ERODE SENGUNTHAR
ENGINEERING COLLEGE
(An Autonomous Institution)
Approved by AICTE, New Delhi, Permanently Affiliated to Anna University- Chennai,
Accredited by National Board of Accreditation (NBA), New Delhi &
National Assessment and Accreditation Council (NAAC), Bangalore with 'A' Grade
PERUNDURAI -638 057, TAMILNADU, INDIA.

CURRICULUM DEVELOPMENT

The Outcome Based Curriculum is designed based on the feedback from all stakeholders including Students, Alumni, Academic experts, Industry experts and Parents which aligns with the Institution's Mission. The design process includes the points gathered after carefully assessing the opportunities for enhancement, industrial needs, suitable employability, innovation, research and development of entrepreneurship skills among the students. Courses developed focus mainly on employability, entrepreneurship and skill development. Many new courses are developed to satisfy the requirements of the current industry.

Outcome Based Education (OBE)

OBE is an educational theory that bases each part of an educational system around goals (outcomes). By the end of the educational experience, each student should have achieved the goal. There is no single specified style of teaching or assessment in OBE; instead, classes, opportunities, and assessments should all help students achieve the specified outcomes. The role of the faculty adapts into instructor, trainer, facilitator, and/or mentor based on the outcomes targeted.

Course Outcomes (COs)

Course Outcomes (COs) are central to the course's curriculum. They articulate to students, faculty, and other stakeholders what students will achieve in each course and how their learning will be measured. It clearly indicates what a student should know and be able to do as a result of learning. An effective CO is student-centered, measurable, concise, meaningful, achievable and outcome-based. They inform both the way students are evaluated in a course and the way a course will be organized. Course outcomes will specify what expectations an instructor has for

the course, which are related to one or more program outcomes. Course Outcomes help teachers to describe to students what is expected of them, plan appropriate teaching strategies, materials and assessments, learn from and make changes to curriculum to improve student learning and assess how the outcomes of a single course align with larger outcomes for an entire program. It will be useful for students to anticipate what they will gain from an educational experience, track their progress and know where they stand and to know in advance how they'll be assessed. Cos for each course is framed along with the syllabus, and the same are assessed after the end semester examination to assess the performance of the student learning that course.

Blooms Taxonomy

Bloom's Taxonomy based on six levels of Cognitive Learning Dimensions (Remembering, Understanding, Applying, Analyzing, Evaluating and Creating) is used to deliver course content. High and Low order thinking is distinguished perceptively. A variety of pedagogical programs and instructional approaches including seminars, tutorials, laboratory classes, project work, value added courses & Continuous Assessment Test for theory Courses are used to enhance and ensure the effectiveness of course delivery.

Program Outcomes (POs)

POs are statements about the knowledge, skills and attitudes (attributes) the graduate of a formal engineering program should have. POs deal with the general aspect of graduation for a particular program, and the competencies and expertise a graduate will possess after completion of the program. These are broad and cover a wider area than of COs. the NBA has set 12 Program Outcomes or Graduate Attributes for the sake of unity and quality assurance. The Program Outcomes set by the institution reflect on these. The Mission, PEOs of the Department along with the 12 Graduate Attributes (GAs) given by the NBA are used in defining the POs which are listed below

PO1: Engineering Knowledge

PO2: Problem Analysis

PO3: Design/Development of Solutions

PO4: Conduct Investigations of Complex Problems

PO5: Modern Tool Usage

PO6: The Engineer and Society

PO7: Environment and Sustainability

PO8: Ethics

PO9: Individual and Team Work

PO10: Communication

PO11: Project Management and Finance

PO12: Life-long Learning

Program Specific Outcomes (PSOs)

The PSOs are program specific. These are statements that define outcomes of a program which make students realize the fact that the knowledge and techniques learnt in this course has direct implication for the betterment of society and its sustainability.

Program Educational Objectives (PEOs)

Program Educational Objectives (PEOs) are statements that describe the career and professional accomplishments that the program is preparing the graduates to achieve. PEO's are measured 4–5 years after graduation. They are set in order to measure the effectiveness of the program, and to check whether it has prepared the students to deal with the real world, where they could apply and use the skills and knowledge they've learned to good use.

Board of Studies (BoS)

BoS consists of members including internal faculty members, students, alumni, academic experts, and industry experts. Revision of curriculum and syllabus are done once in four years. However, minor revisions as and when required, recommended by the Quality Improvement Committee (QIC), Program Assessment Committee (PAC) and Board of Studies (BoS) are incorporated in the regulations/curricula/course content. The overall curriculum is prepared through a consultative process among various stake holders. Initially a brainstorming meeting is arranged with all the stakeholders by carefully considering the important parameters such as Department Vision, Mission, Program Educational Objectives (PEOs), Program Outcomes (POs), Program Specific Outcomes(PSOs), inputs from external stakeholders and benchmarking of curriculum against similar programs run by leading educational institutions in India and abroad. The drafted curriculum and the syllabi is reviewed in Board of Studies meeting by the

BoS members and the recommendations suggested in Board of Studies meeting by the BoS members are incorporated in the curriculum and syllabi.

Quality Improvement Committee (QIC)

Quality Improvement Committee consists of Program Coordinator, Module Coordinator and faculty representatives. Chaired by Program Coordinator, the committee monitors the attainment of POs and PEOs. It evaluates program effectiveness and proposes necessary changes for continuous improvement. Its role is to prepare periodic reports, records on program activities, progress, status or other special reports for management key stake holders. QIC also motivates the faculty and students towards attending workshops, developing projects, working models, paper publications and research. The committee interacts with students, faculty, Program Coordinators, Module Coordinator and outside/community agencies (through their representation) in facilitating program educational objectives. QIC meets atleast once in 6 months to review the program and submits reports to Program Assessment Committee (PAC).

Program Assessment Committee (PAC)

The PAC is composed of members from renowned institutions as well as members from industry, alumni and members of faculty of the department, Head of the Department and student representatives. It receives the report of the QIC and monitors the progress of the program. The board discusses on current and future issues related to programs. It develops and recommends new or revised program goals and objectives. The main objective of PAC is making up to date with the latest requirements of the industry and incorporating necessary components in the curriculum as much as possible. The committee also reviews and analyzes the gap between curriculum and Industry requirement and gives necessary feedback or advice actions. PAC encourages for industry-institute interactions to bridge up curriculum/industry gap and suggest quality improvement initiatives to enhance employability. It also proposes necessary action plan for skill development of students, required for entrepreneurship development and quality improvement. PAC also identifies and suggests thrust areas to conduct various activities (final year projects, training courses and additional experiments to meet PEOs. PAC members assist in redefining existing PEO's, aligning of PEO's to the mission statements and defining program specific outcomes. PAC meets once in a year to review the programs.