

ATTAINMENT PROCEDURE (PROGRAM)

Attainment of Course Outcomes

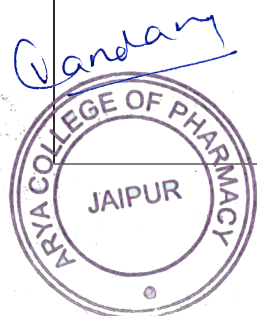
Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based

Assessment process:

The tools such as tests, assignments, examinations etc. are taken on the questions that relate to specific course outcomes in each course. Presentations and seminars are aimed towards wider scope of the subject including its impact on society and environment as a whole. The questions at the presentations/seminars make the scope even wider and relate with the course outcomes and give the student a feel that things are almost never complete, thus the need for continuous independent life-long learning is emphasized.

Tools used in measuring CO:

Assessment Tool Type	Assessment Tool Title	Tool Description
Assessment Tools	Assignment	The assignment is a qualitative performance assessment tool designed to assess student's knowledge of engineering practices, framework, and problem solving. It also helps to guide written presentation skills and improve the thinking capability of the students.
	Internal practical Assessment	This is mainly to assess student's practical knowledge with their designing capabilities. The students are tested for their confidence in terms of design of experimentation and viva voce.
	Midterm exams	Midterm examination is conducted twice per semester. Midterm examination is metric for assessing whether the entire COs is attained or not. Examination is more focused on attainment of course outcomes and program outcomes using a descriptive exam.
	Final University Exam (theory +practical)	External examination is conducted at the end of the semester by the Rajasthan University of Health Sciences. This tool examines at all cognitive levels the ability & understanding of the students with respect to the concepts taught and their applicability in solving complex pharmaceutical problems.
	Industrial Internship / Seminar	The industrial internship offered at the end of the second, fourth & sixth semester and the students presents his work in the form of Seminar to the department which is used to measure the CO.
	Project Evaluation	The projects are mandatory for Final Year students. The students make their projects under the supervision of respective Guide of department which helps to measure the CO.



Record the attainment of Course Outcome of all courses with respect to set attainment levels

The weighted distribution of components used to record the attainment of course outcome is given as per following table:

Select Type	Assessment Type	Assessment Components	Weightage (%)
Theory	Internal Assessment	Assignments	5%
		Mid Semester Examination	15%
	External Assessment	Final University Examination	80%
Practical (Lab./Project/ seminar)	Internal Assessment	Internal Laboratory Examination	60%
	External Assessment	External Laboratory Exam	40%

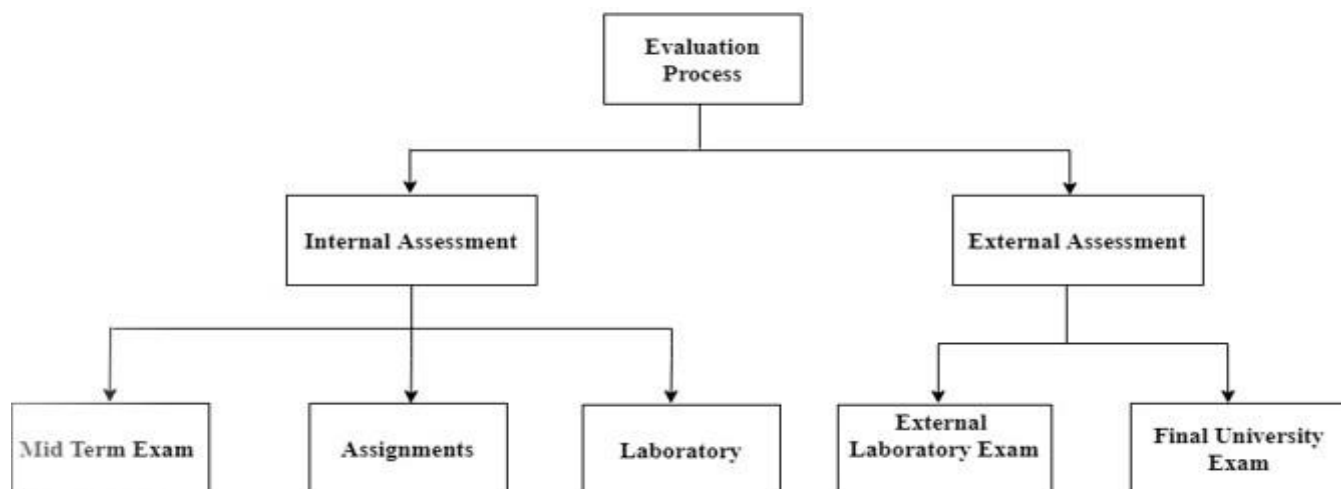
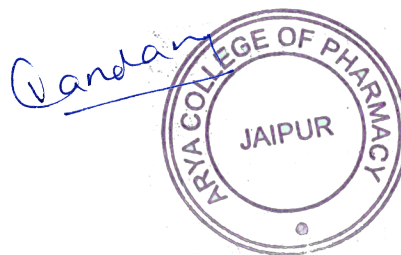


