

Mechanism for Development and Implementation of Outcome-Based Curriculum

Program level vision and mission with strategy to accommodate OB Curriculum

&

Mapping the COs with the POs

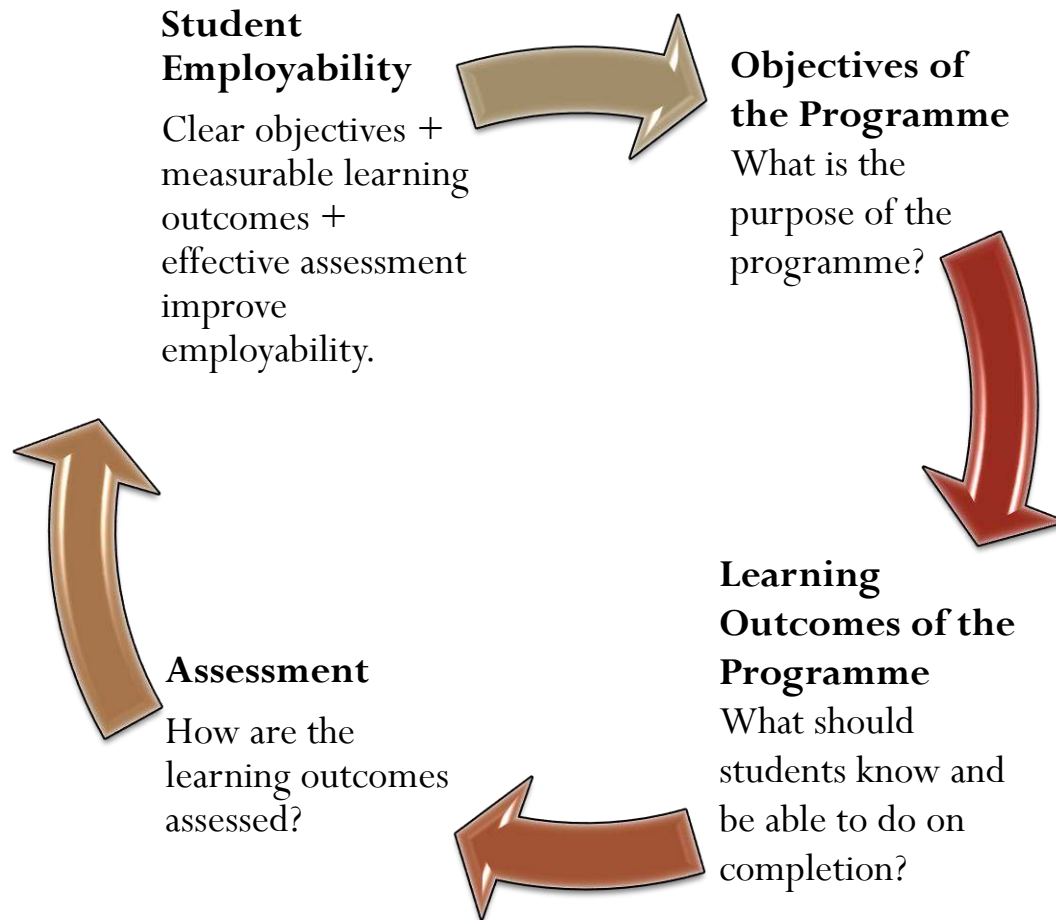
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Outcome-based education?

“Outcome-based education means starting with a clear picture of what is important for students to be able to do, then organising the curriculum, instruction, and assessment to make sure that this learning ultimately happens” (Spady, 1994) .

