

## 2. Teaching- Learning and Evaluation as Best Practice

### Objective

Teaching is a science and Teacher has to adapt to various teaching environment by using different methodology and techniques to teach effectively to the learners. Teaching method is the inspiration, guidance, direction and support for learning. Teaching is an interaction process in which participation of both teacher and student get benefited mutually. This interaction process takes place for achieving desired objectives. For an effective teaching, one has to follow some specific principles based on certain distinct knowledge.

#### Learning objectives

- Should be concise and clear with outcomes.
- Should specify knowledge, skills and attitudes
- Should help to clarify, organize and prioritize learning.
- Should help the teacher and students to evaluate their progress
- Should give confidence to them to take responsibility for their learning.

### Context

Industry expects precisely the ability of applying engineering concepts in solving problems and developing new tools. Understanding and applying the basic concepts of Engineering and Technology is very important for an engineering graduate. Hence the institution focuses on framework, or environment, in which technical knowledge and skills are learned. The culture of education, the skills we teach, and the attitudes we convey should indicate the role of engineers render their service to the society. It is important to note that we believe that the product, process, or system lifecycle should be the context, not the content, of engineering education.

### Practice

- ❖ The institution is affiliated to Anna University, Chennai. So, the process of teaching-learning and evaluation is in complying with the regulations of the University. The curriculum and syllabus, schedule are followed as per the guideline of the university. The following sequence is followed strictly to achieve the vision and mission of the College.
- ❖ The Head of the Department allot the subjects for the faculty based on their willingness and area of expertise.
- ❖ The Department timetable in-charge prepares timetable of the faculty members for the allotted courses. The timetable is approved by the Head, circulated to the faculty members along with copy of signed syllabus. Simultaneously it is displayed on the notice board.

- ❖ The softcopy of the academic calendar is distributed to the students individually and hard copy is kept in the Library and Department office for their reference
- ❖ The lesson plan and question bank are prepared based on the syllabus provided by the University and approved by the HoD which are circulated to the students, by the individual faculty for their allotted subject.
- ❖ The faculty takes utmost care in preparing their course material for the subject by referring reference books, text books and other ICT tools such as NPTEL Videos, etc.
- ❖ The faculty is provided with subject log book, in which the student's attendance and internal marks are entered. Also, the portions covered in each lecture hour is entered by the faculty which is verified by HoD periodically.
- ❖ Three internal tests and one model exam are planned for every semester as per academic calendar.
- ❖ Based on the academic calendar, Controller of Examination (COE) cell prepares the timetable for the test/exam and circulate it to the faculty members and the students one week before of the commencement of the test/exam.
- ❖ Faculty members intimate the test portions and pattern of the question papers to the students one week before the commencement of the test.
- ❖ The evaluated answer scripts are distributed to the students and the results are discussed in the classroom.
- ❖ The marks secured in three internal tests and model examinations are uploaded in the university web portal.
- ❖ Students can view their attendance and internal test marks in the university web portal at any time.
- ❖ Insists minimum of 450 periods per semester and this is strictly adhered by the college. Insists minimum of 450 periods per semester and this is strictly adhered by the college.
- ❖ Regular reading after understanding the concepts helps in embedding the knowledge of basics in students mind. Motivating the students to this habit and evaluating the benefits helps the students in a long way. With this view regular class tests have been designed.
- ❖ In each subject after every six periods of teaching, one hour test is conducted as as GMT (Good Morning Test) in the first period of every working day. GMT tests helps the students to prepare, remember and practice well for their examinations .
- ❖ Course Outcomes (CO) statements are defined for every course by considering the course content and competencies gained by the students through the course.
- ❖ The attainment of Course Outcomes (COs) is calculated with the help of performance in Internal Tests, Model Examination, Assignments, Seminars, End Semester University examinations and Course Exit Surveys. The assessment tools and processes used for measuring the attainment of each of the Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) are also well defined at the end of every semester; the Course Outcome attainments for all the courses undergone by a particular batch of students is calculated.

- ❖ At the end of the programme, PO and PSO attainment levels for a particular batch are obtained which is an indicator of the outcome of the Course.

### **Evidence of success**

- ❖ The outcome is visible in their academic performance in end semester university examinations.
- ❖ Students are motivated to participate in technical events like paper presentations, software contests, code debugging, etc. and won many prizes at inter-college and intra-college levels.
- ❖ They are encouraged to do mini-projects and additional design experiments in the laboratory classes which create interest to participate in project contests and doing industrial projects.
- ❖ Due to the interest created, our students have received funds from funding agencies like Tamilnadu State Council for Science and Technology (TNSCST) and won cash prize in project competition conducted by Pan IIT Leadership Series (PALS), IIT-Madras.
- ❖ The outcome of the project is presented in national/international conferences and journals.

### **Problems encountered and resources required**

#### **Slow learners**

- ❖ Special care is taken for the slow learners by conducting evening coaching classes, tutorial classes and assignments. To achieve better course outcomes, previous year question papers and question bank are prepared for all the courses and distributed to the slow learners well in advance.
- ❖ During laboratory classes and project works, slow learners are grouped with advanced learners for enabling peer learning. The slow learners are grouped with advanced learners for presenting papers in national/international conferences. The students are counseled by the mentor to help them in solving personal and academic difficulties. These approaches improve the internal tests and university exam results.