Fig: Process used to obtain attainment level of course outcome Attainment level



Course Outcome Attainment:

Attainment Level 1: 60% of students score more than 60% marks out of the maximum relevant marks. (Low)

Attainment Level 2: 70% of students score more than 60% marks out of the maximum relevant marks. (Moderate).

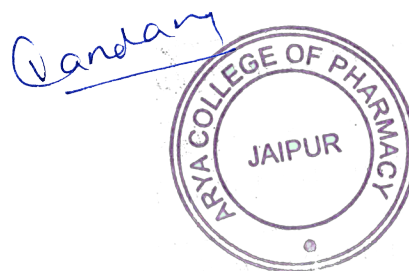
Attainment Level 3: 80% of students score more than 60% marks out of the maximum relevant marks. (Substantial)

For example:

Attainment through University Examination: Moderate i.e., 2,

Attainment through Internal Assessment: Substantial i.e., 3

We have given 80% weightage to University examination and 20% weightage to internal assessment,



ATTAINMENT PROCEDURE

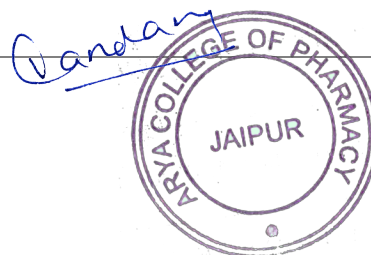
(For First Year)

The Assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done

The Direct assessment tools such as tests, assignments, examinations etc. are taken on the questions that relate to specific course outcomes in each course. Presentations and seminars are aimed towards wider scope of the subject including its impact on society and environment as a whole. The questions at the presentations/seminars make the scope even wider and relate with the course outcomes and give the students a feel that things are almost never complete, thus the need for continuous independent life-long learning is emphasized. They all contribute equally towards indirect attainment of course outcomes.

Tools used in measuring CO:

Assessment Tool Type	Assessment Tool Title	Tool Description
Assessment Tools	Assignment	The assignment is a qualitative performance assessment tool designed to assess student's knowledge of engineering practices, framework, and problem solving. It also helps to guide written presentation skills and improve the thinking capability of the students.
	Internal practical Assessment	This is mainly to assess student's practical knowledge with their designing capabilities. The students are tested for their confidence in terms of design of experimentation and viva voce.
	Midterm exams	Midterm examination is conducted twice per semester. Midterm examination is metric for assessing whether the entire COs is attained or not. Examination is more focused on attainment of course outcomes and program outcomes using a descriptive exam.
	Final University Exam (Theory + Practical)	External examination is conducted at the end of the semester by the Rajasthan University of Health Sciences. This tool examines at all cognitive levels the ability & understanding of the students with respect to the concepts taught and their applicability in solving complex pharmaceutical problems.