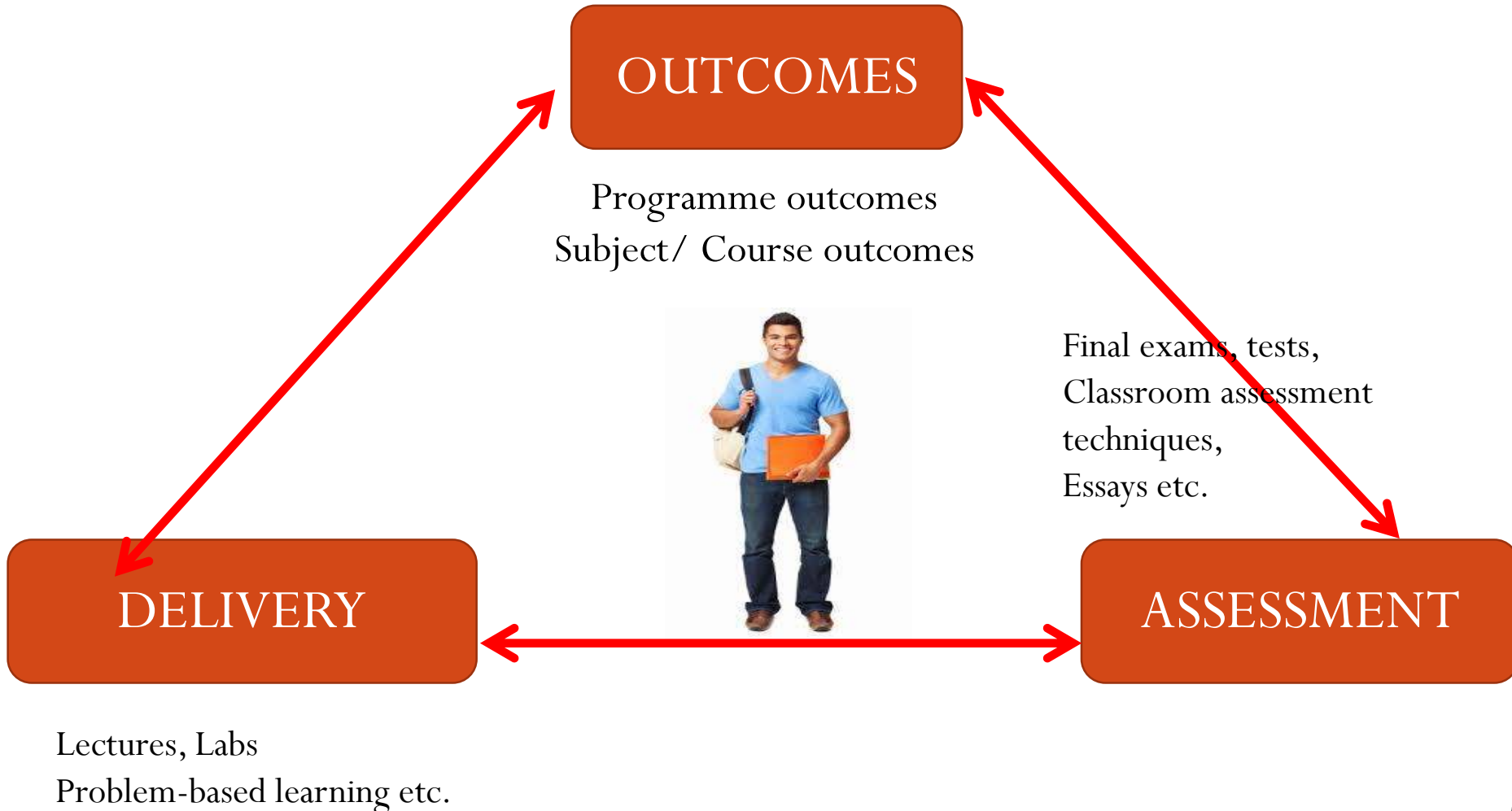
Emphasis is on the learning outcomes (LOs), as opposed to the process in an educational strategy.

Learning Outcomes: In Summary

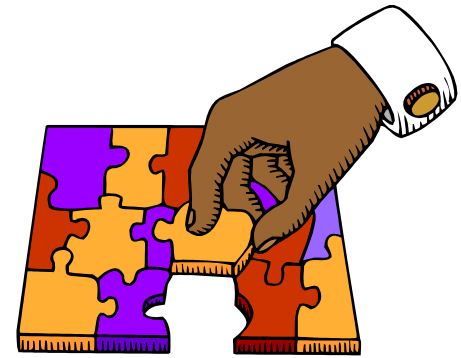


Constructive alignment

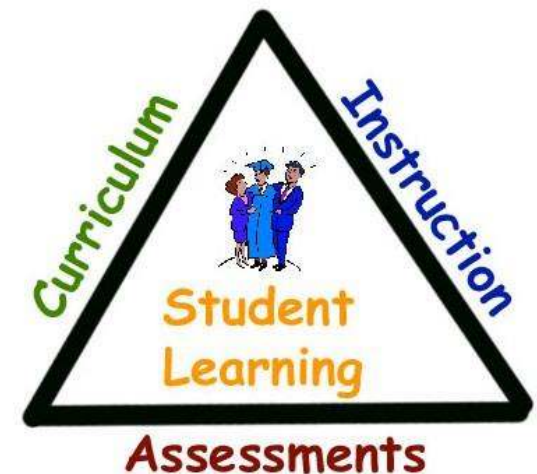
a principle used for devising teaching and learning activities, and assessment tasks, that directly address the learning outcomes (LOs) (Biggs & Tang, 2011)



What is Curriculum ?



Curriculum is a design **PLAN** for learning that requires the purposeful and proactive organization, sequencing, and management of the interactions among the teacher, the students, and the content knowledge we want students to acquire.



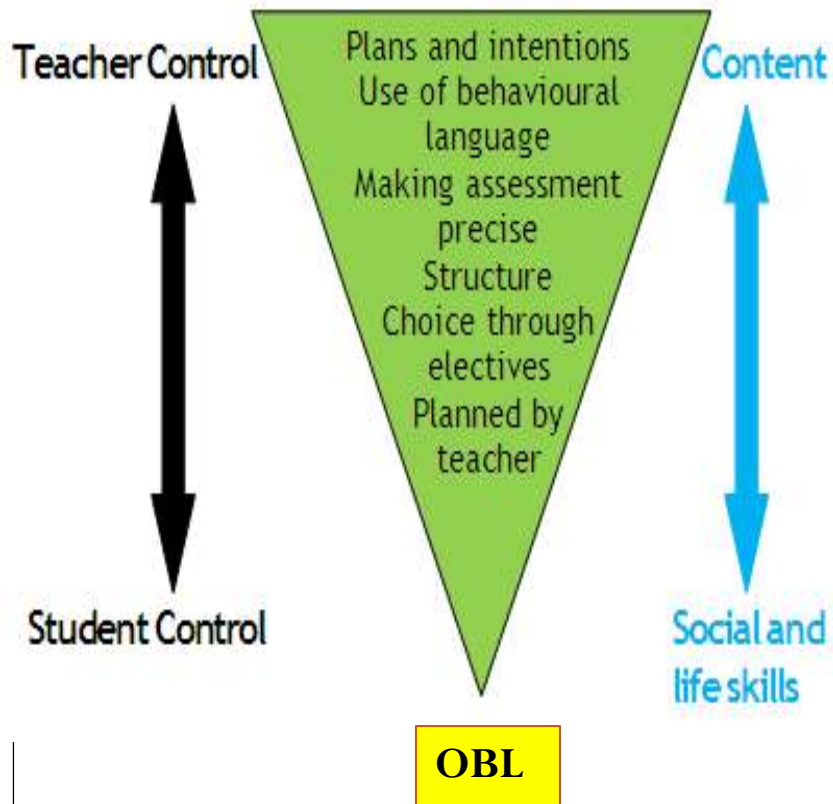
What do
I want my
students to
learn?

