



JAYAWANT SHIKSHAN PRASARAK MANDAL'S
**RAJARSHI SHAHU COLLEGE
OF ENGINEERING**



An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University,
Approved by AICTE, Accredited by NBA (UG Programs),
Accredited by NAAC With "A" Grade. MHRD-NIRF Rank:151-200

**PROCESS OF
CURRICULUM
DESIGN**





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1. OBJECTIVE:

To establish a systematic process for designing, reviewing, and implementing a curriculum that ensures quality, relevance, and alignment with regulatory bodies, industry needs, and Outcome-Based Education (OBE).

SCOPE :

This SOP applies to all Undergraduate Engineering Programs offered by the institute. It involves faculty, Head of the Department, Board of Studies (BoS), Academic Council, External Experts, Industry Representatives, and Stakeholders.

2. RESPONSIBILITIES

- **Academic Council:** Approves final curriculum.
- **Board of Studies (BoS):** Designs and recommends curriculum.
- **Head of Department (HoD):** Coordinates department-level inputs.
- **Program Academic coordination and Assessment Committee (PACAC):**
Verify draft and suggest modifications.
- **Faculty Members:** Draft Course Outcomes (COs), syllabi, and teaching methodologies.
- **Industry Experts/Alumni/Employers:** Provide inputs on industry relevance.
- **IQAC/OBE Cell:** Ensures compliance with OBE and quality standards.

3. PROCEDURE FOR CURRICULUM DESIGN:

The Department designs its program curriculum based on the vision and mission of the Institution and the Department. The curriculum aims to make students industry-ready and encourages their curiosity to pursue research in the broad and diverse field of Technology. It offers a balanced mix of theoretical knowledge and practical training in core engineering concepts, along with exposure to emerging technologies, modern tools, and industry practices. The curriculum also



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integrates science, engineering, arts, humanities, and social sciences, complemented by courses in environmental science, ethics, values, and life skills. This comprehensive approach fosters problem-solving, adaptability, and professional skills, preparing students to meet the changing needs of the engineering field.

The program curriculum is designed and structured by the Department along with the Board of Studies (BoS) according to the UGC, AICTE, and NEP guidelines in order to fulfil the PEOs, POs, and PSOs. In 2023 pattern curriculum design, we followed the NEP 2020 guidelines. The course coordinator prepares a draft of the course contents and subsequently considers feedback from all stakeholders, including Board of Studies (BoS) members, industry partners, alumni, parents, and external academicians, for the final drafting of the syllabus. This draft is finalized and approved in the BoS meeting.

The contents of each course are finalized with the help of domain experts from the industries like Persistent Systems Ltd., Tata Consultancy Services, Veritas Technologies etc.

The draft syllabus content with respect to the curriculum is further discussed for any modifications during the Program Academic Coordination and Assessment Committee (PACAC) meeting. The finalized curriculum and syllabus content is presented in the BoS meeting for approval. The final version is then forwarded to the Academic Council for approval and implementation.

The PACAC meets at the start and end of every semester to assess the effectiveness of program curriculum and suggest improvements (if any). The PACAC meeting is followed by a BoS meeting for ratification and subsequent forwarding of the curriculum to the Academic Council (AC) for final approval and implementation. Flow Chart is shown below

The BoS consists of the BoS Chairman (HoD), Vice Chancellor nominee from affiliating university, industry representative, alumni representative, special invite and internal faculty members with diversified specializations. Following Steps are involved.

