

# CO-PO ATTAINMENT

## Attainment of Course Outcomes

### 1. Describe the assessment processes used to gather the data upon which the Evaluation of Course Outcome is based

Assessment process includes tutorial questions, assignments, seminars, internally developed assessment exams, project presentations and external exams for theory and laboratory.

#### ASSESSMENT PROCESS FOR DATA COLLECTION

- Outcome Based Education (OBE): Assessment is done through various processes carried out by the institution to identify, analyze and evaluate data towards the achievement of Course Outcomes (COs).
- As an important exercise of Outcome-Based Education (OBE) the assessment of course outcomes is done. Initially, Course Outcomes (CO's) for each course are defined based on the Program Outcomes (PO's) and other requirements. At the end of each course, the COs are assessed and evaluated to check whether they have been attained or not.
- Assessment is carried out by the department through identification, collection, and consolidation of data and achievement of program Outcomes evaluated.
- Attainment is the action of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed from test or examination result.
- Examination and test results are meticulously reviewed to attain a standard result facilitating accomplishment of desired goals.
- Attainments of the COs are measured both directly and indirectly.
- Direct attainment is determined by evaluating the student's knowledge and skills from their performance in all the relevant assessment methods such as internal assessments, assignments, quiz and external university examination. These methods provided comprehensive summary of student learning.
- Through indirect methods like surveys and interviews, our graduate's opinions and thoughts have been analyzed.
- CO attainment for the Laboratory is continuously assessed through observation notes, record marks, viva performance and experiment marks. Assessment Process for theory courses, practical courses and project works is shown in Table 1, Table 2 and Table 3.

**Table 1 Assessment Process for Theory courses**

Assessment Tool	Assessment period	Assessed by	Reviewed by
Assignment I	Once after every Three units	Subject in charge	Internal Examination committee
Mid Test-I			
Assignment II			
Mid Test-II			
University Exam	Once per semester	JNTUK	

**Table 2 Assessment Process for Practical Courses**

<b>Assessment Tool</b>	<b>Assessment period</b>	<b>Assessed by</b>	<b>Reviewed by</b>
Internal lab Exam	Once per semester	Subject in charge	Internal Examination committee
University Exam	Once per semester	JNTUK	

**Table 3 Assessment Process for Project Work**

<b>Assessment Tool</b>	<b>Assessment period</b>	<b>Assessed by</b>	<b>Reviewed by</b>
1 <sup>st</sup> Review	4 weeks after commencement of class work	Project Review Committee	Internal Examination committee
2 <sup>nd</sup> Review	4 weeks after the first review		
3 <sup>rd</sup> Review	4 weeks after the Second review		
Project VIVA-VOCE	Once per semester	Internal and External examiners appointed by JNTUK.	

## **2. Record the attainment of Course Outcomes of all courses with respect to set Attainment levels**

(Examples of data collection processes may include, but are not limited to, specific exam/ tutorial questions, assignments, laboratory tests, project evaluation, student portfolios(A portfolio is a collection of artifacts that demonstrate skills, personal characteristics and accomplishments created by the student during study period), internally developed assessment exams, project presentations, oral exams etc.)

Assessment of the student's learning is carried out not only by conventional methods like assignments, tutorial questions, laboratory tests, project evaluations, but also real time working models prepared by students are duly acknowledged, appreciated and demonstrated in the classroom and marks are awarded as a part of the internal assessment. An improved pedagogy strategy has been adopted through VEDIC (Vishnu Educational Development and Innovation Center) workshops and faculty development programs. This exercise has significantly strengthened our faculty, student's knowledge, skill portfolios , augmented the attainment of our Course Outcomes.

The following three tools are used to assess the Course outcomes

1. Internal Tests and Assignments
2. University Examination
3. Course Outcome Feedback

#### **COs Assessment Process-Theory Courses:**

The attainment process of COs is taken from three assessment Tools-Internal Tests and Assignments, University Examination, and Course Outcome Feedback. Here Internal Tests, and Assignments, University Examination are considered for direct attainment and Course Outcome Feedback for indirect attainment.

#### **Assessment Tool -Internal Tests and Assignments:**

As per the Curriculum of JNTU Kakinada, the student has to write two internal examinations each semester in a particular course. Each midterm exam is conducted for 30 Marks. The coverage of syllabus for MID –I is first three units and remaining three units are covered for MID-II. The marks obtained for each question and corresponding COs to which these COs are mapped are collected for each subject and then CO attainment is calculated. Assignments given for each course are two, where each assignment carries 10 marks. The CO assessment is calculated by measuring the percentage of students crossing a predefined bench mark.