Curriculum

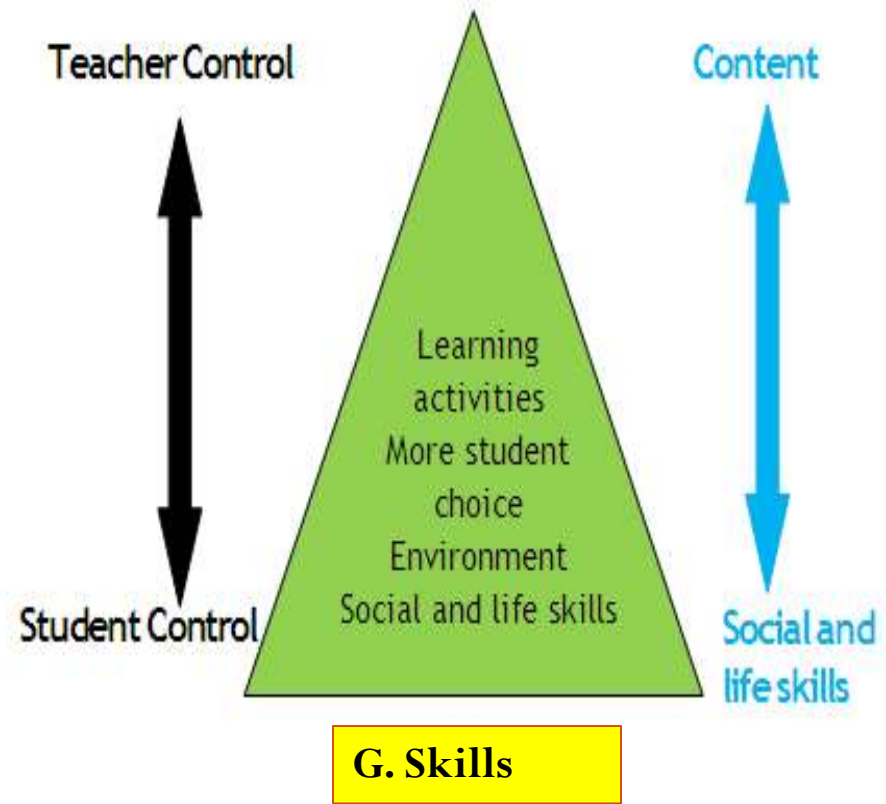
How should
I know
whether
students
learnt?

How should
I deliver the
contents?

Product model



Process model



An aligned curriculum

The Intended Learning Outcomes of the Curriculum

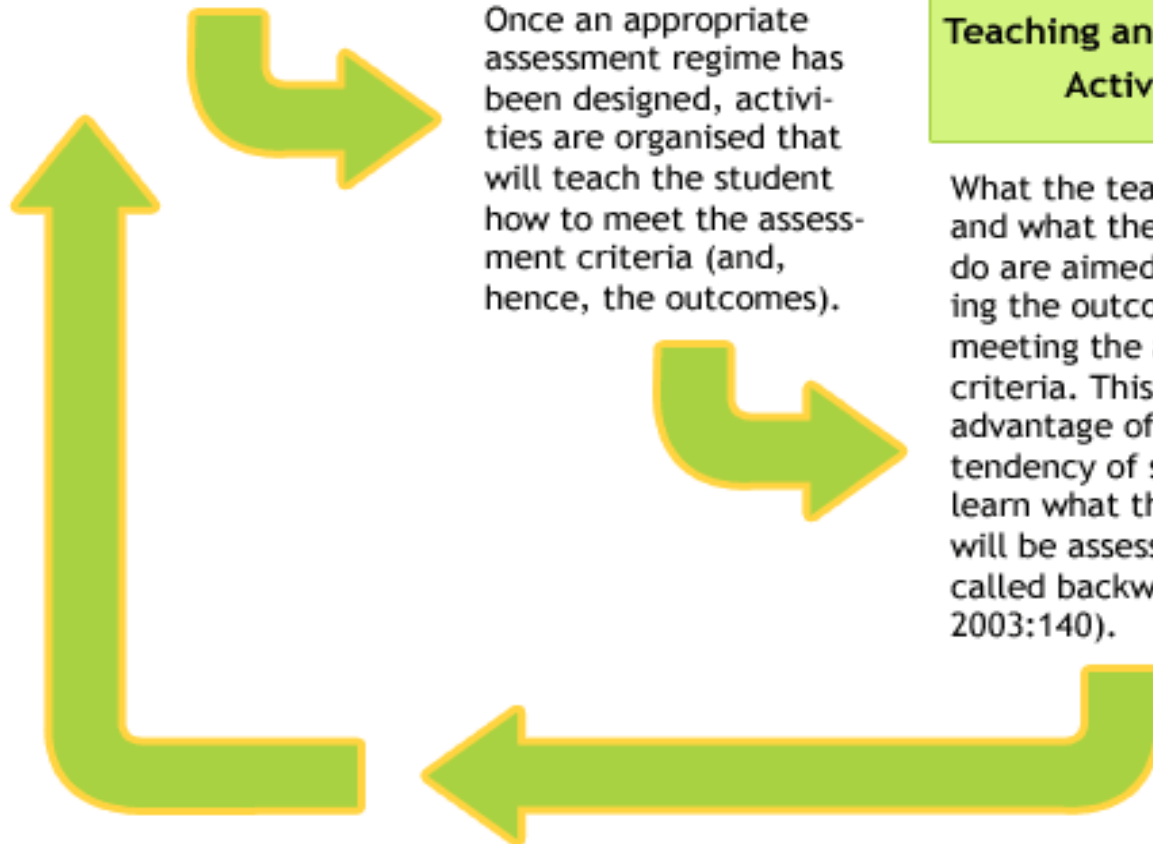
The outcomes are formulated first. From these the assessment criteria are developed.

