

2.6.2-Attainment of Programme outcomes, Programme specific outcomes and course outcomes

Attainment of Course Outcomes

Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10) Open Separately

Institute
Marks

ASSESSMENT PROCESS	EVALUATION	FREQUENCY
DIRECT ASSESSMENT		
THEORY		
Class tests	Class tests are conducted every day during 1 st hour for 25 marks for the attainment of all CO's.	Weekly once for each subject
Continuous Assessment Tests	Three continuous assessment tests and one model exam will be conducted. All the exams are conducted for 100 marks for a duration of 3 Hrs for the attainment of all CO's..	Thrice in a semester
End Semester Examination	Will be conducted as per Anna University schedule for the attainment of all CO's..	Once in a semester
Assignments	Three assignments will be given for each subject for the attainment of CO's..	Minimum of three per semester
LABORATORY		
Model Exam	Lab model exam will be conducted after completion of all the experiments for 100 marks for a duration of 3 Hrs for the attainment of CO's.	Once in a semester
End Semester Examination	Will be conducted as per Anna University schedule for the attainment of CO's.	Once in a semester
PROJECT WORK		
Final Year Projects	Students will be divided into groups, wherein each group will have a maximum of 3 to 4 students. Every group will be mentored by a faculty. Four reviews will be conducted and the	Once during final year

	students will be reviewed by a panel of Professors for the attainment of PO's and PSO's.	
OTHERS		
Tutorials	Extra tutorial hours will be allotted in the timetable and more case studies will be given for the students to work out. Every week an hour will be allocated for tutorials wherein the faculty will make the students solve more problems for the attainment of PO's and PSO's.	15 sessions for subjects with tutorial as per curriculum

Program shall have set Course Outcome attainment levels for all courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the Course Outcomes of a course in addition to the performance in the University examination)

The attainment of Course outcome is evaluated under two categories – University Examination and Internal Assessment.

University Examination

For University assessment the target is fixed based on the following criteria.

- Attainment Level 1: <50% of students scoring more than Class Average in the University Examination.
- Attainment Level 2: 50%- 60% of students scoring more than Class Average in the University Examination.
- Attainment Level 3: >60% of students scoring more than Class Average in the University Examination.

Internal Assessment

For Internal Assessment, the target is fixed based on summative manner i.e., by considering course performance through Internal Assessment Tests, Assignments, Seminars, Quiz, Surprise test and Project reviews based on the need as described Instructor.

For Internal Assessment, the target is fixed based on the following criteria.

- Attainment Level 1: <50% of students scoring more than Class Average in Internal Assessment Test.
- Attainment Level 2: 50% -60% of students scoring more than Class Average in Internal Assessment Test.
- Attainment Level 3: >60% of students scoring more than Class Average in Internal Assessment Test.

S.No	Course Code	University Exam Attainment	Internal Exam Attainment	Total Attainment
1	C101	2.4	0.6	3
2	C102	2.4	0.4	2.8
3	C103	2.4	0.2	2.6
4	C104	2.4	0.6	3
5	C105	1.6	0.6	2.2
6	C106	2.4	0.6	3
7	C107	0.8	0.2	1
8	C108	2.4	0.6	3
10	C109	2.4	0.4	2.8
11	C110	2.4	0.6	3
12	C111	2.4	0.4	2.8
13	C112	1.6	0.6	2.2
14	C113	2.4	0.4	2.8
15	C114	2.4	0.2	2.6
16	C115	2.4	0.4	2.8
17	C116	1.6	0.4	2
18	C201	2.4	0.4	2.8
19	C202	2.4	0.6	3
20	C203	2.4	0.6	3
21	C204	0.8	0.4	1.2
22	C205	1.6	0.4	2
23	C206	2.4	0.4	2.8
24	C207	1.2	0.6	1.8
25	C208	0.8	0.4	1.2
26	C209	2.4	0.4	2.8
27	C210	2.4	0.6	3
28	C211	2.4	0.2	2.6
29	C212	2.4	0.4	2.8
30	C213	2.4	0.4	2.8
31	C214	1.6	0.4	2
32	C215	0.8	0.8	1.6

