



ARASU ENGINEERING COLLEGE

Approved by AICTE & Affiliated to Anna University
Chennai Main Road, Kumbakonam – 612 501, Tamilnadu

Best Practice I

IMPLEMENTATION OF TEACHING LEARNING PROCESS THROUGH ENHANCED TECHNOLOGIES AND INDUSTRY SUPPORT

Goals

- ❖ To ensure that courses offered to students are allotted to competent faculty members who have adequate expertise and experience to teach the course.
- ❖ To ensure that the faculty member, well ahead of the beginning of the semester, prepare a set of course objectives and outcomes, adequate study material, presentation material, videos, software tools, lesson plan, question bank and get approved by HOD/Principal.
- ❖ To adapt various pedagogical methods to explain the concept with real world illustrations in an efficient manner.
- ❖ To promote direct industry linkages with the department and enhance In-plant training, Industrial Visit, field/site visits, Internship opportunities to the students and also to train the faculty in the recent advancements

The Context

- ❖ Periodically monitoring the lecture delivery methods followed by the faculty members, measuring the outcomes and analyse the impact that leads to the improvement in teaching learning process.
- ❖ Implementing Learner Centered Methods such as Flipped and Blended Mode Learning, problem solving gamification and concept map to enhance the Teaching-Learning process
- ❖ Focusing on Employability Enhancement Courses and industry oriented advanced courses satisfying program specific demands.

- ❖ Establishing relationship with reputed industries and bringing industry experts to deliver cutting-edge technologies.
- ❖ Collecting Alumni feedback regarding usefulness of courses learned during their stay at institute , need of additional skills , ways of enhancing placement of the students, enhancing sponsorship and internship activities and branding of institute etc.

The Practice

- ❖ In the beginning of the every semester, it is ensured that teachers of all the courses offered are well equipped to handle the courses assigned to them. As the semester progresses, courses are delivered as per the lesson plan prepared. Periodically head of the department reviews the progress of the course delivery and ensure that the course delivery is in line with the lesson plan. In case of any deviation, suitable measures are taken to bring it in line with the lesson plan. The feedback is collected from students and appropriate measures are taken as detailed below:
 - Feedback from the students collected in the Class Committee meeting arranged after the first and second internal assessment tests.
 - Feedback is taken from the students on the teaching of every course at the end of the semester.
 - Once in a year parent teacher meeting is arranged to get parents' views also. For all the concerns raised appropriate actions are taken.
- ❖ Internal quality audit for course planning, delivery of knowledge, evaluation, question paper setting and assessment, obtaining course attainment level, students' performance data collection, and records keeping. This will be done once/twice in year.
- ❖ The innovative teaching methods are inculcated to create the best learning environment for student.
 - Smart Classroom - A smart classroom is a technology-enhanced learning classroom that magnifies the way of teaching and learning digitally. Visual

learning using smart technology elements like graphs, images, charts, presentations are highly effective to grasp the subject quicker. Smart Classrooms helps in developing critical thinking and problem-solving skills in students.

- MOOCs - Faculty members motivate and help the students to complete the NPTEL, SWAYAM and other MOOCs courses by acting as a Mentor for students. Assignments and tests in MOOCs help in improving critical thinking and problem solving ability of students.
- Virtual Labs - Faculty members utilize the Virtual lab facilities provided by the IIT-PALS for doing experiments in laboratory classes. The Virtual Labs provides remote-access to simulation-based Labs in various disciplines of science and engineering.
- Google Classroom - Faculty members utilize open source learning management system like Google Classroom for providing course materials, question bank, lesson plan and assignments.
- Google Forms - Google forms are used for conducting online MCQ Quizzes. The information is stored as a spreadsheet automatically records the answers. The spreadsheet then populates the responses from the quiz or survey in real-time. Participative learning is enhanced by Google Forms.
- ❖ Memorandum of Understanding is signed with various industries to provide courses on recent trends with industrial support
- ❖ Value added courses are regularly conducted for the students enable the industrial needs.
- ❖ Industrial visits and internships are regularly arranged to expose the students about real world problems.

Evidence of Success

- ❖ The effective implementation of Teaching Learning process leads to the improvement in Course Outcome and Program Outcome attainments.
- ❖ The number of successfully graduated students was substantially increased.
- ❖ The innovative teaching methods were successfully implemented for all courses.

- ❖ 28 MoUs are active with reputed industries to enhance the technical expertise of faculty and students.
- ❖ 16 Value added courses were offered with the help of industry experts in advanced topics / skill enhancement techniques
- ❖ During 2022 -2023, 142 students have carried out internships/in-plant training, 47 industry experts were invited to deliver the industry related topics and 87% of graduated students were placed in reputed industries.

Problems Encountered and Resources Required

Problems Encountered :

- ❖ A great deal of time is to be set apart by all the faculty members in monitoring, assessment and relevant documentation, apart from the time spent for the class room teaching.
- ❖ Mentoring of students is challenging issue due to their interest in social media activities apart from the academics.
- ❖ Establishing relationship and entering into MoU with reputed industries takes time and follow-up activities to retain the partnership becomes a challenging one.
- ❖ All the industries are not ready to pay stipend during the period of internships for the students.
- ❖ Establishment of industry supported laboratory is a constraint for rural based colleges.

Resources Required :

- ❖ Budget has to allocated for procuring Industrial equipments.
- ❖ Financial assistances should be provided for the faculty members to undergo training in industries.



Head of the Institution

PRINCIPAL

ARASU ENGINEERING COLLEGE

Kumbakonam - 612 501