

**1.1 Processes**

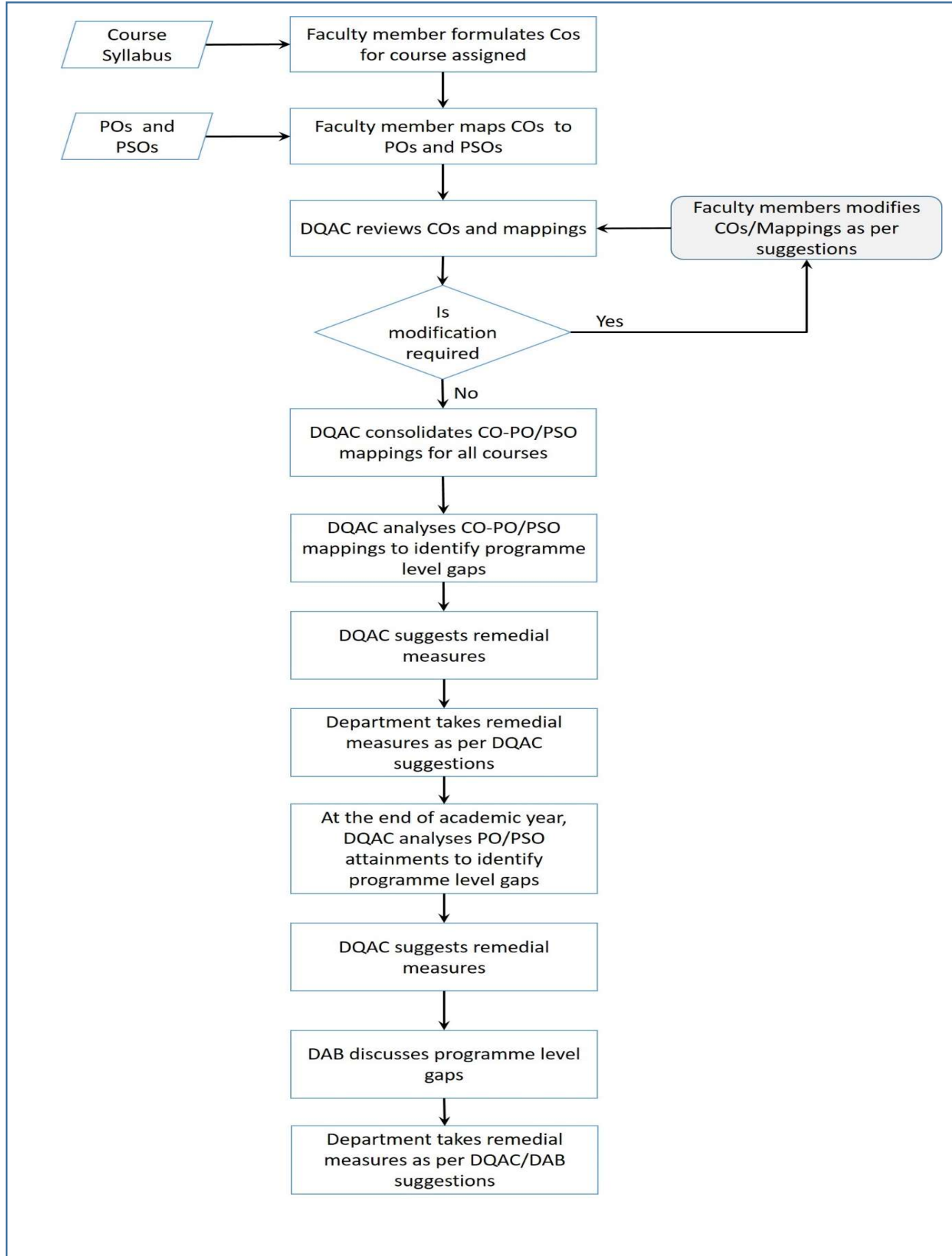
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Process for identifying extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes

- Faculty member formulates Course Outcomes (COs) and map to POs and PSOs for the course assigned before commencement of the semester and submit to DQAC for review.
- Department Quality Assurance Committee (DQAC) reviews COs and mappings and give feedback to concerned faculty member.
- Faculty member refines or changes COs and mappings if required based on DQAC feedback.
- DQAC consolidates all CO-PO/PSO mappings of all courses and analyses the mappings to identify deficiencies in the University curriculum and program level gap (i.e., a course needs to be included in curriculum or any activities need to be organized).
- Faculty members analyze course syllabus to identify course level gap (i.e., a particular topic needs to be included in a course).
- Faculty members uses their observations and/or looks for future data to identify course/curriculum gap if any.
- Faculty member takes remedial measure if any course level gap is identified.
- DQAC analyzes PO and CO attainment levels to identify program level curriculum gap or course level gap.
- DQAC suggests remedial measures to bridge programme level gaps
- Further, PC takes feedback from Departmental Advisory Board (DAB), Experts from Industry, Academia to figure out the gap in the curriculum for attaining POs and PSOs.

Process for identifying extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes



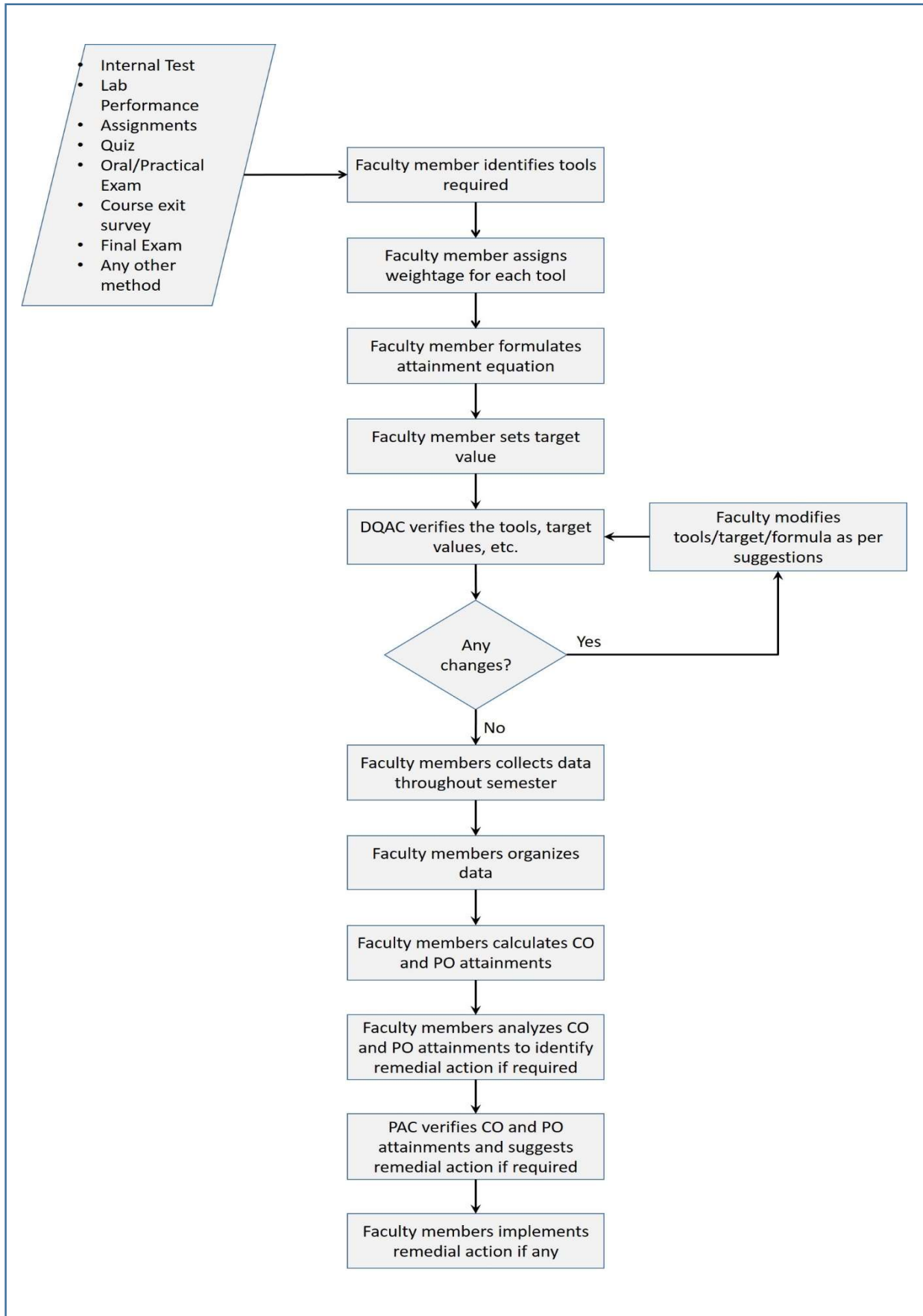


Process to Measure CO attainment

- Faculty member identifies tools required to measure CO attainment for each CO.
- Faculty member assigns weightage for each tool.
- Faculty member formulates equation to calculate attainment.
- Faculty member sets target level for CO attainment.
- DQAC verifies the method/tools/target value of CO attainment calculation and suggests tools, target values, etc. if required.
- Based on feedback from DQAC, faculty member makes appropriate changes.
- Faculty member collects the data throughout semester as per the tools selected for measuring CO attainment.
- Faculty member organizes data.
- Faculty member calculates CO and PO attainments for said course.
- Faculty member analyzes CO attainment to identify remedial actions if necessary.
- DQAC verifies attainment and suggests remedial action.
- Faculty member implements remedial measures during following year to improve CO attainment or sets new target value.



