Teaching - Learning Processes

The processes that are followed by the department to improve quality of Teaching & Learning are mentioned below:

A. Adherence to academic calendar:

- The faculty member's carry out their work in adherence with Academic calendar issued by Dean academic (Annexure 2.1) affairs keeping in view University academic calendar specifying key milestones, schedule of class work and examinations, major events and activities.

- The HoD does the load distribution keeping in view course preferences from the faculty members and their expertise in particular domain.

- All the faculty members are required to prepare course file which includes teaching/lesson plan, notes, previous year University question papers along with model answer, question bank, assignments, e-learning material (NPTEL, PPT etc.) in presentation format before the start of each academic session.

- The students are informed about academic calendar, teaching plan and course objectives and outcomes at the commencement of semester by concerned faculty.

B. Instruction Methods and pedagogical initiatives:

- The use of technology in teaching-learning process is being encouraged and promoted through promulgation of the institutional ICT policy which specifies integration of pre-identified MOOCs, related NPTEL courses\lectures among other innovations into the teaching learning process.

- The students are encouraged to work in peers, present seminars on selected topics, problem solving sessions, quizzes etc. to enhance their academic competencies.

- Continuous assessment is done based on students' performance in sessional tests, tutorials, assignments, attendance and practical's etc.

C. Methodologies to support weak students and encourage bright students:

Identification of weak & Bright Students

The institute has a mentoring/batch counselling system. One faculty member is appointed as mentor/counsellor for a batch of approximately 15-20 students. The mentor/counsellor identifies weak and bright students based on following parameters such as:

- Result analysis of the previous year university examinations.
- Performance analysis through internal Sessional, assignments, tutorials and quiz.

Support to weak student

- Remedial and additional practice session is conducted for weak students.
- Individual performance is monitored on a continual basis for preparing them to perform well in term end examinations.

Support to Bright student

- Bright students are encouraged to get involved in various departmental activities like class representative, cultural, sports, technical events etc. to encourage their leadership skills.
- They are encouraged to participate in external events like seminar, conference, workshop etc. and to take up industry-based projects.

Impact - The impact of the above-mentioned actions has resulted into following impact:

a) Research papers are published in journal.

b) 61% students have taken industry-based projects

c) Involvement in departmental activities, its quality, quantity

D. Quality of classroom teaching:

- The department has spacious, clean, well illuminated and ventilated classrooms with availability of adequate teaching aids for providing effective teaching learning environment.
- For effective engagement of students during class work, faculty members interact with students frequently enquiring about understanding of the topic and discuss relevant practical examples, clarify their doubts, takes into consideration their views and suggestions about the topic.
- In a lecture of 60 minutes duration, department has evolved '50:10 module' where in students are actually engaged for active learning for a period of 50 minutes and will be encouraged to summarize in last 10 minutes about today's topic that helps for their better attentiveness and improvement in communication skills.
- At the end of few modules, students were asked to prepare and present small talk or encourage having group discussion and quiz to encourage collaborative learning among students.
- The feedback is collected twice in a semester i.e. at mid and end of semester and is analysed in consideration of the inputs from senior faculty (observer) who had interacted during theory/laboratory in the semester.

E. Conduct of Laboratory Experiments:

The Laboratories are well equipped with necessary infrastructure and adequate equipment to facilitate effective conduct of experiments: -

- The students are provided with laboratory manuals and are divided into groups (3 to 4 students in each group) at the commencement of semester and experiments are discussed and demonstrated in detail by the respective faculty members.
- During each laboratory session, students are advised to study and come prepared with procedural details and are assessed for the same by the faculty member before conducting practical. If it is found that students are not well prepared for carrying out experiment then they are suggested to prepare and discuss with the faculty and then are allowed to precede in presence/under guidance of authorized laboratory technician.
- After completion of experiment students record the observations, carry out the calculation and summarized the conclusion about the experiment.

- During Laboratory session, students are required to maintain record book of previous experiments and necessary preparation for conduct of next experiment.

F. Continuous Assessment in the Laboratory:

- Continuous evaluation is carried out by the faculty during every laboratory session based on:

   a) Completion of record book of performed experiment.

   b) Preparation/ readiness about experiment to be performed during this session.

   c) Their conduct/punctuality/sincerity/ involvement during laboratory session.

- At the time of end semester laboratory examination, the students are assessed on the basis of:

   a) Performance of said experiment

   b) Viva-voce

   c) Attendance

   d) Continuous evaluation of record book.

G. Student feedback of teaching learning process:

Student feedback is collected on various parameters for assessing the effectiveness of teaching learning process. The performa related to Feedback from students (Course Exit Survey) is enclosed as Annexure-2.2 for ready reference. Some of the parameters which are considered for assessment of effectiveness are given hereunder:

- Content
- Teaching- learning process
- Evaluation process

This feedback is collected at end of semester and analysed by Departmental Academic Advisory Committee which is then communicated to the concerned faculty. Based on the outcome of analysis, the faculty is either will be rewarded for better performance or will be counselled for improvement.

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