Process of Curriculum Design

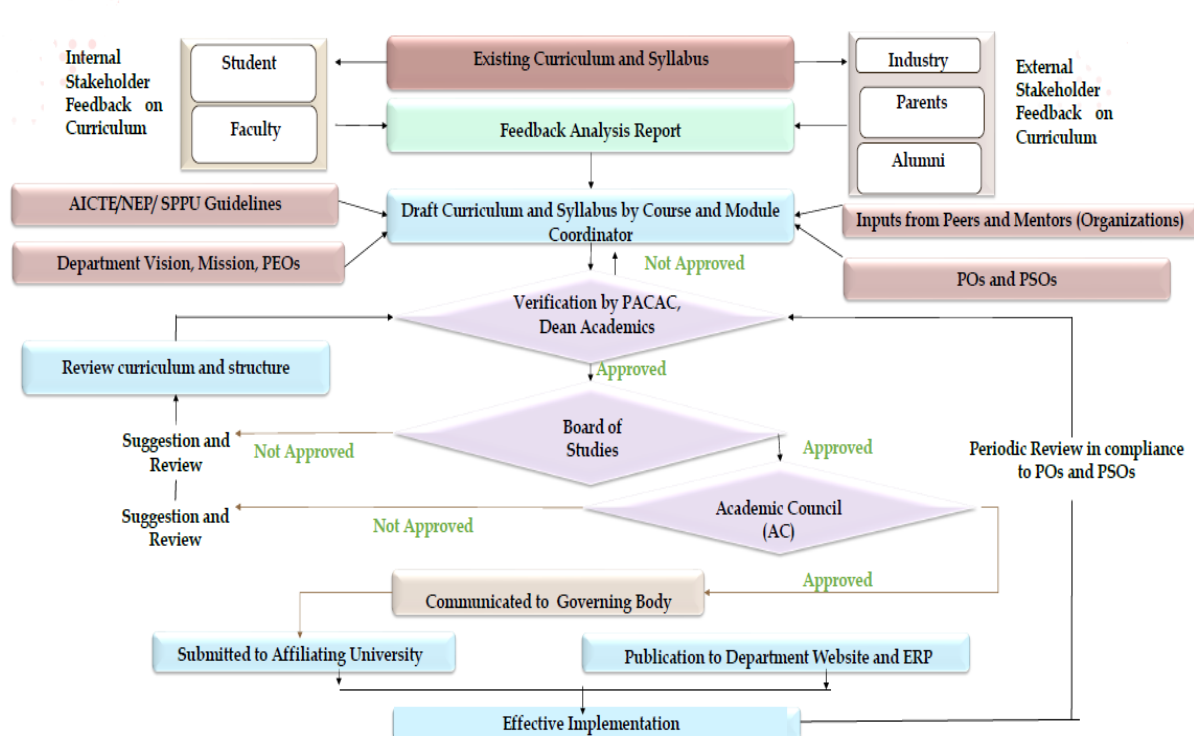


Figure 1. A Flow chart for Design/ revision of Program Curriculum

4. FEEDBACK COLLECTION

- Inputs are collected from **internal stakeholders** (students, faculty) and **external stakeholders** (industry, alumni, parents).
- Feedback is analyzed in line with guidelines from **AICTE/NEP/SPPU** and department vision, mission, and PEOs.

5. ANALYZE LATEST TECHNOLOGICAL TRENDS, RESEARCH AREAS, AND EMPLOYABILITY SKILLS.

I. DRAFT PREPARATION

A draft curriculum and syllabus is prepared, incorporating feedback, POs/PSOs, and inputs from peers and mentor organizations.



II. CURRICULUM STRUCTURE:

- Distribute courses across semesters with a balance of **Basic Sciences, Engineering Sciences, Core, Electives, Open Electives, Humanities, and Project Work**.
- Integrate interdisciplinary and emerging areas (AI, IoT, Data Science, Sustainable Engineering).
- Ensure compliance with AICTE model curriculum and credit distribution (e.g., Choice Based Credit System - CBCS).

III. COURSE DESIGN:

- Define **Course Outcomes (COs)** aligned with **Program Outcomes (POs)**.
- Prepare course syllabus: course structure, credits, prerequisites, learning resources, pedagogy.
- Incorporate ICT tools, lab work, industry case studies, mini-projects, and skill-based learning.

4. REVIEW AND VERIFICATION

The draft is reviewed by **PACAC and Dean Academics**.

5. APPROVAL PROCESS

1. The draft is presented to the **Board of Studies (BoS)** for approval.
2. After BoS approval, it is forwarded to the **Academic Council (AC)** for ratification.
3. Once approved, it is communicated to the **Governing Body**.

6. IMPLEMENTATION

- Approved curriculum is submitted to the **Affiliating University**.
- Publish updated syllabus in the Academic Handbook/Institute Website.
- Published on the **Department Website** and uploaded to **LMS/ERP**.



- Faculty prepare **Course Files** (Lesson Plan, Teaching Methodology, CO–PO Mapping, Assessment Plan).
- Conduct faculty orientation for uniform implementation.

7. CONTINUOUS REVIEW

- Designed curriculum is periodically reviewed considering the attained POs and PSOs of the program.
- Suggestions and feedback from reviews lead to further curriculum revision and updates.

8. DOCUMENTATION

- Curriculum Revision Reports.
- CO–PO Mapping and Attainment Records.
- Stakeholder Feedback Reports.
- BoS and Academic Council Meeting Minutes.



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