Process to Measure CO attainment



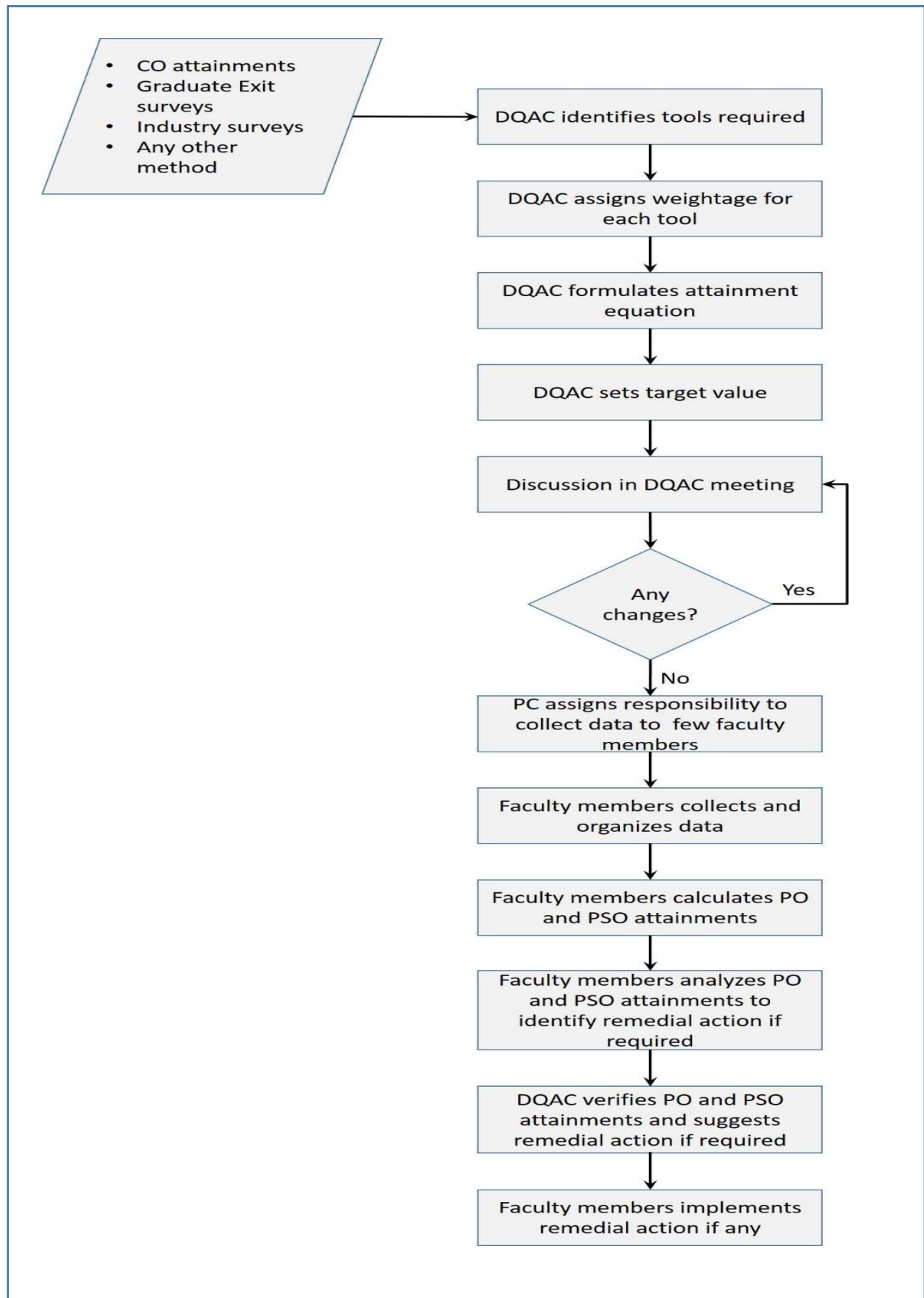


Process to Measure PO/PSO attainment

- DQAC identifies tools required to measure PO and PSO attainment for each PO and PSO.
- DQAC assigns weightage for each tool depending type of data, etc.
- DQAC formulates equation to calculate attainment.
- DQAC sets target level for PO and PSO attainment.
- DQAC finalizes the method/tools/target value of PO and PSO attainment calculation.
- PC assigns responsibility to few faculty members to collect data and designates one of the faculty member as coordinator.
- Respective faculty member collects the data at the end of semester/year as per the tools selected for measuring PO and PSO attainment.
- Respective faculty member organizes data.
- Coordinator calculates consolidated PO and PSO attainments.
- Coordinator analyzes PO and PSO attainments.
- DQAC verifies attainment and suggests remedial action.
- DQAC ensures implementation of remedial measures to improve PO and PSO attainment at department level or sets new target value during next academic year.



Process to Measure PO/PSO attainment





Process to improve learning experience

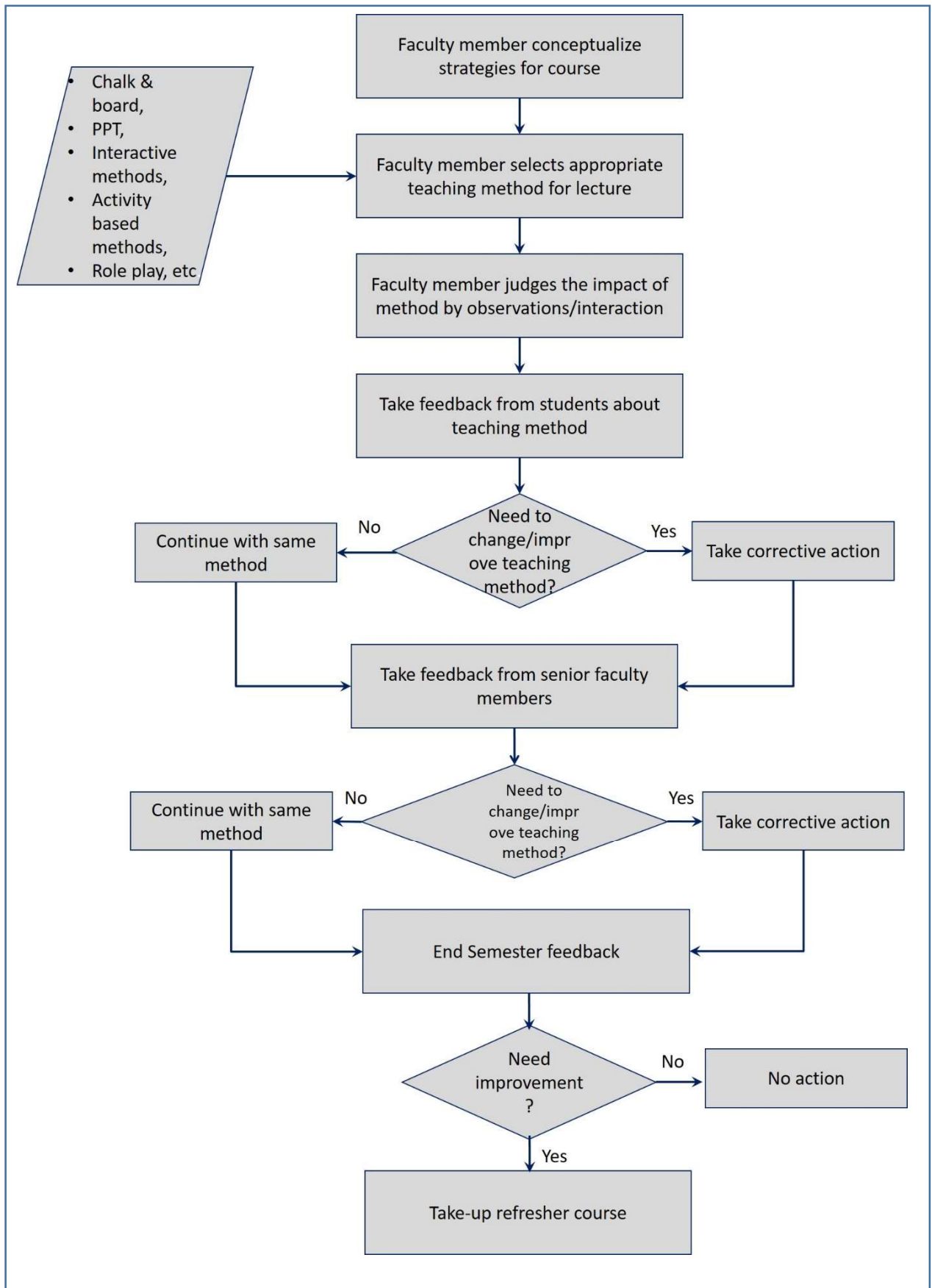
- Faculty member conceptualizes strategies for different teaching methods such as chalk & board, power point presentation, interactive methods, activity based methods, role play, etc.
- Faculty member identifies appropriate method for particular lecture
- Faculty member provides course material to students.
- Faculty member judges the impact of the method by interaction/observations
- Faculty member takes regular feedback from student about effectiveness of teaching
- Faculty member checks whether teaching method need to change or improve
- Faculty member takes feedback about teaching method from colleagues/senior faculty members
- As per the suggestions, faculty member changes or improves teaching
- Based on the mid-term feedback and end-semester feedback, faculty member identifies refresher course/faculty development program/MOOC course if required.
- Faculty member attends the selected course.