A correlation is established between COs and POs in the scale of 1 to 3, where 1 indicates slight correlation(low), 2 indicates moderate correlation(medium) and 3 indicate substantial correlation(high). A mapping matrix is prepared in this regard for every course in the program.

CO attainment levels can be measured based on the results of the internal assessment and external examination conducted by the university. This is a form of direct measurement of attainment. As per university regulations, two internal assessment tests are conducted for each course in a semester. In each test, the percentage of students crossing a set target level in each question is calculated and that value decides the level of attainment of COs which are correlated to that question.

**Attainment Level 1:** If percentage of students crossing the set target level is upto 60%

**Attainment Level 2:** If percentage of students crossing the set target level is between 60% to 80%

**Attainment Level 3:** If percentage of students crossing the set target level is above 80%

#### **Assessment Tool - University Examination:**

At the end of the Semester, University conducts examination for 70 marks for every course. The grade points obtained for each student is calculated to measure the attainment. After the declaration of the university results i.e. grade points are as shown in Table 4, the percentage of students crossing a set target level is measured. Here, it is ensured that the questions answered by a student covers all the course outcomes defined for that course.

**Attainment Level 1:** If percentage of students crossing the set target level is upto 60%

**Attainment Level 2:** If percentage of students crossing the set target level is between 60% to 80%

**Attainment Level 3:** If percentage of students crossing the set target level is above 80%

**Table 4 University Examination Grade Points**

Letter grade	Grade Points
O	10
S	9
A	8
B	7
C	6
D	5
F	0

**Laboratory Course attainment Procedure:**

Out of 75 marks for each lab, 25 marks are for internal and 50 marks are for External Examination. In internal, out of 25 marks, 10 marks for Day to day evaluation, 5 for record evaluation and 10 marks for internal examination. By combining all marks for each student, the CO attainment is calculated. The calculation process is as follows: Internal Exam (40%), External Exam (60%) and Total 100%.

**CO Feedback methodology**

At the end of the course, CO feedback forms are collected from students to get feedback on COs. For each CO a question is prepared and that questionnaire is shared with students. For example, if a course has six COs, then six questions are asked. The student is expected to grade Excellent, Very Good, Good, Satisfactory and Poor. These feedback forms are collected and the data is consolidated.

**Course Outcome Attainment:**

The attainment process is explained through an example

**Direct attainment**

Attainment level through University Examination considered as Moderate i.e. 2

Attainment level through Internal Examination considered as Moderate i.e. 2

Attainment level through Assignment considered as Substantial i.e. 3

Assuming 40% weightage to University examination, 40% weightage to Internal assessment and 20% weightage to assignment,

**The Rubric for direct attainment calculations will be**

$(40\% \text{ of University level}) + (40\% \text{ of Internal level}) + (20\% \text{ of Assignment level}) \text{ i.e. } 40\% \text{ of } 2 + 40\% \text{ of } 2 + 20\% \text{ of } 3 = 0.4 \times 2 + 0.4 \times 2 + 0.2 \times 3 = 0.8 + 0.8 + 0.6 = 2.2$
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**Indirect attainment**

It is measured from the course outcome feedback given by students for a course, let's assume that it is at Substantial level i.e. 3

## Final CO attainment

The Rubric for final attainment calculations will be

$$(80\% \text{ of Direct attainment}) + (20\% \text{ of Indirect attainment}) = 2.2 \times 0.8 + 3 \times 0.2 = 1.76 + 0.6 = 2.36$$

Attainment of course outcomes for all the courses for the programme ECE as shown in table 5.

Table 5 Course Outcome Attainment						
SUB CODE	CO1	CO2	CO3	CO4	CO5	CO6
<b>I SEM</b>						
C111	3	3	3	3	3	3
C112	2.68	2.68	2.36	2.68	2.68	2.68
C113	2.36	2.36	2.36	2.68	2.36	2.36
C114	3	3	3	3	3	3
C115	3	2.68	2.68	3	2.68	2.36
C116	2.68	2.68	2.68	3	3	3
C117	3	3	3	3	3	3
C118	3	3	3	3	3	3
C119	3	3	3	3	3	3
<b>II SEM</b>						
C121	3	3	3	3	3	3
C122	2.68	2.36	2.36	2.68	2.36	2.36
C123	2.6	2.11	2.12	2.57	2.6	2.58
C124	2.36	2.36	2.68	2.68	----	----
C125	2.68	3	2.36	3	3	2.68
C126	3	3	2.68	----	----	----
C127	3	3	3	3	3	3
C128	3	3	3	3	3	3
C129	3	3	3	3	3	3
<b>III SEM</b>						
C211	2.04	2.04	2.04	2.2	2.2	2.2