The Assessment Regime

Once an appropriate assessment regime has been designed, activities are organised that will teach the student how to meet the assessment criteria (and, hence, the outcomes).

Teaching and Learning Activities

What the teacher does and what the students do are aimed at achieving the outcomes by meeting the assessment criteria. This takes advantage of the known tendency of students to learn what they think will be assessed - and is called backwash (Biggs 2003:140).



Curriculum Format

NCTB Format (Secondary, 2012)

1. **Rationale**
2. **Objectives**
3. **Learning outcomes:** Cognitive, Affective & Psychomotor
4. Learning outcomes **mapping**
5. Course, Chapter & Period distribution/ **Course Schedule**
6. **Course-Curriculum Format (Course-wise):**

Learning outcome	Content	Teaching Learning Strategy	Assessment Strategy
Able to make tea	Tea Making	Lecturer, Kitchen	Written, Viva, Drink Tea

CURRICULUM FORMAT (**Program Level**)

1. **Vision & Mission (Canada Immigration : Learn English/passport/point calculation)**
2. **Program Objectives**
3. **Learning Outcomes**: Cognitive, Affective & Psychomotor
(**Product Model**)
4. **Generic Skills** / Graduate Profile (**Process Model**)
5. Curriculum Structure/Layout (**Course Schedule**)
6. Learning Experience/**Teaching Strategy**
7. **Assessment Strategy**

CURRICULUM FORMAT (According to IQAC guideline)

- 1. Vision of the Program**
- 2. Mission of the Program**
- 3. Program Objectives**
- 4. Learning Outcomes**
- 5. Generic Skills**
- 6. Curriculum Structure**
- 7. Course Schedule**
- 8. Teaching Strategy**
- 9. Assessment Strategy**
- 10. Course Profile**

Faculty of XYZ

1. Vision of the Program:

.....

2. Mission of the Program:

----- (SAM:2.1.1-S.1.1)*

3. Program Objectives:

----- (SAM: 2.1.1-S.1.1)

4. Learning Outcomes (Cognitive, Affective & Psychomotor):

..... (SAM:2.1.1-S.1.2)

5. Generic Skills:

..... (SAM: 2.1.1-S.1.3)

6. Curriculum Structure: (example) (SAM:2.2.3)

Curriculum Structure:

Group No.	Course Components	Credit
Group 1	Humanities Courses	16 Credits
Group 2	Mathematics and General Science Courses	26 Credits
Group 3	Core Courses	91 Credits
Group 4	Elective Courses	12 Credits
Total Credit required for B.Sc. in ETE		145 Credits

7. Course Schedule:

Level 1 Term 2			
Code	Course Title	Prerequisite Course	Credits
ENG 123	English Language II	ENG 113	3
MAT 121	Mathematics II: Functions of Complex variable, Linear Algebra and Co-ordinate Geometry	MAT 111	3
PHY 123	Physics II: Electricity, Magnetism and Modern Physics	PHY 113	3
PHY 124	Physics II Laboratory	PHY 113	1
ETE 111	Structured Programming	NIL	3
ETE 112	Structured Programming Laboratory	NIL	1
		Total	14

Level 1 Term 3			
Code	Course Title	Prerequisite Course	Credits
MAT 131	Mathematics III: Ordinary and Partial Differential Equations	MAT 121	3
STA 133	Statistics and Probability	MAT 121	3
BBA 131	Principles of Economics	NIL	2
ETE 131	Electrical Circuits I	PHY 123	3
ETE 132	Electrical Circuits I Laboratory	PHY 124	1
		Total	12
Total Credits in Level 1: 39 (Theory 35 credits and Laboratory 4 credits)			

8. **Teaching Strategy:** *(DIU Ordinance)* (SAM 2.1)

.....