List of documents:

- Lesson plan
- Feedback proofs
- Proofs for Corrective actions
- Proofs for refresher courses



Process to improve learning experience





Process to identify weak learners

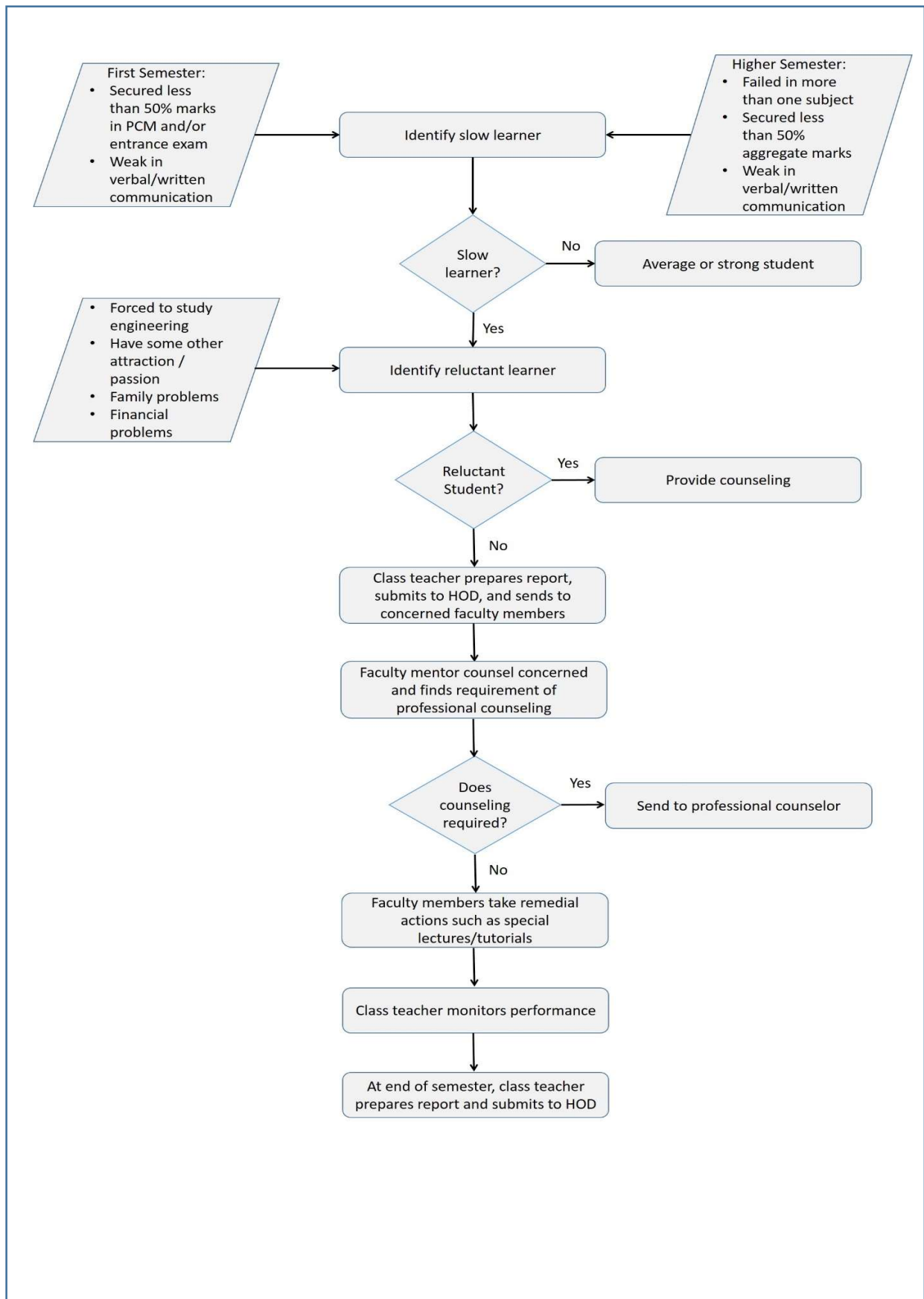
- Beginning of first semester, identify weak learners using following criteria:
 - < 50% aggregate marks in PCM
 - < 50 percentiles in entrance exam
 - Weak in verbal and/or written communication (by observations)
- Identify whether the student is a reluctant student or not by finding following information:
 - Forced to study engineering
 - Have some other attractions
 - Have some family problems
 - May have to work and study
- From second semester onwards, identify weak learners using following criteria:
 - Failed in more than one subject
 - Secured < 50% aggregate marks in previous examination
 - Weak in verbal and/or written communication
- The class teacher prepares the report of the weak students and submit to HOD.
- HOD sends report to concerned faculty members.
- Subject teachers identify the weak students in respective course and takes remedial actions.
- Organize special classes/tutorials for weak students
- Monitor progress of the weak students
- Provide counseling if required
- If student performance does not improve, find the reason and identify the different method to improve learning

List of documents:

- Analysis sheet indication slow learners
- List of reluctant students
- Mentoring reports
- Professional counselor report if any
- Remedial coaching report
- End semester performance report of slow learners