<b>C212</b>	2.36	2.36	2.36	2.36	2.36	2.36
<b>C213</b>	1.72	1.88	1.72	1.72	2.04	1.72
<b>C214</b>	2.36	2.04	2.36	2.36	2.36	----
<b>C215</b>	2.12	2.04	2.52	2.52	----	----
<b>C216</b>	2.36	2.36	2.36	2.36	2.36	----
<b>C217</b>	3	3	3	3	----	----
<b>C218</b>	3	3	3	3	----	----
<b>IV SEM</b>						
<b>C221</b>	2.36	2.36	2.36	2.36	----	----
<b>C222</b>	2.04	2.04	2.2	2.36	----	----
<b>C223</b>	2.2	2.2	1.56	2.04	2.2	1.72
<b>C224</b>	2.36	2.68	2.68	2.68	2.68	2.68
<b>C225</b>	2.52	2.52	2.68	2.68	----	----
<b>C226</b>	2.36	2.04	2.68	2.52	----	----
<b>C227</b>	3	3	3	3	----	----
<b>C228</b>	3	3	3	3	----	----
<b>V SEM</b>						
<b>C311</b>	2.36	2.36	2.36	2.36	----	----
<b>C312</b>	2.36	2.52	2.68	2.36	2.36	----
<b>C313</b>	2.36	2.04	2.68	2.68	----	----
<b>C314</b>	3	3	3	3	----	----
<b>C315</b>	2.68	2.68	2.68	2.68	2.04	2.68
<b>C316</b>	3	3	3	3	----	----
<b>C317</b>	3	3	3	3	----	----
<b>C318</b>	3	3	3	----	----	----
<b>VI SEM</b>						
<b>C321</b>	2.68	2.36	2.36	2.68	----	----
<b>C322</b>	2.68	2.68	3	3	----	----
<b>C323</b>	2.68	2.68	2.36	2.36	----	----

<b>C324</b>	2.04	2.36	2.68	2.36	2.68	2.68
<b>C325</b>	3	2.36	3	3	3	3
<b>C326</b>	3	3	3	3	----	----
<b>C327</b>	3	3	3	3	----	----
<b>C328</b>	3	3	3	3	----	----
<b>VII SEM</b>						
<b>C411</b>	2.04	2.04	2.68	2.68	----	----
<b>C412</b>	2.36	2.2	2.68	2.68	----	----
<b>C413</b>	2.36	2.04	2.68	2.68	2.68	----
<b>C414</b>	2.52	2.36	2.52	2.36	---	----
<b>C415</b>	2.68	2.84	3	3	3	----
<b>C416</b>	2.68	2.68	2.68	2.68	----	----
<b>C417</b>	3	3	3	3	----	----
<b>C418</b>	3	3	3	3	----	----
<b>VIII SEM</b>						
<b>C421</b>	3	3	2.68	2.84	----	----
<b>C422</b>	2.04	2.04	2.04	2.68	2.68	2.68
<b>C423</b>	2.36	2.36	2.68	2.36	----	----
<b>C42A</b>	3	3	2.68	2.68	----	----
<b>C424</b>	3	3	3	3	3	3
<b>C425</b>	3	3	3	3	3	3

# Attainment of Program Outcomes and Program Specific Outcomes

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

PO assessment is done using both direct assessment tools and indirect assessment tools

### Direct assessment Tools:

Some of the direct assessment tools used for direct attainment are described as follows.

Internal Exam Test-I and II: As per University schedule, Internal Exam Test –I and II are conducted.

Project presentation: Project presentation is conducted thrice in the final semester, reviewed and assessed by Project Review Committee.

University Exam: The University Exam is conducted once per semester. The University Lab Exam is assessed by Internal and External Examiners appointed by University.

The University Theory exams are evaluated externally. The attainment of POs and PSOs is evaluated based on the semester result. Assessment process for POs and PSOs attainment is shown Table 3.6.

### Indirect assessment Tools

Indirect assessment tools used for indirect attainment are described as follows.

Student's exit level Feedback: The attainment of POs and PSOs is evaluated on the basis of feedback collected from final year (8th Semester) students.

