

Assessment tools used to gather the data upon which the evaluation of Course Outcome is based

Assessing course outcomes typically involves a variety of assessment tools and processes to gather data effectively. Some of the tools used are indicated below:

Direct Assessment Tools

Exams and Quizzes: These are traditional tools used to assess students' comprehension of course material. They can be in various formats such as multiple choice, short answer, or essay questions.

Assignments: Assignments are normally aimed at testing the higher order cognitive skills of the students. They can take many forms, including essays, analysis of research papers, case studies, or problems etc. They provide an opportunity for students to demonstrate their comprehension and application of course concepts.

Case Studies: Case Studies usually give as assignment are a valuable assessment tool requiring students or professionals to apply their knowledge and skills to real-world situations. They provide a more holistic assessment of an individual's abilities than traditional exams or assignments and can help identify areas for improvement.

Classroom Activities: Activities such as discussions, debates, group projects, and simulation games develop students' critical thinking skills, facilitate working collaboratively and cooperatively, and applying knowledge to propose solutions to various problems.

Probing during and after lecture: Probing can be done verbally, through discussion, or using written assignments or quizzes. It's a valuable tool for engaging students, checking comprehension, and promoting critical thinking.

Essays: Essays are a versatile assessment tool, allows students to demonstrate a range of skills, including writing, critical thinking, research, reflection, and communication. They also provide instructors with a means of assessing students' understanding and mastery of course material in a comprehensive manner.

Theses, research and publications: Theses, research, and publications are used to assess students' ability to conduct independent research, analyze information, and communicate their findings effectively. They are also used to evaluate the quality and impact of researchers' work in their respective fields.

Presentations / Seminars: Presentations and seminars are valuable assessment tools, require individuals to demonstrate their knowledge, communication skills, and ability to

engage with audience. They also provide opportunities for feedback and peer evaluation, which can help individuals, improve their presentation skills over time.

Rubrics: Rubrics provide clear criteria for evaluating student work and assigning grades. They ensure consistency and transparency in assessment processes, helping students understand expectations and providing instructors with a structured approach to evaluation.

Observations: Instructors may observe students' participation, engagement, and behavior during class activities, discussions, or presentations. These observations can provide valuable insights into students' understanding and skill development.

Online Learning Platforms: Learning Management Systems (LMS) often include tools for administering quizzes, assignments, and surveys, as well as tracking student progress and engagement.

Indirect Assessment Tools

Surveys and Questionnaires: Surveys and questionnaires can gather feedback from students about their learning experiences, course material, and teaching methods. This qualitative data can complement quantitative assessment data for understanding student learning.

By employing a combination of these assessment tools and processes, instructors can gather comprehensive data on students' performance and progress towards achieving course outcomes. This data helps to determine course attainments and allows instructional adjustments to support student learning.

Assessment criteria

For assessment of each theory and laboratory course of the program, the following components are used:

Direct Component includes performance of the students in Mid-term examinations, Semester End Examinations, Assignments, Day-to-Day evaluation in laboratories, etc.

Indirect Component includes Students' feedback and Surveys.

Assessment criteria for theory and laboratory courses including weightages given for various components are mentioned in the following tables of 3.2.1.a and 3.2.1.b.

Assessment criteria for each Theory course

CO	Assessment		Assessment Tools	Assessment Criteria	Frequency of Data Collection
Course Code/ Name	Direct Assessment (75%)	Internal Assessment (40%)	Continuous Internal Evaluation - (CIE) - Mid Term examinations (30%).	Target for each question in Subjective Paper 60% of maximum marks of each question. – Weightage - 30% Marks allocated for Subjective Paper -25.	Twice in a semester per course during 8 th and 16 th weeks.
			Continuous Internal Evaluation (CIE) - Assignments (10%).	Target: 60% of total marks. – Weightage - 10% Marks allocated for assignments per course - 5	Five times in a semester per course
		External Assessment (60%)	Semester End Examination (SEE) - (60%)	Target: 60% of maximum marks of each question – Weightage - 60% Marks allocated for SEE - 70	Once in a Semester per course
	Indirect Assessment (25%)	Class Review Committee (40%)	Feedback on Course Outcomes	Class Review Committee comprises of Class Teacher and 6 six students – Weightage - 40%	Unit wise Five times in a semester in each course
		TLP Feedback (40%)	Feedback on Teaching Learning Process	From all students Feedback taken centrally by IQAC – Weightage - 40%	Twice in a Semester per course
			Course End Survey (20%)	Feedback on General Objectives and Course Outcomes	Feedback on General Objectives and Course Outcomes for each course at the end of the course – Weightage - 20%

Assessment criteria for each Lab course

CO	Assessment		Assessment Tools	Assessment Criteria	Frequency of Data Collection
Lab Code/ Name	Direct Assessment (75%)	Internal Assessment (40%)	Mid Term examinations (40%)	Target: 60% of maximum marks No. of Mid Exams - 2 per lab Maximum marks for each mid - 15 Average of the Mid exam is taken	Twice in a semester per course
				Day to Day Evaluation marks - 15 – Weightage - 40%	
		External Assessment (60%)	Semester End Examination (60%)	Target: 60% of maximum marks Maximum marks - 70 – Weightage - 60%	Once in a Semester per course
	Indirect Assessment (25%)	Class Review Committee (40%)	Course Outcome feedback	Class Review Committee comprises of Class Teacher and 6 six students – Weightage - 40%	Unit wise Five times in a semester in each course
		TLP Feedback (40%)	Teaching Learning Process feedback	From all students Feedback taken centrally by IQAC – Weightage - 40%	Twice in a Semester per course
		Course End Survey (20%)	Course Outcome feedback	Feedback on General Objectives and Course Outcomes for each course at the end of the course – Weightage - 20%	Once in a Semester per course at the end of the semester