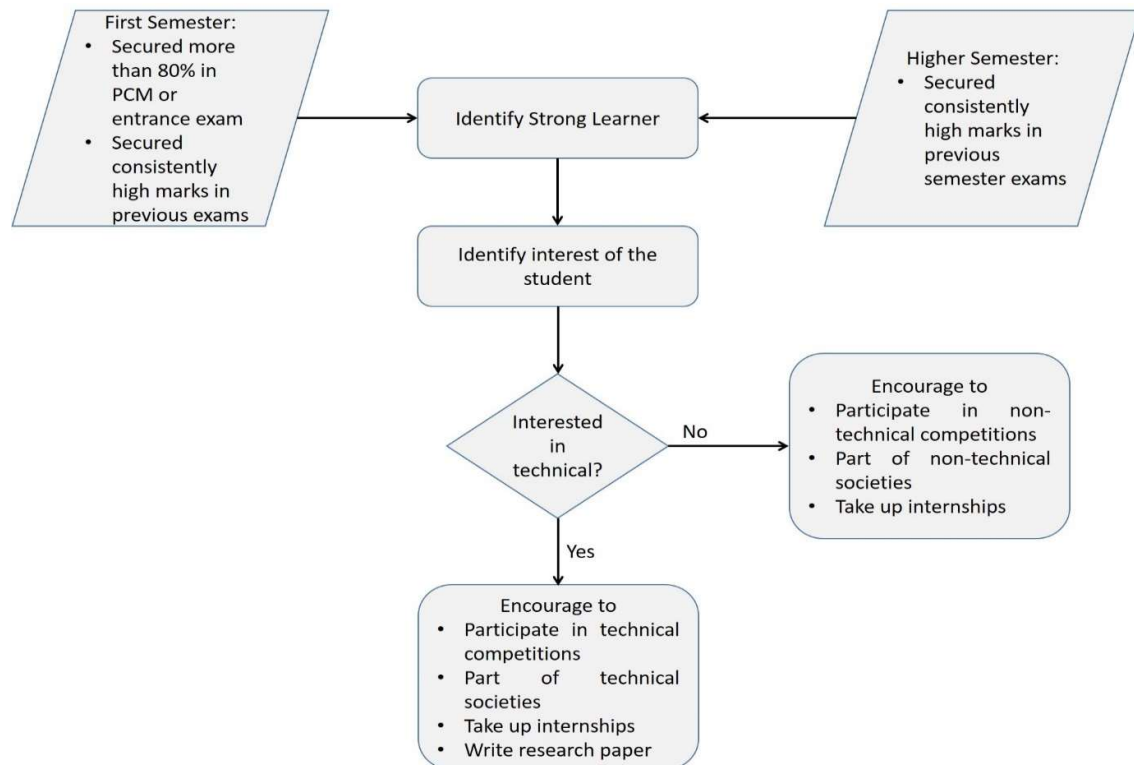
Process to identify weak learners





Process to identify Strong Learners

- Identify strong students based on following criteria:
 - During first semester:
 - Secured more than 80% in PCM or entrance exam
 - Secured consistently high marks in previous exams
 - At higher semester
 - Secured consistently high marks in previous semester exams
- Identify interest of the students
- If student is interested in technical aspects, encourage student to
 - Participate in technical competitions
 - Part of technical societies
 - Take up internships
 - Write research paper
- If student is interested in non-technical aspects, encourage student to
 - Participate in non-technical competitions
 - Part of non-technical societies
 - Take up internships



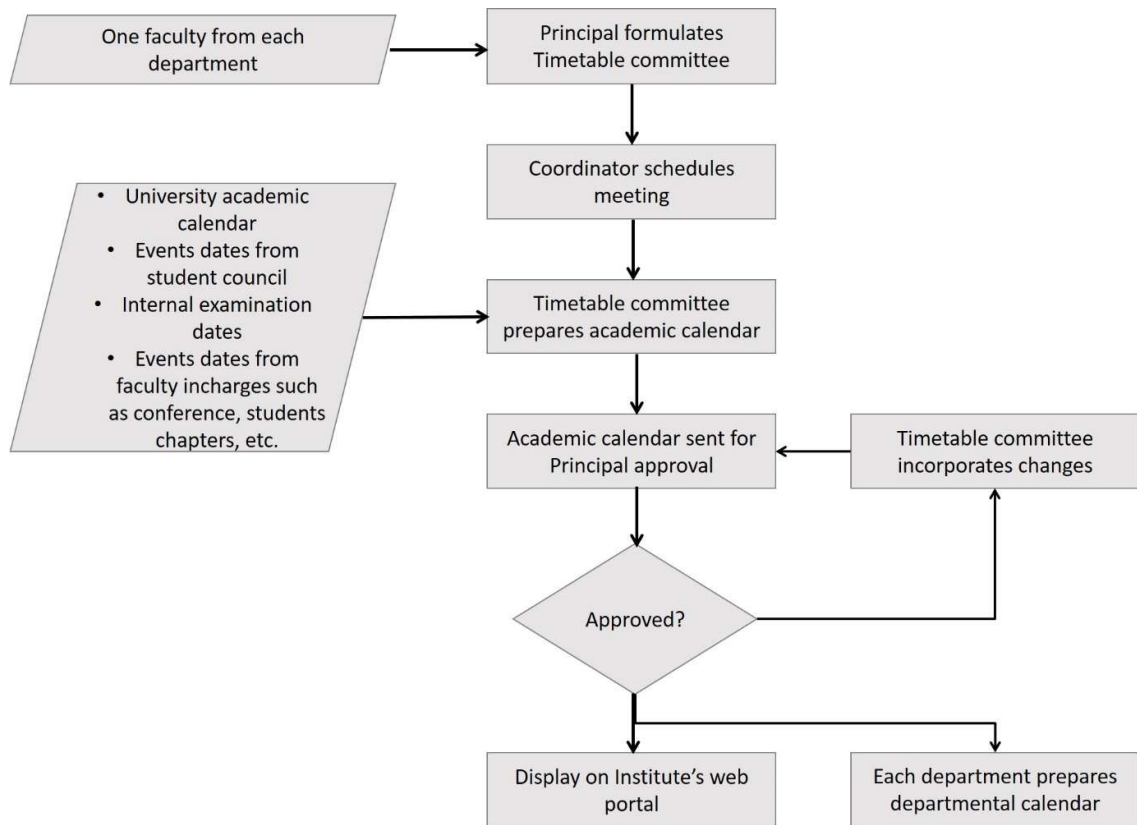
List of documents:

- Analysis sheet indication bright students
- List of students
 - Member of technical/non-technical teams
 - Participation in competitions
 - Internships



Process to prepare academic calendar

1. Principal formulates Timetable committee which includes atleast one member from each department.
2. Coordinator schedules meeting for preparation of time table and academic calendar.
3. Timetable committee collects data from concerned faculty incharges, office, examination cell, etc.
4. Timetable committee prepares Institute academic calendar.
5. Coordinator sends academic calendar to Principal for approval.
6. If any suggestions given by Principal, timetable committee modifies the academic calendar.
7. Coordinator ensures publication of academic calendar on Institute portal.
8. Each department prepares departmental calendar based on Institute academic calendar.