Alumni survey: A feedback is collected from alumni students to track the growth of our students. Assessment process for measuring the attainment of POs and PSOs for outcome-based education as shown in Figure 1

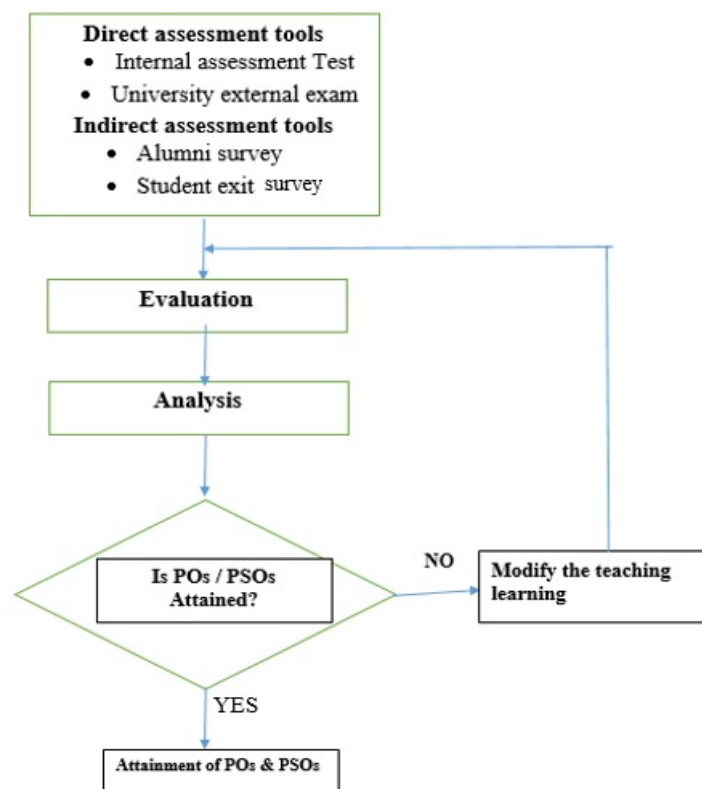


Figure 1 Assessment process for measuring the attainment of POs and PSOs.



**Table 6 Assessment tools for POs and PSOs attainment**

Assessment Type	Assessment method	Assessment period	Assessed and Reviewed by
Direct assessment	Mid exam I and II	Once after every Three units	Subject In-charge & Internal Examination committee
	Assignment I and II	Once after every Three units	Subject In-charge & Internal Examination committee
	University Exam	Once per semester	External Assessment and Valuation. Results are Externally reviewed by JNTUK.
Indirect assesment	Student Exit survey	Once per year	Faculty coordinator
	Alumni Survey	Once per year	Faculty coordinator

**PO attainment process explained with an example**

**Example:**

1. It is assumed that a particular PO has been mapped to four courses C211, C311, C321 and C411
2. The attainment level for each of the four courses will be as per the examples shown in 2
3. PO attainment level will be based on attainment levels of direct assessment and indirect assessment
4. For affiliated, non-autonomous colleges, 80% weightage is given to direct assessment and 20% weightage to indirect assessment through surveys from students (largely), employers (to some extent). Program may have different weightages with appropriate justification.
5. Assuming following actual attainment levels:

**Direct Assessment**

- C211 – High (3)
- C311 – Medium (2)
- C321 – Low (1)
- C411 – High (3)

Attainment level will be summation of levels divided by no. of courses  $3+2+1+3/4= 9/4=2.25$

**Indirect Assessment**

Surveys, Analysis, customized to an average value as per levels 1, 2 & 3. Assumed level - 2

PO Attainment level will be 80% of direct assessment + 20% of indirect assessment i.e.  $(0.8*2.25)+(0.2*2) = 1.8 + 0.4 = 2.2$ .

**1 – Light correlation 2 – moderate correlation 3 – strong correlation**

**2. Provide results of evaluation of each PO & PSO (40)**

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).