33	C216	2.4	0.4	2.8
34	C217	1.6	0.4	2
35	C301	2.4	0.4	2.8
36	C302	2.4	0.4	2.8
37	C303	2.4	0.4	2.8
38	C304	2.4	0.6	3
39	C305	2.4	0.4	2.8
40	C306	1.6	0.2	1.8
41	C307	2.4	0.2	2.6
42	C308	1.6	0.2	0.8
43	C309	2.4	0.4	2.8
44	C310	2.4	0.2	2.6
45	C311	2.4	0.2	2.6
46	C312	2.4	0.4	2.8
47	C313	2.4	0.6	3
48	C314	2.2	0.2	2.6
49	C315	2.4	0.4	2.8
50	C316	2.2	0.6	2.8
51	C317	1.6	0.2	0.8
52	C401	2.4	0.4	2.8
53	C402	2.4	0.2	2.6
54	C403	2.4	0.4	2.8
55	C404	2.4	0.4	2.8
56	C405	2.4	0.2	2.6
57	C406	2.4	0.6	3
58	C407	1.6	0.2	1.8
59	C408	1.8	0.2	2.0
60	C409	2.4	0.4	2.8
61	C410	2.4	0.2	2.6
62	C411	2.4	0.4	2.8
63	C412	2.4	0.6	3
64	C413	2.4	0.2	2.6

Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes

(Describe the assessment tools and processes used together the data upon which the evaluation of each of the Program Outcomes and Program Specific Outcomes is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels)

1. Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

ASSESSMENT PROCESS	EVALUATION	FREQUENCY
DIRECT ASSESSMENT		
THEORY		
Class tests	Class tests are conducted every day during 1 st hour for 20 marks for the attainment of all CO's.	Weekly once for each subject
Continuous Assessment tests	Three Continuous Assessment Test and one model exam will be conducted for	Thrice in a semester

	100 marks for a duration of 3 Hrs for the attainment of all COs.	
End Semester Examination	Will be conducted as per Anna University schedule for the attainment of all CO's.	Once in a semester
Assignments	Three assignments will be given for each subject for the attainment of CO's.	Minimum of three per semester
LABORATORY		
Model Exam	Lab model exam will be conducted after completion of all the experiments for 100 marks for a duration of 3 Hrs for the attainment of COS	Once in a semester
End Semester Examination	Lab model exam will be conducted after completion of all the experiments for 100 marks for a duration of 3 Hrs for the attainment of CO's.	Once in a semester
PROJECT WORK		
Final Year Projects	Students will be divided into groups, wherein each group will have a maximum of 4 students. Every group	Once during final year

	will be mentored by a faculty. Four reviews will be conducted and the students will be reviewed by a panel of Professors for the attainment of PO's and PSO's.	
OTHERS		
Publications	The final year project groups with the guidance of their supervisor should publish their work in any conference or journal for the attainment of PO5, PO10, PO11 and PSO's.	Minimum one publication during final year
Workshops Attended	Students participate in internal/external workshops conducted for the attainment of PO5, PO10, PO11 and PSO's.	Once in a year
Conferences Attended	Students participate in internal/external Conferences conducted for the attainment of PO5, PO10, PO11 and PSO's.	Once in a year
Industrial Visits	Students participate in industrial visits organized by the department for the attainment of PO5, PO10, PO11 and PSO's.	Twice in a semester

Inplant Training	Students are certified after completion of the training in industry for the attainment of PO5, PO10, PO11 and PSO's.	Twice in four years
Value Added Courses	Students are certified after completion of the course in each semester for the attainment of PO5, PO10, PO11 and PSO's.	once in a semester
Placement and soft skill training	Test will be conducted after completion of the course in each semester for the attainment of PO5, PO10, PO11 and PSO's.	Twice in a semester
Tutorials	Extra Tutorial classes are conducted in the time table and more case studies are given for students to work out. every week an hour is allocated for tutorials wherein the faculty would make the students solve extra problems for the attainment of POs and PSOs.	15 sessions for subjects with tutorial as per curriculum
Seminars	Students will be divided into groups. Each group will be assigned a technical	Twice in a month