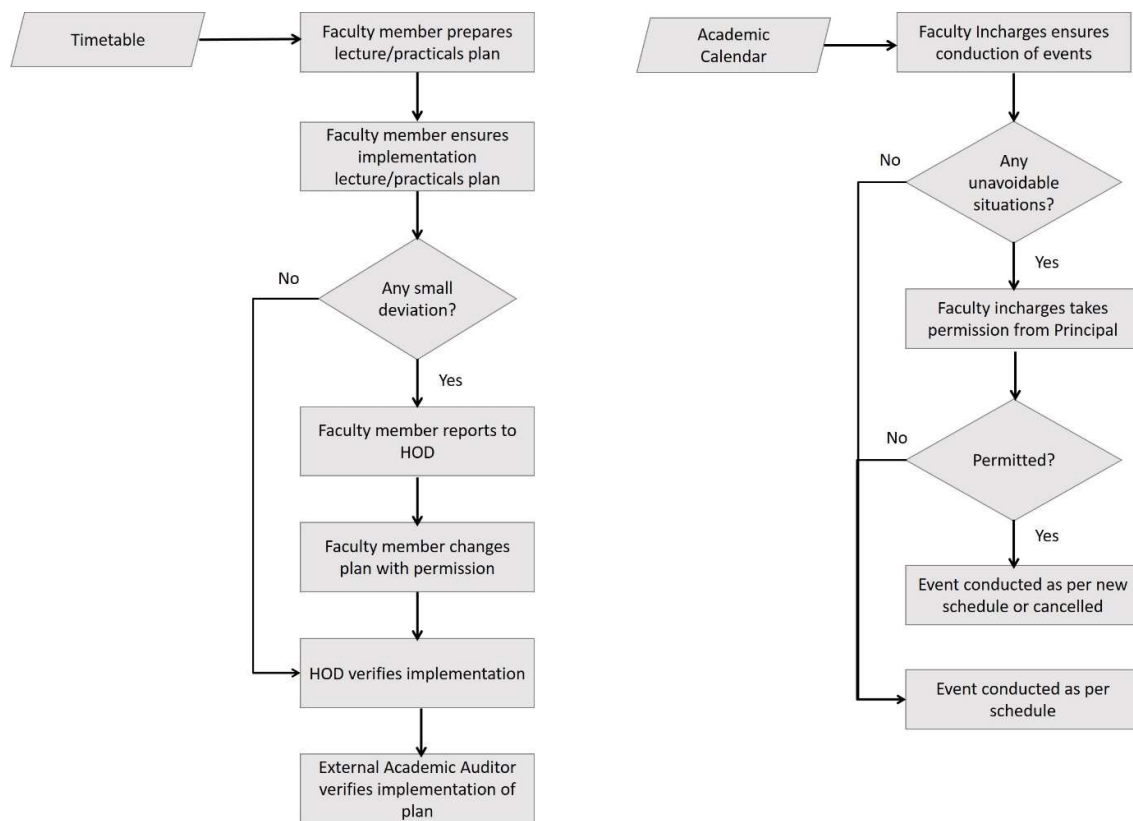
List of documents:

- Circular regarding formulation of committee
- Circular regarding meeting
- Approval communication



Process to ensure adherence to Academic Calendar

- Faculty member plans lectures/practicals based on the time table.
- Faculty members ensures conducting lectures/practicals as per the plan.
- In case of small deviation, faculty member reports to Head of the Department and with permission, faculty member make the changes in the plan.
- Head of the Department verifies the implementation of lecture/practical plan.
- External academic auditor verifies the implementation of the lecture/practical plan.
- Faculty in-charges ensure conduction of the events as per the academic calendar.
- In case of unavoidable circumstances, faculty in-charges make the changes in the event date with prior permission of the Principal.



List of documents:

- Sample lesson plan
- Deviation sample
- Sample of external academic auditor report
- Academic calendar
- Circulars regarding events
- Mapping of actual event dates with academic calendar
- If dates are changed then circulars/permission regarding change