**PO Attainment**

**Note:** Similar table is to be prepared for PSOs

PO Attainment table for all the courses for the programme ECE as shown in below table 7

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
<b>I YEAR I SEMESTER</b>												
C111			3				3	3		3		3
C112	2.62	2.62	2.62	2.62	2.62							2.62
C113	2.41	2.41	2.41	2.41	2.41							2.41
C114	2.52	2.52	2.46	2.48	2.52	2.46	2.52	2.52	2.46	2.52	2.55	2.52
C115	2.73	2.73	2.73	2.52	2.52							
C116	2.84	2.84	2.84	2.84					2.84	2.84		
C117			3				3	3	3	3		3
C118	3	3	3	3	3	3		3	3	3	3	3
C119	3	3	3	3	3	3	3			3	3	3
<b>I YEAR II SEMESTER</b>												
C121			3				3	3	3	3		3
C122	2.46	2.46	2.46	2.46	2.46							2.46
C123	2.43	2.43	2.35		2.43	2.46	2.41	2.46	2.35		2.43	2.57
C124	2.52	2.52	2.52	2.36	2.36	--	--	--	--	--	--	2.52
C125	2.78	2.89	2.56		2.78		2.78	2.78	2.78		2.78	2.78
C126	2.89		2.89	3	2.84					3		
C127	3	3	3	3	3	3	3	3	3		3	3
C128			3				3	3	3	3		3
C129	3	3	3	3	3							
<b>II YEAR I SEMESTER</b>												
C211	3	3	3	3	3	3	--	--	--	--	--	--
C212	2.12	2.09	2.12	2.2	2.16	2.3			2.2			2.12
C213	1.8	1.8	1.8	1.8	1.8	1.88						
C214	2.29	2.29	2.29	2.29	2.29							2.29
C215	2.3	2.3	2.3		2.36	2.39	2.3		2.32	2.52	2.3	2.3
C216	2.36			2.36		2.36		2.36	2.36	2.36	2.36	2.36

C217	3	3	3		3	3			3	3	3	3
C218	3	3	3		3		3		3	3	3	3
<b>II YEAR II SEMESTER</b>												
C221	2.36	2.36	2.36	2.36	2.36	2.36			2.36			2.36
C222	2.16	2.16	2.16	2.16	2.16	2.16						
C223	2.12	2.12	2.12	--	--	2.2	--	2.2	--	2.12	--	2.12
C224	2.6	2.68	2.68	2.68	2.61	2.68			2.68			2.52
C225	2.6	2.6	2.6	2.68	2.52	2.68	2.68		2.68			
C226		2.36	2.2	2.2							2.30	
C227	3	3	3		3		3		3	3	3	3
C228	3	3	3	3			3			3	3	3
<b>III YEAR I SEMESTER</b>												
C311	2.36	2.36	2.36	2.36	2.36	2.36	--	--	2.36	--	--	2.36
C312	2.41	2.4	2.48	2.44	--	--	--	--	--	--	--	2.68
C313	2.44	2.44	2.57	--	--	2.52	2.68	2.52	2.36	2.52	2.68	2.52
C314	2.32	2.28	2.32	2.36	2.36	--	--	--	2.36	2.36	--	2.3
C315	2.57	2.55	2.68	--	--	--	2.68	--	--	2.68	--	--
C316	3	3	3	--	3	--	3	--	3	3	3	3
C317	3	3	3	3	--	--	--	--	--	--	3	--
C318	3	3	3	3	--	--	3	--	--	3	3	3
<b>III YEAR II SEMESTER</b>												
C321	2.52	2.52	2.52	2.52	2.68	2.68	--	--	2.68	--	--	2.52
C322	2.84	2.68	2.84	2.68	2.68	3	--	--	3	--	--	2.68
C323	2.52	2.57	2.52	3	2.68	3	--	--	3	--	--	2.68
C324	2.46	2.46	2.46	2.46	2.55	--	--	--	--	--	2.46	2.46
C32D	2.68	3	2.68	3	2.68	2.89	3	--	--	3	--	--
C326	3	3	3	3	3	--	--	--	3	3	3	3
C327	3	3	3	--	3	--	3	--	3	3	3	3
C328	3	3	3	3	--	--	3	--	--	3	3	3