	topic for the attainment of PO5, PO10, PO11 and PSO's.	
Online tests	From 7 th semester, the students will take up online tests on different topics for placement preparation. The tests will be conducted after college hours for the attainment of PO5, PO10, PO11 and PSO's.	7 to 10 online tests in 7 th semester
Mock Interview	From 7 th semester, the students will attend mock interviews conducted by our faculty on different subjects for placement preparation. The mock interviews will be conducted after college hours for the attainment of PO5, PO10, PO11 and PSO's.	7 to 10 mock interviews in 7 th semester
INDIRECT ASSESSMENT		
Alumni survey	Get the feedback from the Alumni for the improvement of infrastructure, library facilities, placement activities and industry-	Once in a year

	institute interaction for the attainment of all PEO's.	
STUDENT FEEDBACK		
Mid Semester	Get the feedback after a month from the Start of the semester to improve teaching-learning process for the attainment of all PO's and PSO's.	Once in a semester
End Semester	Get the feedback after syllabus completion to improve teaching-learning process for the attainment of all PO's and PSO's.	Once in a semester
Parent Feedback	Get the feedback from the parents during the orientation programme for the improvement of the student performance and conduct for the attainment of all PO's and PSO's.	Once during the orientation programme and as and when needed
Student Entry survey	Get the expectations from the students during the orientation programme to know their requirements	Once during the orientation programme

	for the their improvement for the attainment of all PO's and PSO's.	
Student Exit survey	Get the feedback from the students after their course completion for the betterment of the department for the attainment of all PO's and PSO's.	Once after course completion
Industry feedback	Get the feedback from the industry to know the gaps to be filled to improve our students' skill and placement count for the attainment of all PEO's.	After every campus drive, guest lecture, workshop and seminar
Ranking	Anna University ranks the department based on end semester examination results and university ranks secured for the attainment of all PO's and PSO's.	Once in a semester
Internationally/ Nationally normed exams	Various examinations (national and international level) like GATE, NET, CAT, GRE, IELTS, and TOEFL are taken into consideration for students' performance .	As and when the exams are conducted and also on students' readiness
Program shall set Program Outcome attainment levels for all POs & PSOs.		

(The attainment levels by direct(student performance) and indirect(surveys) are to be presented through Program level Course – PO & PSO matrix as indicated).

CO-PO attainment

Subj	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	3	1	0	1	1	1	1	1	0	0	0
C102	3	2	0	0	1	0	0	2	1	0	0	1
C103	3	2	1	0	0	0	1	1	1	0	0	2
C104	2.8	3	1.6	2	2	0	0	1	0	0	0	2
C105	2.6	1.4	2	0	0	0	0	0	0	0	0	2
C106	3	3	2.8	1.8	2	0.8	1	1	2	0	0	1.8
C107	2	2.8	2	0	3	2	1	1	1	0	1	1
C108	3	3	3	2.8	3	1.6	0	0	0	3	0	1
C109	3	3	2.8	3	2.8	0	0	0	0	3	0	1
C110	3	2.8	3	3	3	0	0	0	0	3	0	1
C111	3	1	1.4	1	1	1.6	0	0	0.6	0.2	0	2
C112	3	3	3	2.8	3	1.8	0	0	0	3	0	1
C113	3	2	1.2	0	0	0	0	0	0	0	0	1
C114	3	2	2	3	0	0.8	1	1	1	1	0	0
C115	3	2.8	1	0	1	1	0.8	1	1	0	0	0
C116	3	1	1.4	1	1	2.8	0	0	1.6	0.2	0	2
C201	3	1.8	2	3	0	1	2	0.8	1	0	0	2
C202	3	3	0.2	3	2.4	1.4	0.2	0	0	0	0	0
C203	0	2.8	0	1.8	0.4	0	0	0	0	0	0	0
C204	3	2.8	3	1.6	0	0	0	0	0	0	0	1
C205	3	3	3	2.4	3	1	1.8	0	0	0	0	0
C206	3	1.8	3	3	2	1	1	1	1	0	1	1
C207	2	1.2	1.2	0	0	0	0	0	0	0	0	1
C208	2.2	0.8	1.6	0.6	0	0	0	0	0	0.2	0	1.8
C209	3	3	2	2	2	0	0	0	0	0	0	2
C210	1	1	2	0	0	2	1	1	0	0	0	1
C211	2	1	1.8	3	2.8	1	1	0.8	1	0	1	1
C212	3	2.8	3	2	3	1	2	0	0	0	0	0
C213	2	2.8	3	2	2	1	0	0	1	2.8	0	1.8
C214	3	3	2	2	1.8	0	0	0	0	0	0	2
C215	3	2	2	2	2	1	1.8	0	0	1	1	1.8