9. **Assessment Strategy:** *(DIU Ordinance)* (SAM 2.2)

.....

(Above mentioned information is as per part of University Ordinance)

10. **Course Profile:** (for 'n' number of courses) *(to be developed: NCTB Format)*

Course-1 Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Course No.: XXXXXX 01- Credit : 2 Contact Hours: 2 Total Marks: 100

10.1 Rationale:

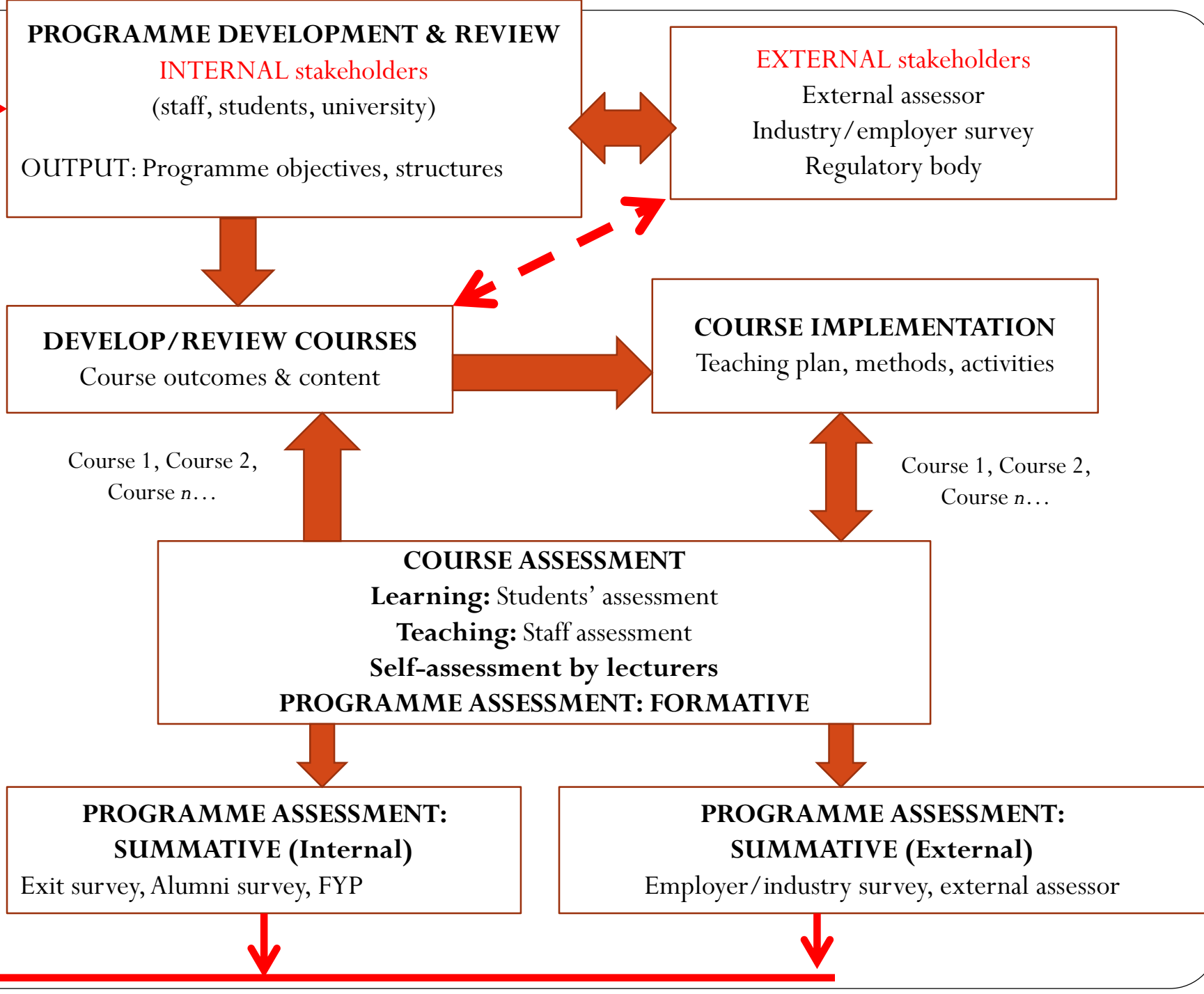
Why learning this course?