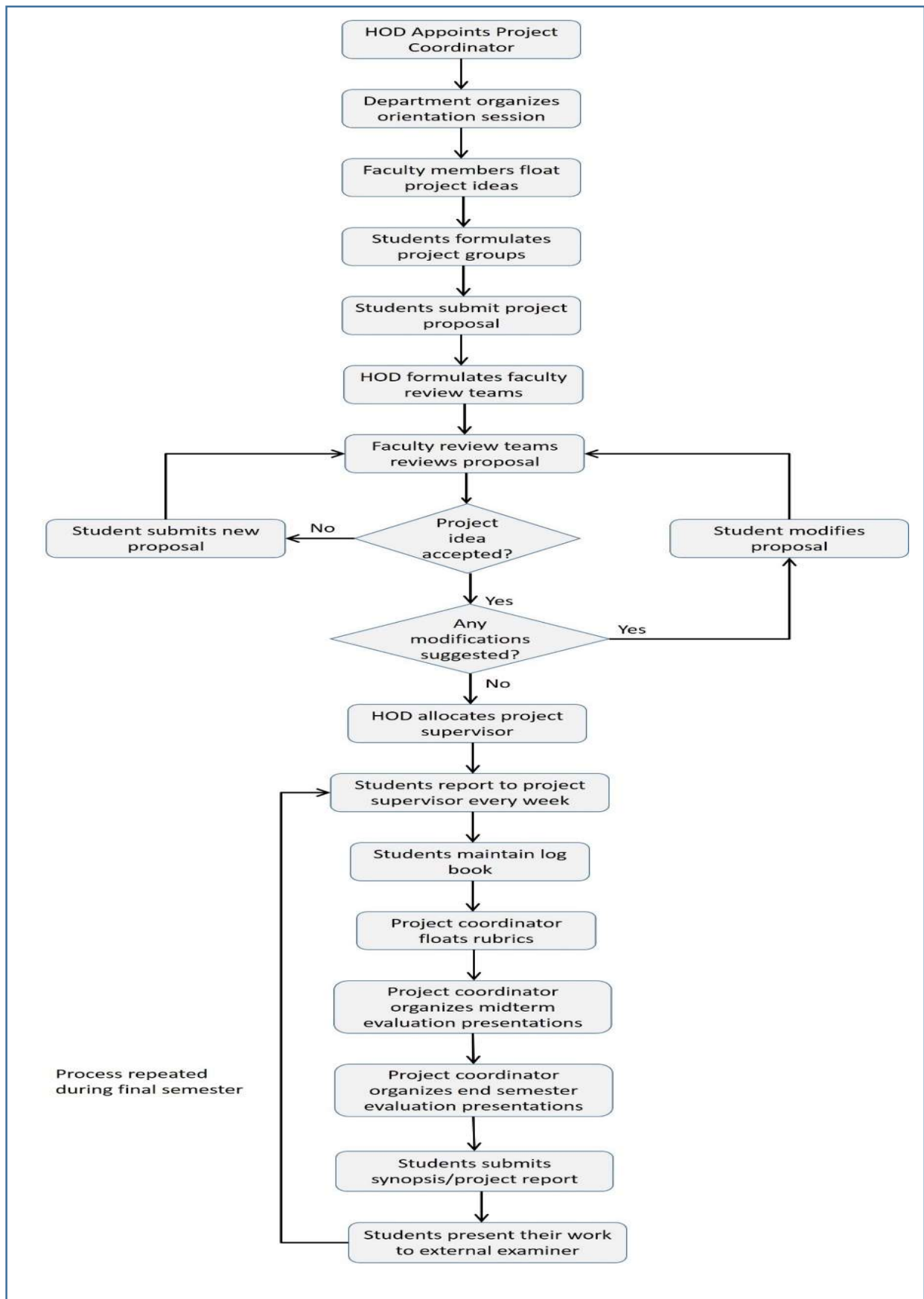


Project Process

1. Head of the department appoints project coordinator.
2. At end of sixth semester, department organizes orientation session for project selection.
3. Faculty members float the project ideas.
4. Student formulates project group as per the University guidelines.
5. Student select project from ideas float by department or their own idea.
6. At the beginning of the seventh semester, students submit project proposal in prescribed format.
7. **HOD and project coordinator** formulates faculty teams to review project ideas.
8. **Coordinator** organizes session for reviewing project idea.
9. Faculty teams reviews the project ideas based on feasibility, innovations, etc.
10. If project idea is not accepted, student need to propose new idea.
11. If project idea is accepted, but need modifications, **student need to modify proposal and resubmits for review.**
12. HOD allocates project supervisor based on the project domain and faculty expertise.
13. Student reports to project supervisor every week and appraise and discuss about progress of the project.
14. Project coordinator floats project evaluation rubrics.
15. Project coordinator organizes progress review session at the mid of the semester.
16. Project coordinator organizes pre-final progress review session at the end of the semester.
17. Student submit synopsis/project report.
18. **During** end semester, student present their project work to external examiner.
19. Steps 13-18 repeated in final semester.



Project Process





Project Process

List of documents:

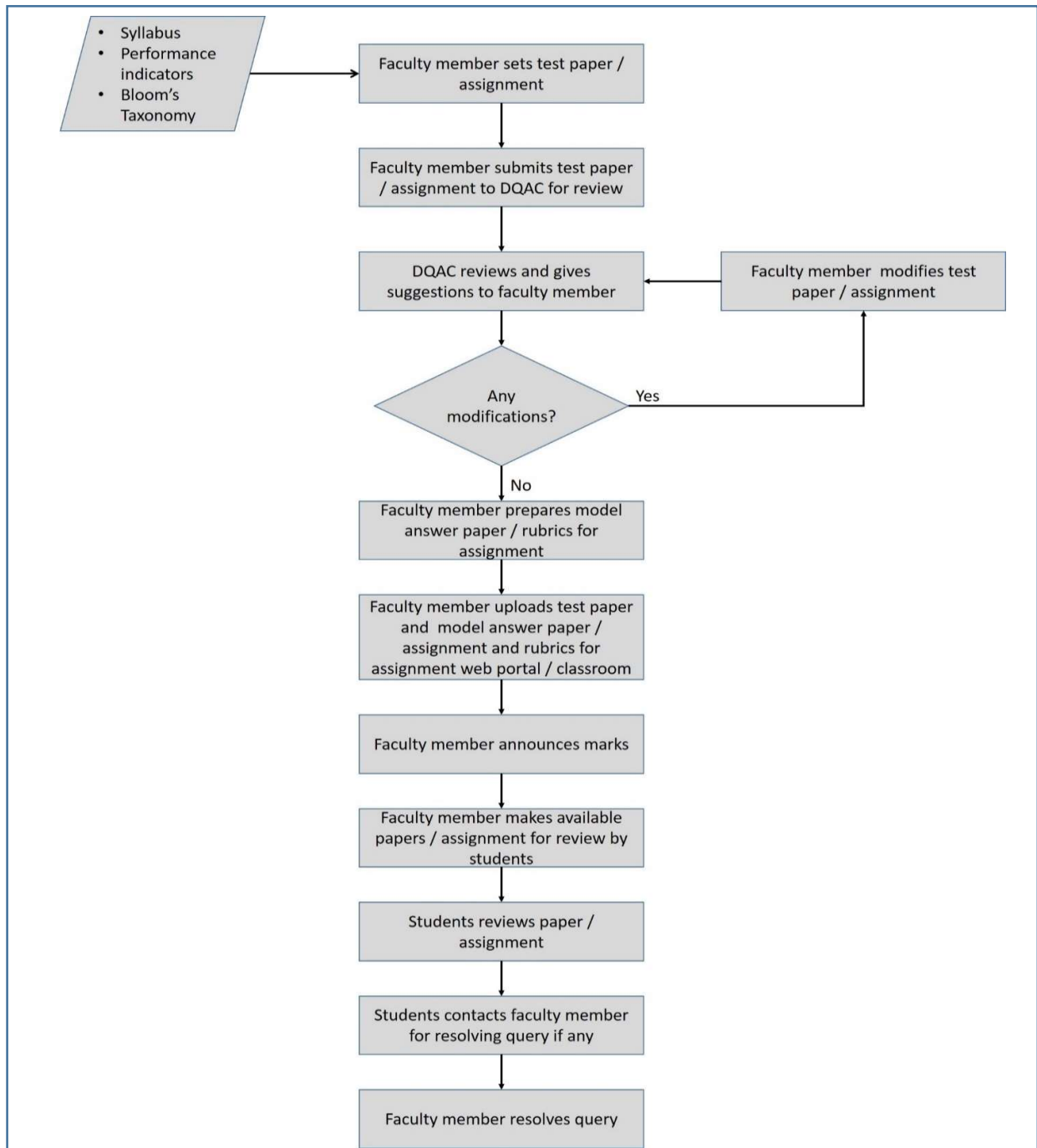
- Appoint letter/circular of project coordinator
- Circular regarding orientation session and attendance
- List of projects offered by faculty members
- List of project groups
- Project proposals submitted by students
- Circular regarding formulation of faculty teams
- Circular regarding proposal presentation
- Grading sheet regarding proposal
- Circular regarding assignment of project supervisor
- Log book
- Rubrics
- Midterm evaluation reports
- Pre-final evaluation reports
- External examiner report

Process to improve quality of internal assessment:

- Faculty member sets unit test paper/assignment based on syllabus considering performance index, Bloom's taxonomy, COs, etc.
- Faculty member submits test paper/assignment to DQAC for review.
- DQAC reviews test paper/assignment and gives feedback to faculty member.
- Faculty member prepares model answer paper and marking scheme for test paper, and rubrics for assignment.
- Faculty member uploads test paper/assignment and model answer paper on web portal/classroom.
- Faculty member corrects test paper/assignment as per the marking scheme/rubrics.
- Faculty members announce marks and makes available answer paper/assignment for review by students.
- Student contact faculty member if they have any query.
- Faculty member clears the query raised by student.