C216	2	2	1	1	0	1.8	2	2	1	0	2	2
C217	3	2	0.8	1	1	1	1	0	0	0	1	0
C301	2	3	1.8	0	3	2	1	1	1	0	1	1
C302	3	2	1	1	0.8	1	1	0	1	0	0	1
C303	3	2	1	1	0.8	1	1	0	1	0	0	1
C304	2	2	2	2	1	1.8	2	1	0	1	1	2
C305	3	3	3	2	1	1	1	0	1	0	0	1
C306	2	2	3	2	1	1	2	1	0	1	1	2
C307	3	1	2	2	1	2	0.8	1	1	0	1	1
C308	3	3	2.8	3	1	1	1	2	2	0	0	1
C309	2	2	2.8	2	1	1	2	1	0	1	1	2
C310	2	2	1	2	2	2	1.8	1	1	1	2	1.8
C311	0	0	3	1	1	3	2.8	1	1	1	0	2
C312	1	1	3	1	0	3	3	2.8	0	3	0	1
C313	1	0	0.2	0.2	0	0.4	0.4	0.6	1	1.2	0	0
C314	2	2	3	0	0	0	0	2	1	0	0	1
C315	3	3	2	1	1	0	0	2	1.8	0	0	1
C316	2	3	0	0	0	0	0	2	1	0	0	1
C317	3	2.8	3	2	1	2	0	0	0	2	0	1.8
C401	3	2	2	2	2	1	0.8	1	1	0	0	1
C402	0	0	0	0	0	0	0	2	3	3	0	3
C403	2	3	0	0	0	0	0	2	1	0	0	1
C404	0	0	0	0	1	1	0	1	0	3	3	3
C405	3	2.8	2	2	1	0	0	2	1	0	0	1
C406	0	0	0	0	0	0	0	2	3	3	0	3
C407	3	0	0	0	0	3	3	3	0	0	0	0
C408	3	0	3	0	0	0	0	2	3	3	0	3
C409	1	1	1.8	1	1	2	1	3	2	2	3	1
C410	2	2	3	1	0	0	2	0	1	3	0	2
C411	3	2.8	0	0	0	1	0	2	1	0	0	2
C412	3	2	2	2	0	0	0	2	1	0	0	1
C413	3	2	2	2	1	0	0	1	2	0	0	0

CO-PSO attainment

COURSE	PSO1	PSO2	PSO3
C101	0	0	0

C102	0	2	0
C103	0	3	1
C104	0	1	0
C105	2	2	0
C106	0	0	0
C107	2	2	0
C108	0	3	0
C109	0	0	0
C110	0	2	0
C111	2	2	0
C112	0	2	0
C113	1	2	1
C114	2	3	0
C115	2	3	1
C116	1	2	1
C201	1	2	0
C202	0	2	2
C203	3	2	0
C204	3	2	2
C205	3	3	1
C206	2	2	0
C207	0	2	2
C208	2	3	1
C209	0	0	0
C210	2	1	0
C211	3	2	0

C212	3	1	3
C213	2	3	0
C214	2	2	0
C215	0	0	0
C216	3	2	0
C217	2	2	0
C301	2	2	1
C302	3	2	1
C303	0	3	0
C304	2	1	2
C305	0	0	0
C306	0	0	0
C307	2	2	1
C308	2	2	1
C309	2	1	2
C310	2	3	2
C311	2	2	1
C312	2	1	2
C313	0	0	0
C314	2	2	1
C315	2	2	1
C316	2	3	2
C317	2	2	1
C401	2	2	0
C402	2	2	1
C403	3	3	1

C404	2	2	2
C405	2	2	1
C406	0	0	0
C407	3	3	1
C408	2	2	0
C409	0	0	0
C410	3	3	2
C411	3	3	3
C412	3	2	0
C413	3	3	3