10.2 Objectives:

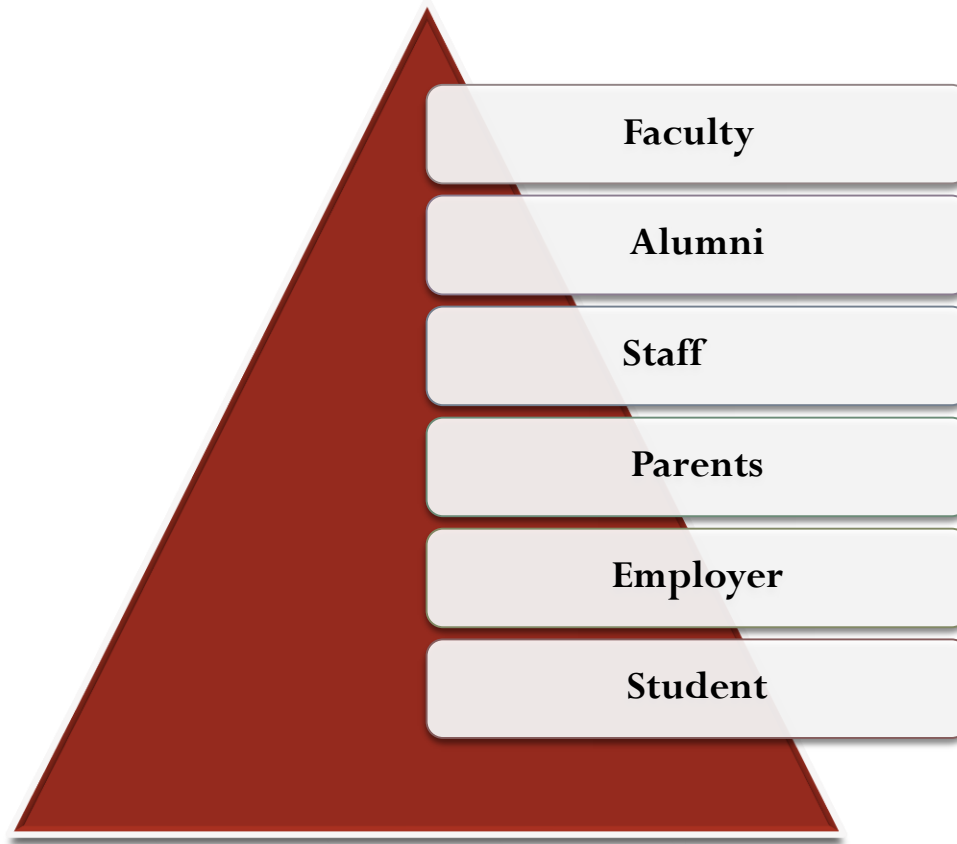
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10.3 <i>Learning Outcomes</i>	10.4 <i>Course Content</i>	10.5 <i>Teaching Strategy/ Learning Experience</i>	10.6 <i>Assessment Strategy</i>
.....
.....

Mapping the COs with the POs



Stake Holder Analysis



Faculty

Expectation	Contribution
<ul style="list-style-type: none"><li data-bbox="121 511 1031 661">❑ Entry level students` quality monitoring<li data-bbox="121 704 1031 858">❑ Physical infrastructure and facility improvement	<ul style="list-style-type: none"><li data-bbox="1054 511 1821 825">❑ Direct academic involvement with students, research and Extra curricular activities

Staff (Non-Academic)

Expectation	Contribution
<input type="checkbox"/> Better working environment, career prospect	<input type="checkbox"/> Help the smooth conduction of academic and administrative activities.

Alumni

Expectation	Contribution
<ul style="list-style-type: none"><li data-bbox="59 586 987 901">❑ Increase the number of experience teachers in the department, up to date curriculum<li data-bbox="59 958 987 1100">❑ industrial collaboration with job providers.	<ul style="list-style-type: none"><li data-bbox="1006 586 1875 729">❑ Branding, Job placement, Fund raising

Students

Expectation

- State of the art education
- Congenial learning environment
- prospective career

Contribution

- Social activities
- Become intangible assets for the nation.