Process to improve quality of internal assessment:



List of documents:

- Circular regarding submission of test paper/assignment to DQAC
- Circular regarding the DQAC meeting about review of test paper/assignment
- Review reports of test papers/assignments
- Sample test paper, model answers, assignment, rubrics for assignment
- Proof regarding uploads of paper/assignment on wen portal/classroom

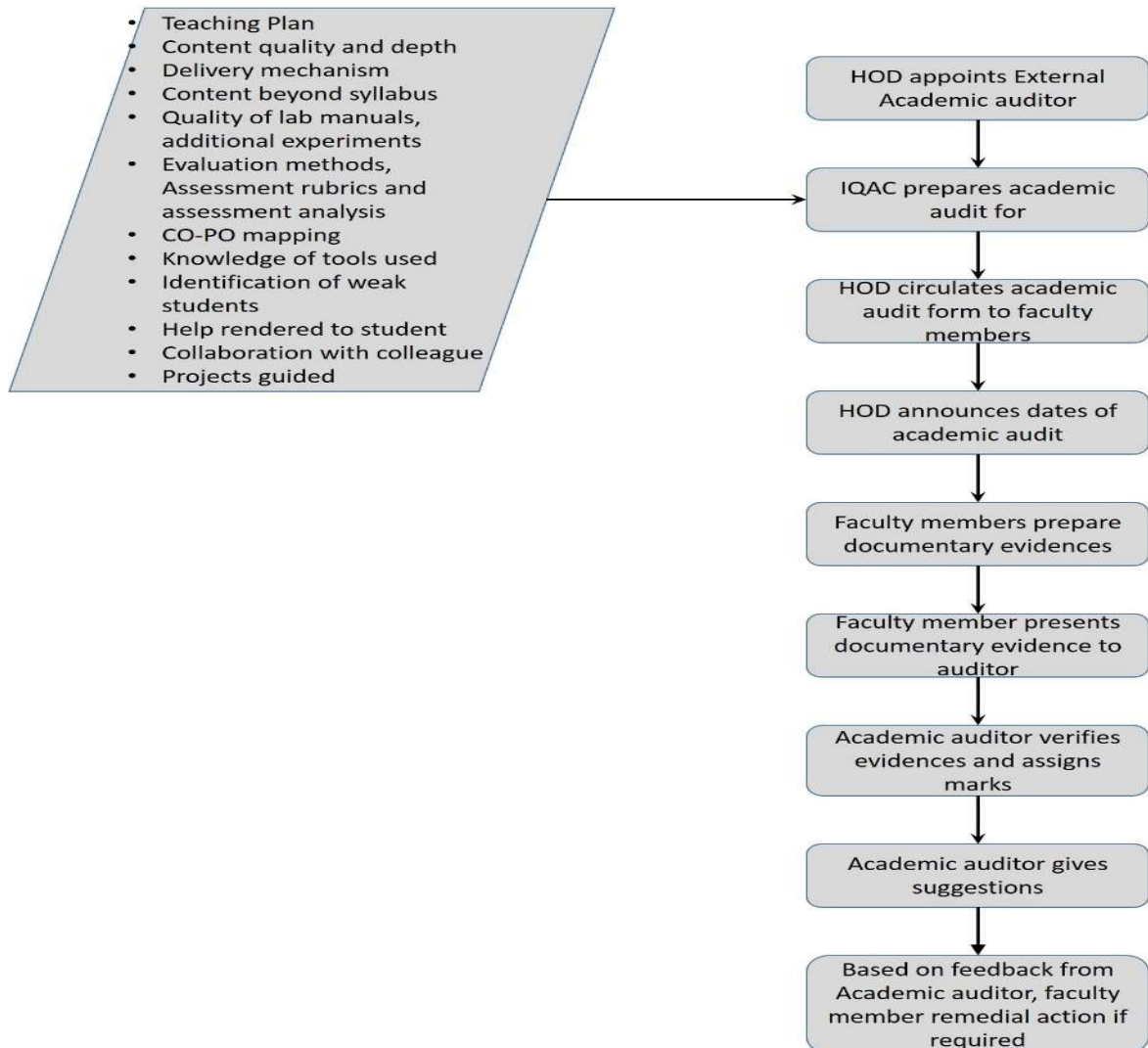


Academic Audit Process

- Head of the department appoints external auditor.
- IQAC prepares academic audit form considering following parameters:
 - Teaching Plan
 - Content quality and depth
 - Delivery mechanism
 - Content beyond syllabus
 - Quality of lab manuals, newly added experiments
 - Evaluation methods, Assessment rubrics and assessment analysis
 - CO-PO mapping
 - Knowledge of tools used
 - Identification of weak and bright students
 - Help rendered to student
 - Collaboration with colleagues
 - Projects guided
- HOD circulates external audit form among faculty members.
- HOD announces dates of the external audit.
- Faculty member prepares course files and other related documents.
- Faculty member presents their course files to external auditor.
- External auditor assesses the course files and assigns marks as per audit form, puts appropriate remarks.
- External auditor gives suggestion to concerned faculty member.
- Based on the feedback from external auditor, faculty member takes remedial actions if necessary.



Academic Audit Process



List of documents:

- Appoint letter of external academic auditor
- Blank academic audit form
- Notice regarding academic audit
- Completed academic audit forms
- Remedial measures if any
 - SWOT analysis submitted by student
 - Data related with identification of weak/bright students
 - Mentoring report as per template
 - Professional counselor report if any