The individual COs of the courses are mapped with correlation level and are being evaluated by prescribed assessment tools. The attainment of individual CO is calculated by assigning separate weightage to the continuous assessment tests, end term examinations, assignments, or quizzes. The attainment of COs is compared with the target level. The CO is said to be attained if its attainment value is greater than or equal to target attainment level.

The weighted distributions of components to Record the attainment of Course Outcomes are given in the following table:

Select Type	Assessment Type	Assessment Components	Weightage (%)
Theory	Internal Assessment	Assignments	5%
		Mid Semester Examination	15%
	External Assessment	Final University Examination	80%
Practical	Internal Assessment	Internal Laboratory Examination	60%
	External Assessment	External Laboratory Exam	40%

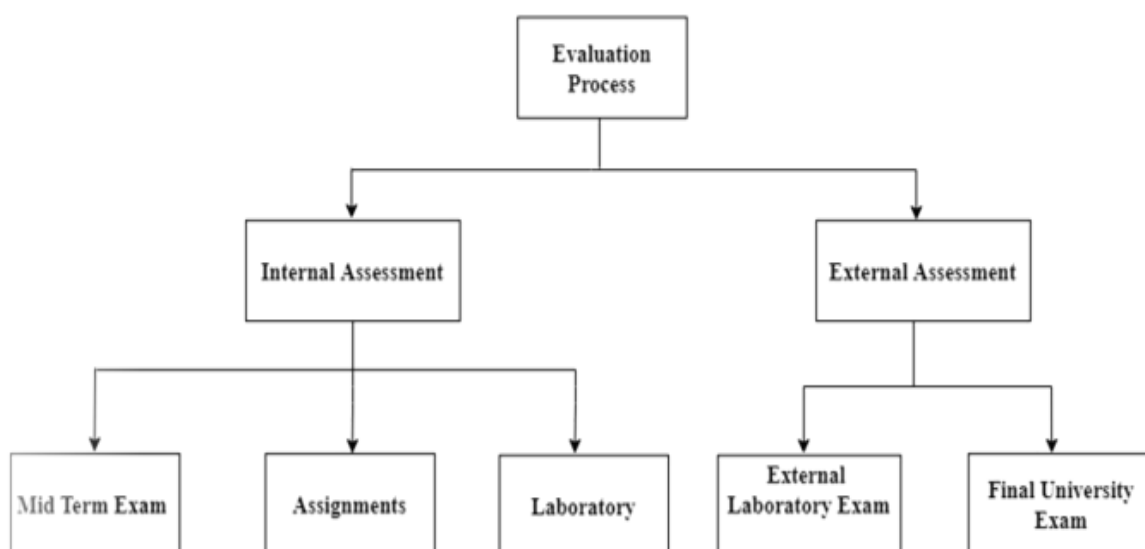
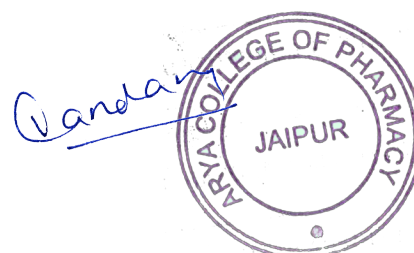


Fig: Processes are used to obtain attainment level of course outcome



Attainment Level 1:

60% of students score more than 60% marks out of the maximum relevant marks. (Low)

Attainment Level 2:

70% of students score more than 60% marks out of the maximum relevant marks. (Moderate)

Attainment Level 3:

80% of students score more than 60% marks out of the maximum relevant marks.

(Substantial)

Course Outcome Attainment Formula :

For example:

Attainment through University Examination: Moderate i.e., 2, Attainment through Internal Assessment: Substantial i.e., 3

We have given 80% weightage to University examination and 20% weightage to Internal assessment, the attainment calculations are

$$(80\% \text{ of University level}) + (20\% \text{ of Internal level}) = 80\% \text{ of } 2 + 20\% \text{ of } 3 = 1.6 + 0.6 = 2.2$$