IV YEAR I SEMESTER												
C411	2.36	2.36	2.36	2.36	2.46	2.04	2.46	--	--	2.36	2.68	2.68
C412	2.48	2.48	2.48	2.48	2.48	2.48						2.48
C413	2.07	2.07	2.07	2.07	2.07							
C414	2.44	2.44	2.44	2.52	2.52	--	--	--	2.36	--	--	2.44
C41B	2.9	2.9	2.9	2.9	2.96	2.9	--	3	--	2.84	--	3
C41D	2.68	2.68	2.68	2.68	2.68	2.68	--	--	2.68	--	--	2.68
C417	3	3	3	--	3	--	3	--	3	3	3	3
C418	3	3	3	--	3	3	3	--	3	3	3	3
IV YEAR II SEMESTER												
C421	2.88	2.89	2.89	2.94	3	2.88	2.88	2.88	--	2.88	--	2.84
C422	2.36	2.36	2.36	2.46	2.25	2.04	2.04	2.2	--	--	2.04	2.2
C423	2.44	2.46	2.44	2.36	2.36	2.36	--	--	--	2.36	--	2.36
C42A	2.78	2.84	2.84	2.84	2.84	2.68	2.84	2.84	2.84	2.84	--	2.84
C424	3	3	3	3	3	3	3	3	3	3	3	3
C425	3	3	3	3	3	3	3	3	3	3	3	3
Direct Attainment	2.65	2.65	2.67	2.64	2.65	2.62	2.84	2.76	2.76	2.83	2.80	2.70
Indirect Attainment	3	3	3	3	3	3	3	3	3	3	3	3
CO Attainment	2.72	2.72	2.74	2.71	2.72	2.70	2.87	2.81	2.81	2.86	2.84	2.76

PSO Attainment for all the courses for the programme ECE as shown in below table 8

	PSO1	PSO2	PSO3	PSO4
I YEAR I SEMESTER				
C111	3	3	3	3
C112	2.62	2.62		
C113	2.62	2.62		

C114	2.52	2.52	2.52	2.55
C115	2.68	2.68		
C116	2.84			2.84
C117	3			3
C118	3	3	3	3
C119	3	3	3	3
<b>I YEAR II SEMESTER</b>				
C121	3			3
C122	2.46	2.46		
C123	2.43		2.52	2.43
C124	2.52	2.36	2.36	2.36
C125	2.72			3
C126	2.89	3		
C127	3		3	3
C128	3			3
C129	3		3	3
<b>II YEAR I SEMESTER</b>				
C211	3	3	3	3
C212	2.12	2.09	2.63	2.63
C213	1.8	1.8	1.8	1.8
C214	2.29	2.29	2.29	2.29
C215	2.38	2.41	2.3	2.22
C216	2.36	2.36	2.36	2.36
C217	3	3	3	3
C218	3	3	3	3
<b>II YEAR II SEMESTER</b>				
C221	2.36	2.36	2.36	2.36
C222	2.16	2.16	2.16	2.16
C223	2.12	2.12	2.12	2.2

C224	2.6	2.6	2.61	2.61
C225	2.6	2.66	2.6	2.6
C226	2.2	2.2	2.6	2.6
C227	3	3	3	3
C228	3	3	3	
<b>III YEAR I SEMESTER</b>				
C311	2.36	2.36	2.36	2.36
C312	2.45	2.45	2.45	2.45
C313	2.44	2.44	2.44	2.44
C314	2.32	2.32	2.32	2.32
C315	2.55	2.68	2.57	2.68
C316	3	3	3	3
C317	3	3	3	--
C318	3	3	3	--
<b>III YEAR II SEMESTER</b>				
C321	2.52	2.52	2.52	2.52
C322	2.84	2.84	2.84	2.84
C323	2.52	2.46	2.52	2.52
C324	2.46	2.46	2.46	2.46
C32D	2.87	3	2.84	2.84
C326	3	3	3	3
C327	3	3	3	3
C328	3	3	3	--
<b>IV YEAR I SEMESTER</b>				
C411	2.36	2.25	2.36	2.36
C412	2.48	2.48	2.48	2.48
C413	2.07	2.07	2.07	2.07
C414	2.44	2.44	2.44	2.44
C41B	2.9	2.9	2.9	2.9

<b>C41D</b>	<b>2.68</b>	<b>2.68</b>	<b>2.68</b>	<b>2.68</b>
<b>C417</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>C418</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>IV YEAR II SEMESTER</b>				
<b>C421</b>	<b>2.88</b>	<b>2.88</b>	<b>2.88</b>	<b>2.88</b>
<b>C422</b>	<b>2.36</b>	<b>2.36</b>	<b>2.36</b>	<b>2.36</b>
<b>C423</b>	<b>2.44</b>	<b>2.44</b>	<b>2.44</b>	<b>2.44</b>
<b>C42A</b>	<b>2.84</b>	<b>2.89</b>	<b>2.89</b>	<b>3</b>
<b>C424</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>C425</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Direct Attainment</b>	<b>2.67</b>	<b>2.65</b>	<b>2.67</b>	<b>2.67</b>
<b>Indirect Attainment</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>CO Attainment</b>	<b>2.74</b>	<b>2.72</b>	<b>2.74</b>	<b>2.74</b>