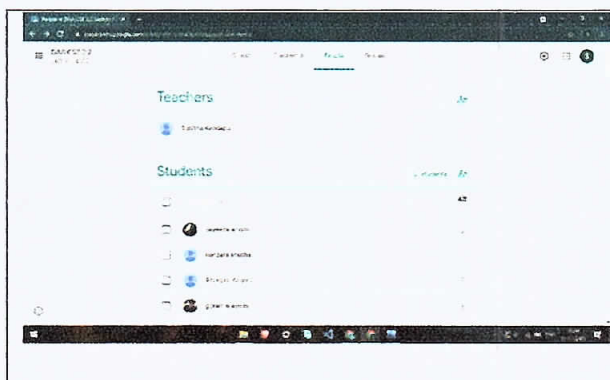
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ii. Power point presentation (PPT)




iii. E-Learning



iv) Multimedia




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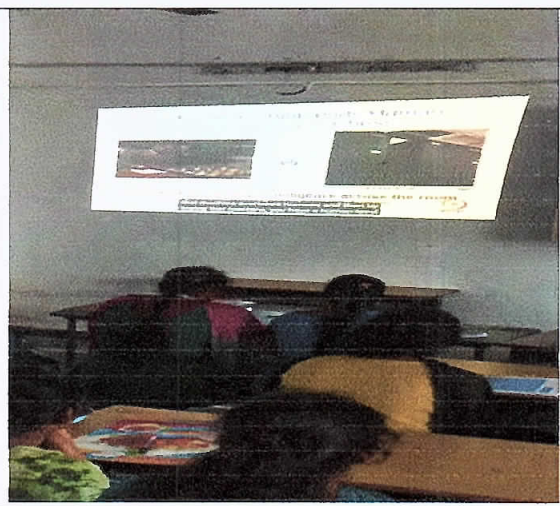
➤ **Interactive Method:**


The lecture method of teaching is supplemented with the discussion and interactive method, wherever required. There is ample scope for active participation of the students through discussions in each course. Search for advanced topics for discussion to organize the sessions.

➤ **MOOCs & Open Sources**

- Students are encouraged to take up online courses in collaboration with NPTEL, Practice their programming with the help of online programming sites. The college has a digital library which can be accessed online by the students and faculty. It contains NPTEL videos, handbooks, lecture notes, text books, online journals, and many other materials for aiding student's learning through self-study.
- The department of Computer Science and Engineering encourages students to enroll different Online Open source Courses (MOOCs) provided by University on different curriculum subjects.

NPTEL VIDEO:




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➤ Guest Lectures & Workshops

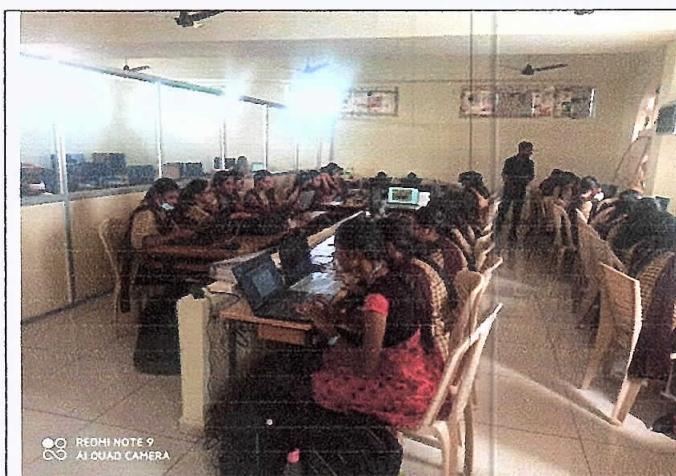
- Guest lectures by experts from industry and academia are organized regularly for the students in advanced or core concepts to fill the gaps in the curriculum there by assisting in the attainment of POs/PSOs.
- Workshops help the students to learn about advanced topics covering the breadth, research areas and technological developments in Computer Science and Engineering. This helps the students to engage in life-long learning.

Impact Analysis

The number of students attending various national level workshops for having hands-on experience on advanced technical topics in Electronics & Communication Engineering has been increased.

