

CRITERION 3	Course Outcomes and Program Outcomes	120
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

(Program Outcomes as mentioned in Annexure I and Program Specific Outcomes as defined by the Program)

3.1.1. Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (05)

Note: Number of Outcomes for a Course is expected to be around 6.

Course Name: Ciii **Year of Study:** YYYY – YY; for ex. C202 **Year of study** 2013-14

C202.1	<Statement>
C202.2	<Statement>
C202.3	<Statement>
...	<Statement>
C202.N	<Statement>

Table B.3.1.1

C202 is the second course in second year and '.1' to '.6' are the outcomes of this course.

3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1												
C202.2												
C202.3												
...												
C202.N												
C202												

Table B.2.1.2

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

It there is no correlation, put "-"

2. Similar table is to be prepared for PSOs

3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101												
C202												
C303												
....												
....												
C4...												

Table B.3.1.3

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

It there is no correlation, put "-"

* It may be noted that contents of Table 3.1.2 must be consistent with information available in Table 3.1.3 for all the courses.

2. Similar table is to be prepared for PSOs

3.2. Attainment of Course Outcomes (50)

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

(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.)

3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

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)

Measuring Course Outcomes attained through University Examinations

Target may be stated in terms of percentage of students getting more than the university average marks or more as selected by the Program in the final examination. For cases where the university does not provide useful indicators like average or median marks etc., the program may choose an attainment level on its own with justification.

Example related to attainment levels Vs. targets: (The examples indicated are for reference only. Program may appropriately define levels)

*Attainment Level 1: **60%** students scoring more than University average percentage marks or set attainment level in the final examination.*

*Attainment Level 2: **70%** students scoring more than University average percentage marks or set attainment level in the final examination.*

*Attainment Level 3: **80%** students scoring more than University average percentage marks or set attainment level in the final examination.*

- Attainment is measured in terms of actual percentage of students getting set percentage of marks.*
- If targets are achieved then all the course outcomes are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.*
- If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.*

Measuring CO attainment through Internal Assessments: (The examples indicated are for reference only. Program may appropriately define levels)

Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (midterm tests, assignments, mini projects, reports and presentations etc. as mapped with the COs)

Example

Mid-term test 1 addresses C202.1 and C202.2. Out of the maximum 20 marks for this test 12 marks are associated with C202.1 and 8 marks are associated with C202.2.

Examples related to attainment levels Vs. targets:

*Attainment Level 1: **60%** students scoring more than 60% marks out of the relevant maximum marks.*

*Attainment Level 2: **70%** students scoring more than 60% marks out of the relevant maximum marks.*

*Attainment Level 3: **80%** students scoring more than 60% marks out of the relevant maximum marks.*

- *Attainment is measured in terms of actual percentage of students getting set percentage of marks.*
- *If targets are achieved then the C202.1 and C202.2 are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.*
- *If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.*

Similar targets and achievement are to be stated for the other midterm tests/internal assessment instruments

Course Outcome Attainment:

For example:

Attainment through University Examination: Substantial i.e. 3

Attainment through Internal Assessment: Moderate i.e. 2

Assuming 80% weightage to University examination and 20% weightage to Internal assessment, the attainment calculations will be (80% of University level) + (20% of Internal level) i.e. $80\% \text{ of } 3 + 20\% \text{ of } 2 = 2.4 + 0.4 = 2.8$

Note: Weightage of 80% to University exams is only an example. Programs may decide weightages appropriately for University exams and internal assessment with due justification.

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

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

(Describe the assessment tools and processes used to gather 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)

3.3.2. 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

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101												
C102												
...												
....												
....												
C409												
Direct Attainment												
Indirect Attainment												

Table B.3.3.2

Note: Similar table is to be prepared for PSOs

C101, C102 are indicative courses in the first year. Similarly, C409 is final year course. First numeric digit indicates year of study and remaining two digits indicate course nos. in the respective year of study.

- Direct attainment level of a PO & PSO is determined by taking average across all courses addressing that PO and/or PSO. Fractional numbers may be used for example 1.55.
- Indirect attainment level of PO & PSO is determined based on the student exit surveys, employer surveys, co-curricular activities, extracurricular activities etc.

Example:

1. It is assumed that a particular PO has been mapped to four courses C201, C302, C303 and C401

2. The attainment level for each of the four courses will be as per the examples shown in 3.2.2
3. PO attainment level will be based on attainment levels of direct assessment and indirect assessment
4. For affiliated, non-autonomous colleges, it is assumed that while deciding on overall attainment level 80% weightage may be 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

C201 –High (3)

C302 – Medium (2)

C303 – Low (1)

C401 – 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

6. PO Attainment level will be 80% of direct assessment + 20% of indirect assessment i.e. $1.8 + 0.4 = 2.2$.

Note: Similarly for PSOs