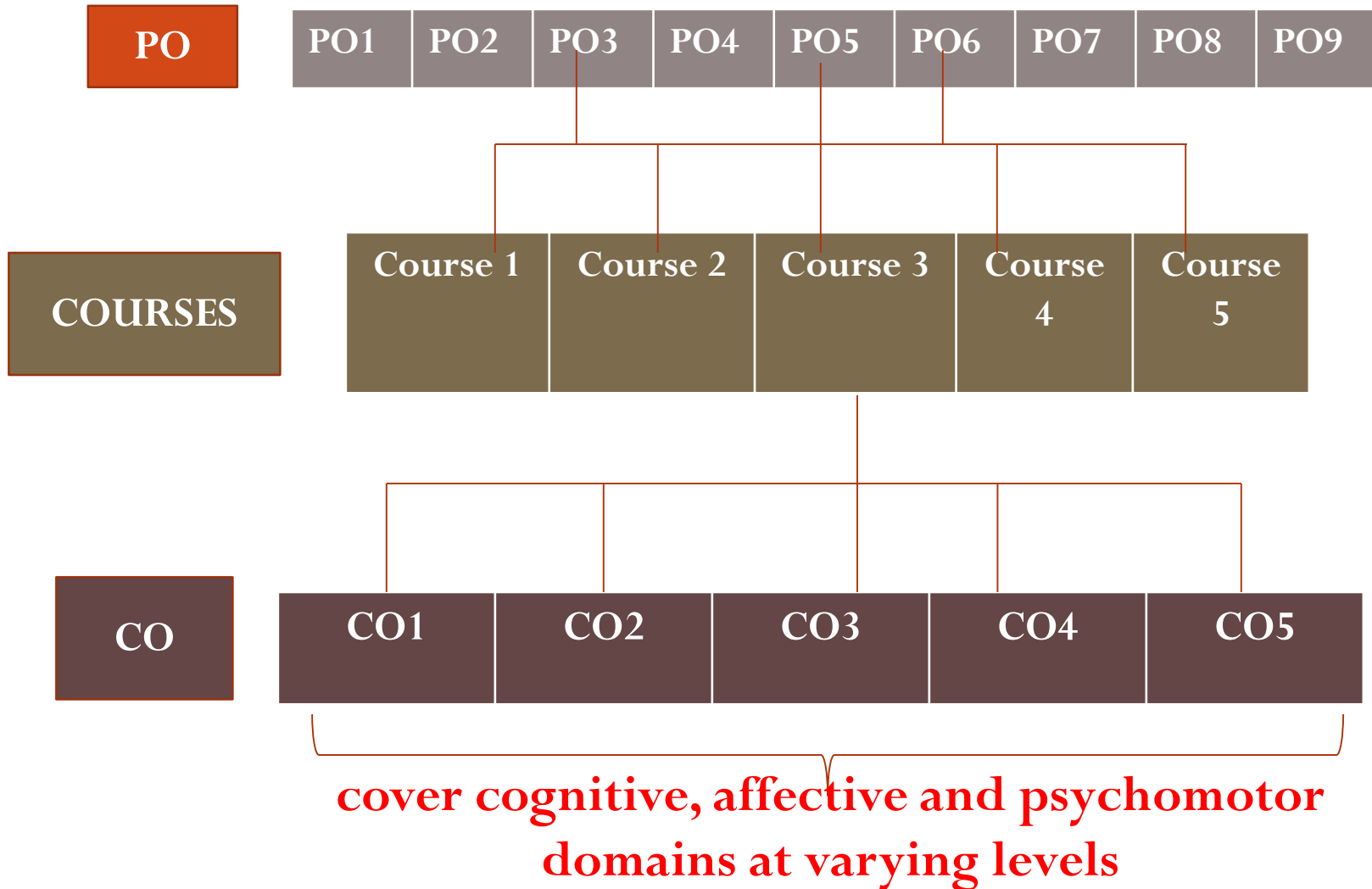
Employers

Expectation	Contribution
<ul style="list-style-type: none"><li data-bbox="59 544 977 772">❑ Proper direction to the students about practical working condition<li data-bbox="59 825 977 1058">❑ Sound communication skill and adaptability to new environment	<ul style="list-style-type: none"><li data-bbox="996 544 1858 701">❑ Job placement, Sponsoring, valuable practical training.

