

DESCRIBE THE ASSESSMENT PROCESSES USED TO GATHER THE DATA UPON WHICH THE EVALUATION OF COURSE OUTCOME IS BASED

The process for preparing assessment plan, data collection, data verification and CO quality compliance is as follows:

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Inputs:			
<ol style="list-style-type: none"> 1. Syllabus curriculum and Academic Plan. 2. Teaching and Laboratory Plan. 3. Action plan for closing attainment gap of the previous year (if any). 4. DCC (Departmental Core Committee) suggestions/recommendations (if any). 			
Sr. No.	Activity	Responsibility	Stage Outcome
01	Set target for CO attainment for each course	DCC	The target for each course is set.
02	Prepare assessment pattern.	NBA Coordinator (Institute).	Assessment pattern is prepared and fixed to 20% of average internal assessment and 80% of average external assessment.
03	Determine assessment tools to evaluate CO attainment.	Individual course coordinator.	Assessment tools are determined.
04	Execute the teaching-learning process and assessment plan for CO attainment evaluation.	Individual course coordinator and exam coordinator.	CO attainment is carried out using assessment tools.
05	Determine student's CO attainment level of each course through assessment.	Individual course coordinator	CO Attainment record of each course is prepared and submitted to Criteria 3 coordinators.
06	Analyze Program level CO attainment.	Criteria-3 coordinators	The program level CO attainment summary is prepared. Analysis of CO attainment with respect to set attainment level is carried out.
07	CO quality compliance	DCC and individual course coordinators	For courses where the CO attainment target is achieved, enhanced targets are set. For courses where CO attainment target is not achieved, action plan to close the CO attainment gap is submitted by the individual course coordinator.
Output: Assessment pattern, data collection, analysis and CO quality compliance are completed.			

The assessment tools used for gathering data are classified into two major categories:

1. Internal assessment tools
2. External assessment tools

INTERNAL ASSESSMENT TOOLS

The list of internal assessment tools along with weightages are as follows:

List of internal assessment tools

Sr. No.	Internal Assessment Tool	Weightage (Maximum Marks)
1	Mock-In-Semester Exam (MISE) for SE, TE and BE	30
2	Prelim examination for SE, TE and BE	70
3	Laboratory Record for SE, TE and BE	15
4	Assignments for SE, TE and BE	10
5	Mini Project for TE	50
6	Project Evaluation for BE	250

The course outcome (CO) attainment is carried out using various internal assessment tools such as:

1. **Unit Tests Mock-In-Semester Exam (MISE)/Prelim examination:** Mock In-semester examination is conducted for SE, TE and BE graduates. Prelim Examination is conducted for SE, TE and BE graduates at the end of each semester. The schedule of all the tests is included in the academic calendar. A detailed schedule of the respective examination is displayed well in advance on the department notice board.

CO Attainment through MISE and Prelim examination:

- Prepare question papers by identifying the COs covered in the respective examination and tagged each question to the respective CO. Evaluate the students' answer sheets as per the paper solution prepared.
- The marks obtained by each student for respective CO's are recorded in the CO attainment record sheet.

2. **Laboratory Assessment:** Laboratory sessions are conducted for courses s specified by Savitribai Phule Pune University (SPPU) in the curriculum/syllabus structure. Respective Lab Instructor evaluates laboratory sessions and a record of the same is maintained in Laboratory Record Book and Lab Index Card.

CO Attainment through Laboratory Record:

- For the courses which are having practical, identify the corresponding CO's.
- Record the marks for this CO through average RCV marks obtained by each student in the CO attainment record sheet.

Other internal assessment tools used are:

1. **Assignments (not mandatory for internal evaluation):** Assignments are given to the students for self-learning purposes. Assignment(s) on each unit on completion are given to students to evaluate their learning capability. Students submit the assignment within the stipulated time period as said by the course coordinator for assessment. The course coordinator and remarks assess assignments are communicated to the students if any. Each assignment is graded for ten marks. Assignment notebooks are returned to the students at the end of the course for external examination preparation.

CO Attainment through internal assessment for Mini-Project and Project:

1. **Mini-project Evaluation (Third year):** The student(s) will carry the project work individually or in a group. Optimum group size is chosen following the guidelines laid by SPPU in the curriculum/syllabus structure. However, based on project complexity, group size can be changed, which needs to be approved from the DCC. However, DCC is required to be convinced about such complexity and scope of the work. Respective project guides carry out Mini-project internal assessment at various project review stages. The marks awarded in internal assessment are recorded under the log book marks in CO attainment record.
2. **Project Evaluation (Final year):** The student(s) will carry the project work individually or in a group. Optimum group size is chosen following the guidelines laid by SPPU in the curriculum/syllabus structure. However, based on project complexity, group size can be changed, which needs to be approved from the DCC. However, DCC is required to be convinced about such complexity and scope of the work. Project evaluation is carried out at various review stages of a project. The marks awarded in internal assessment are recorded under the log book marks in CO attainment record.

EXTERNAL ASSESSMENT TOOLS

The list of external assessment tools along with weightages are as follows:

List of external assessment tools

Sr. No.	External Assessment Tool	Weightage (Maximum Marks)
1	In-Semester Exam (ISE) for SE, TE and BE	30
2	End-Semester Exam (ESE) for SE, TE and BE	70
3	Practical/Oral examination for SE, TE and BE	25/50*
4	Term work (TW) for SE, TE & BE	25/50*
5	Mini-project	50
6	Project Stage I and II	250

1. **University Evaluation:** The circular about the schedule of In-Semester examination (ISE) and End-Semester examination (ESE) is displayed on the university website before the commencement of each semester. The external assessment of course outcomes is based on the university (SPPU) examination, as mentioned above. The question paper is set by the panel of examiners appointed by the university, and external faculties evaluate the process of central assessment program (CAP) carried out by SPPU. Since question wise marks are not provided in the university result, hence the total mark obtained by each student is directly recorded in the CO attainment record sheet.
2. **Practical/Oral Examination:** For courses, wherein Practical/Oral examination is specified in the university (SPPU) curriculum, evaluation is done by the panel of examiners which consist of an internal and external examiner appointed by the university. Mark awarded in the practical/oral examination by the external examiner for each student is directly recorded in the CO attainment record sheet.

3. **Mini-Project/Project Work Evaluation:** A project report must be submitted in the prescribed format during the viva-voce of Mini-Project or Project evaluation. The certified copy of the project report is required to be presented to the external examiner at the final examination time. The examination is conducted by two examiners (internal and external) as appointed by the university. Mark awarded in the oral examination by the external examiner for each student is directly recorded in the CO attainment record sheet.
4. **Term work Evaluation:** Courses wherein a term work assessment (internal or external) specified by the university is considered an external assessment tool. For final year graduates, external examiner evaluates the term work of the student. For the second and third year, the term work is evaluated by the respective course coordinator. Internal term work evaluation is carried out based on students' performance in the internal examination, laboratory sessions, attendance, and assignment portfolio. Marks computed for Term work (applicable for only SE and TE) are directly recorded in the CO attainment record sheet.