Table 2.3.2.1 List of students participated in workshops

Academic Year	No. of Students participated in workshops in various organizations
2019-2020	10
2018-2019	08
2017-2018	05





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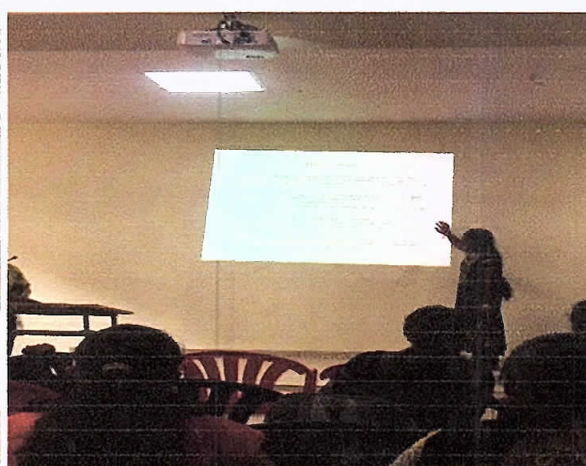
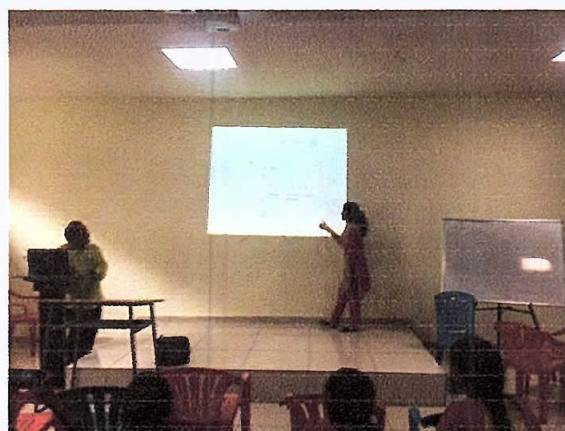
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➤ Seminar by students:

- Students are motivated to present seminars on various topics related to CSE to improve the documentation, presentation and communication skills. Has 1 credit for each student. Also, the students are encouraged to participate in inter & intra-collegiate competitions like Paper Presentations, Poster Presentation etc.
- Apart from the curriculum, bright students are encouraged to present a seminar on their interesting subject of their present semester during peer teaching hour once in every week. The respective Course Instructors monitor the session.



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➤ Role Plays

- Faculty uses role plays to explain the topic and makes students involve in those role plays.

➤ Think Pair Share:

- Think-Pair-Share (TPS) is a discussion method where students work together to solve a problem or answer a question about an assigned reading.

This strategy requires students to

- (1) Think individually about a topic or answer to a question; and
- (2) Share ideas with classmates. Discussing with a partner maximizes participation, focuses attention and engages students in comprehending the reading material.

Implementation of Think-Pair-Share Methodology:

1. Decide upon the text to be read and develop the set of questions or prompts that target key content concepts.
2. Describe the purpose of the strategy and provide guidelines for discussions.
3. Model the procedure to ensure that students understand how to use the strategy.
4. Monitor and support students as they work through the following:

T : (Think) Teachers begin by asking a specific question about the text. Students "think" about what they know or have learned about the topic.

P : (Pair) Each student should be paired with another student or a small group.

S : (Share) Students share their thinking with their partner. Teachers expand the "share" into a whole-class discussion.

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➤ Collaborative learning:

The following are some of the collaborative learning activities that are implemented by CSE department. Some of the activities are as follows.

- i. Seminars
- ii. Poster presentations
- iii. Paper presentations
- iv. Group Discussion
- v. Lecture with Quiz
- vi. JAM sessions
- vii. Crossover Learning

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Department of Computer Science and Engineering ICT tools and Group discussion pics



ii. Poster presentations:



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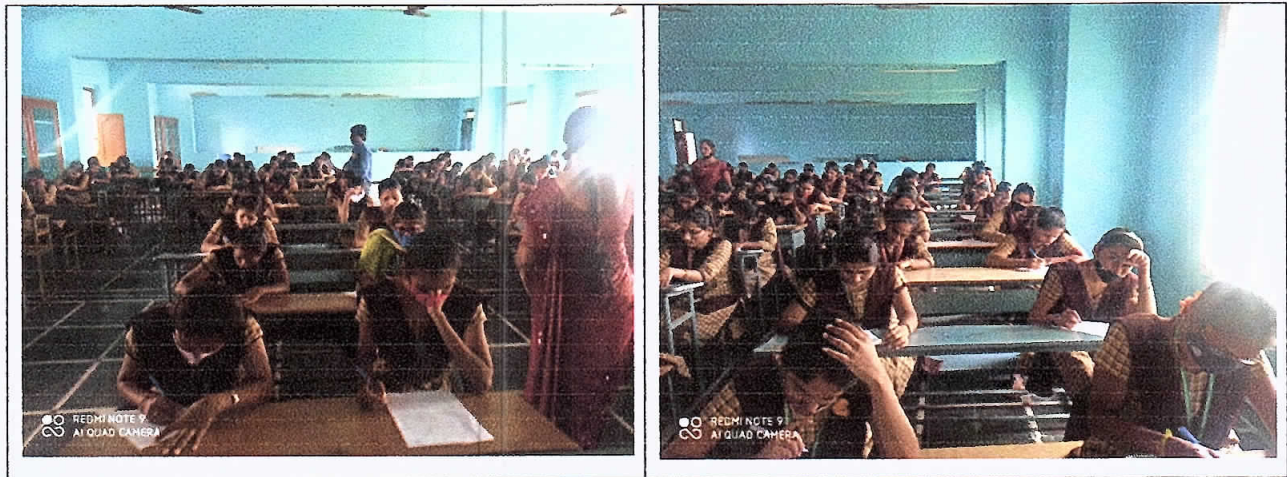


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V.Lecture with Quiz:



Plickers:

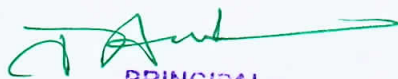
Students were handed cards with a unique pattern for their answers, and the quiz was administered using the tool Plickers. Option A, B, C, or D are possible answers. Students can register their answers by placing cards in front of a mobile camera. This quiz was given to students studying Data Structures and Artificial Neural Networks.

After the quiz was completed, the answers were presented on the projector screen so that students could see their results. The question in which students performed poorly was revisited so that students might obtain a better understanding of the topic or inquiry.

Teacher will put question on screen/board.

Process:

- To reply, understudies will turn their cards with the goal that their answer decision (A, B, C, or D) is at the top.
- Rotate their card with the goal that their picked answer decision is at the top
- Ensure that their Plickers card is confronting the educator while replying
- Hold their card still and straight until it is checked


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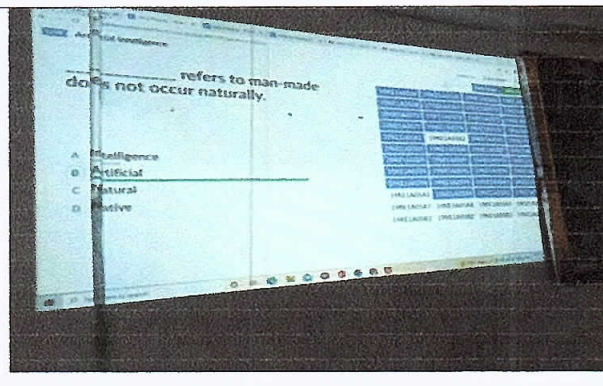
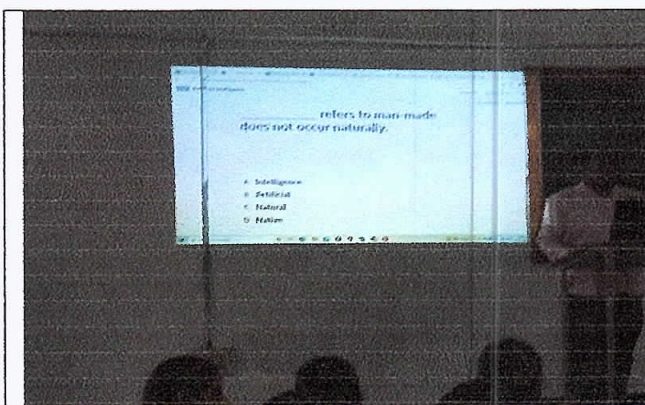
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- Teacher will filter all Plickers cards from his/her portable.

Outcome:

Understudies will immediately notice a reaction to their solutions. The instructor will identify the areas of the question where the presentation is lacking and will re-explain those focuses. As the educator focuses on the areas where execution is lacking, the youngsters will understand.



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