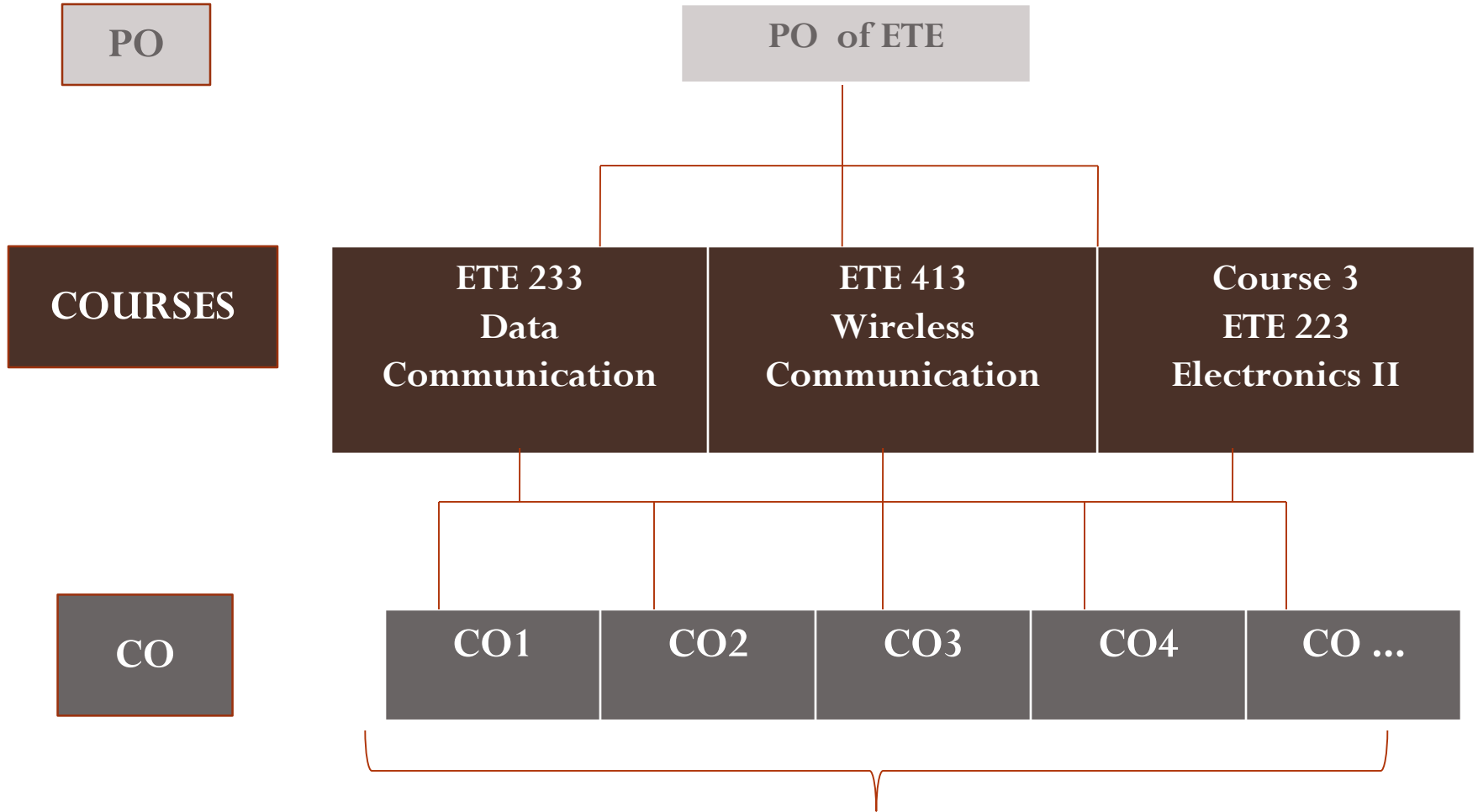
Parents

Expectation	Contribution
<ul style="list-style-type: none">❑ Proper education to their off-springs❑ Civilized and responsible global work force	<ul style="list-style-type: none">❑ Moral and financial support to the students

PROGRAMME X: Mapping the COs with the POs



BSc. In ETE: Mapping the COs with the POs



Course 1 ETE 233 (Data Communication)

Program Outcome (PO):

- ❑ To keep the students up to date with the latest advancement in the fields of Communication, Satellite Communication, Radar etc.
- ❑ Able to contribute to the developments in their own field recognizing the significance of lifelong learning.
- ❑ Having strong ethical values and adhering to the quality and honesty.
- ❑ Able to take individual responsibilities and to work as a part of a team.

Course Outcome (CO):

- ❑ Students will be able to Explain components of data communication system.
- ❑ Students will be Able to classify the devices used in LAN, Man and WAN and select the best network criteria to set up a small network among buildings in an area.
- ❑ Students will be able to develop leadership quality through Group work.
- ❑ Students will become efficient by solving real life problems through case studies.

Course 2: ETE 413 (Wireless and Mobile communication)

Program Outcome (PO):

- ❑ To keep the students up to date with the latest advancement in the fields of Mobile Communication, Satellite Communication, Radar etc.
- ❑ Able to contribute to the developments in their own field recognizing the significance of lifelong learning.
- ❑ Having strong ethical values and adhering to the quality and honesty.
- ❑ Able to take individual responsibilities and to work as a part of a team.

Course Outcome (CO):

- ❑ Students will be able to develop profound knowledge in different types of wireless and mobile communication systems and their technologies.
- ❑ Students will be able to analyze hands-on problems in wireless communication.
- ❑ Students will be able to design wireless and cellular networks.
- ❑ Students will improve their communication skill through presentation.
- ❑ Students will be able to develop leadership quality through Group work.
- ❑ Students will become efficient by solving real life problems through case studies.

Recap main points
Feedback & answer
Assessment of LOs
Reference
Forward plan

[10 minutes]

Introduction

Rapport
Link
Importance/rationale
Pre-assessment
Layout/ content outline
[15 minutes]

Lesson Plan

Conclusion

Development

Section-A --10min
Section-B --15min
Section-C—40min

Sample Question Assessment according to Bloom's Cognitive Domain

Analysis of Questions with Bloom's Taxonomy

Name: Md. Taslim Arefin

Designation: Associate Professor

Department: ETE

Subject Name & Code: Wireless & Mobile Communication (ETE 413) (Final Exam)

Questions		Bloom's Levels of Cognition					
Question no	Marks per question	1	2	3	4	5	6
1. (Section A)	3		3				
2. (Section A)	1	1					
1.a (Section B)	3			3			
1.b	3			2	1		
1.c	1		1				
2.a	2					2	
2.b	2				2		
2.c	3		3				
3.a	3			1	2		
3.b	2					2	
3.c	2	2					
4.a	3				1	2	
4.b	2			1	1		
4.c	2						2
Total Marks	32	3	7	7	7	6	2
Total % in each level		9.38%	21.875%	21.875%	21.875%	18.75	6.25%
% Marks in Levels (1&2: 3&4: 5&6)		31.25%		43.75%		25%	
Ratios in Levels (1&2 :3&4 : 5&6)							

Sample Question Assessment according to Bloom's Cognitive Domain

Analysis of Questions with Bloom's Taxonomy

Department: ETE

Subject Name & Code: Electronics II, ETE 223 (Final)

Questions		Bloom's Levels of Cognition					
Question no	Marks per question	1	2	3	4	5	6
1(a, b)	10	5				5	
2(a, b)	10		5		5		
3(a, b)	10		5		5		
4(a, b)	10			5	5		
5(a, b)	10	5				5	
Total Marks	50	10	10	5	15	10	
Total % in each level		20	20	10	30	20	
% Marks in Levels (1&2: 3&4: 5&6)		40		40		20	
Ratios in Levels (1&2 :3&4 : 5&6)							

How do we grade? SAMPLE OF A RUBRIC

Description	Score
Demonstrates complete understanding of the problem. All requirements of task are included in response.	5
Demonstrates considerable understanding of the problem. All requirements of task are included	4
Demonstrates partial understanding of the problem. Most requirements of task are included.	3
Demonstrates little understanding of the problem. Many requirements of task are missing	2
Demonstrates no understanding of the problem	1
No response/task not attempted	0



Do you have any questions?

**THANK YOU FOR YOUR
ATTENTION !**