



MARIAN COLLEGE
KUTTIKANAM
(AUTONOMOUS)
MAKING COMPLETE

Established in
1995

OBE MANUAL



Expected Outcomes of This OBE Manual

Upon successful learning of the information provided in the Manual, you will be able to:

- Describe various components of OBE in Higher education with confidence
- Define POs, PSOs and COs in Arts, Humanities and Engineering Disciplines with clarity
- Enlist major components of OBE
- Develop the PSOs and COS for your discipline with confidence
- Describe the Process of Assessment of Learning Outcome in OBE
- Calculate the attainment of COs, PSOs and POs



Expected 21st Century Skills of Education

01 Critical thinking

02 Creativity

03 Collaboration

04 Communication

05 Information literacy

06 Media literacy

07 Technology literacy

08 Flexibility

09 Leadership

10 Initiative

11 Productivity

12 Social skills



Competency Based Education



- **Competency-based education** is defined as an approach that allows students to advance **based** on their ability to master a skill or **competency** at their own pace regardless of environment. This method is tailored to meet different **learning** abilities and can lead to more efficient student outcomes



Outcome Based Education

- OBE is a process that involves **assessment** and **evaluation** practices in education to reflect the **attainment** of expected learning by students



Characteristics of OBE curriculum

- It has Programme Educational Objectives (PEO), Programme Outcomes(PO), course learning outcomes (COs) and performance indicators.
- It is **objective** and **outcome driven**, where every stated objective and outcomes can be **assessed** and **evaluated**.
- It is centered around the **needs of the students** and the **stakeholders**.



Characteristics of OBE curriculum cont..

- Every **learning outcome** is **intentional** and therefore the outcomes must be **assessed** using suitable performance indicators.
- Programme Educational Objectives address the graduates attainment within **3-5 years** after their graduation.



Characteristics of OBE curriculum cont..

- **Programme Outcomes**, which consist of abilities to be attained by students before they graduate from an institution, **are formulated** based on the programme educational **objectives**.
- **Programme Specific Outcomes** which consist of abilities to be attained by students before they graduate through a specific programme



Linking Topics to Programme Educational Objectives (PEO)

- Programme Educational Objectives has to achieve Mission and Vision of Institution
- Programme outcomes and Programme Specific Outcomes must address the achievement of Programme Educational Objectives (What kind of “Graduates” to produce?)
- Course Outcomes must relate to programme outcomes and Programme Specific Outcomes
- Topics lead to Course Outcomes



Levels of Outcomes

- Program Outcomes: POs are statements that describe what the students graduating from any of the educational programs should be able to do.
- Program Specific Outcomes: PSOs are statements that describe what the graduates of a specific educational program should be able to do.
- Course Outcomes: COs are statements that describe what students should be able to do at the end of a course



Vision

A **Vision statement** should explain why your organization exists and what it hopes to achieve in the future. It articulates the organization's essential nature, its values and its work.

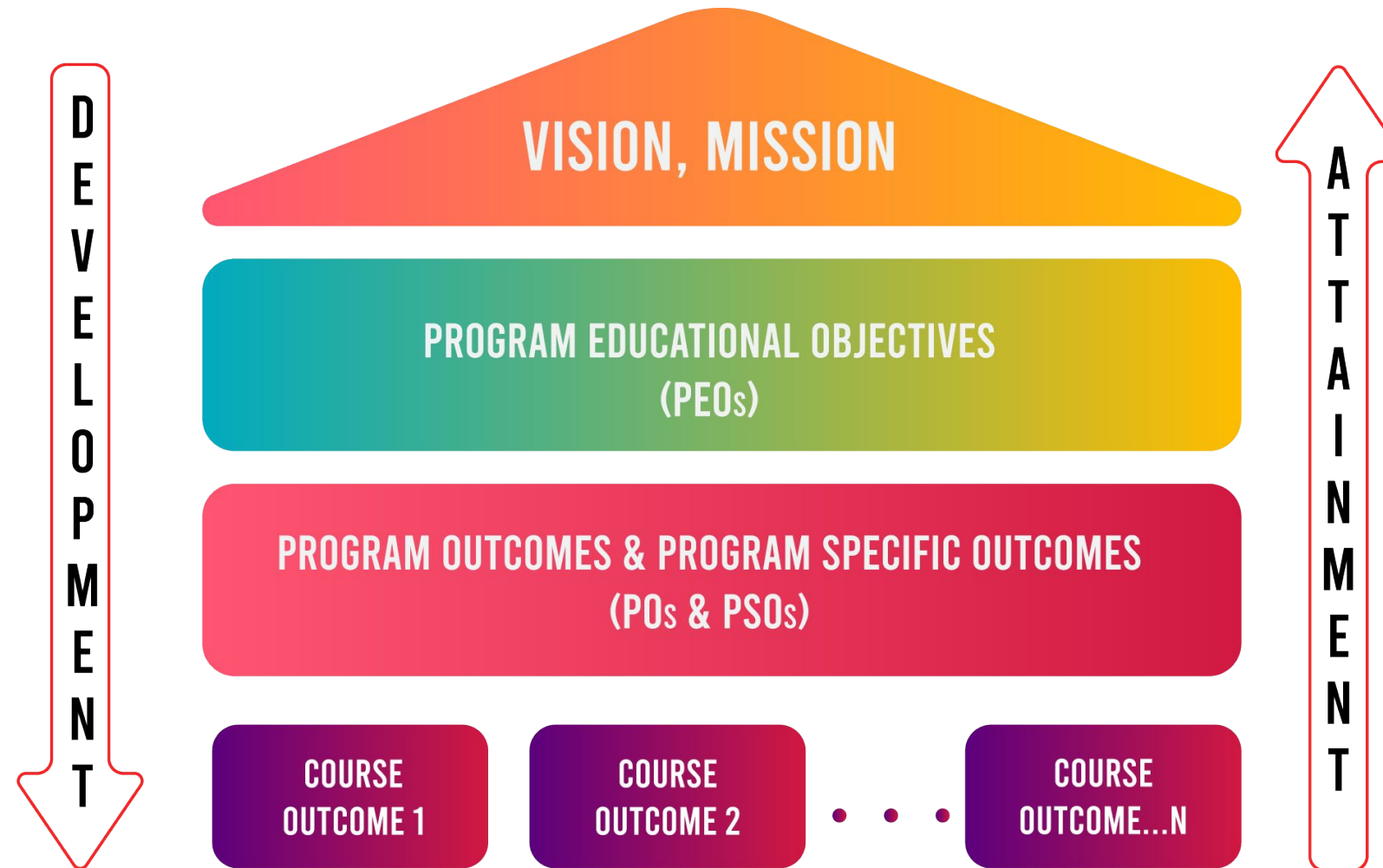


Mission Statement

A **mission statement** is a short **statement** of an organization's purpose, what its overall goal is, identifying the goal of its operations: what kind of product or service it provides, its primary customers or market, and its geographical region of operation.

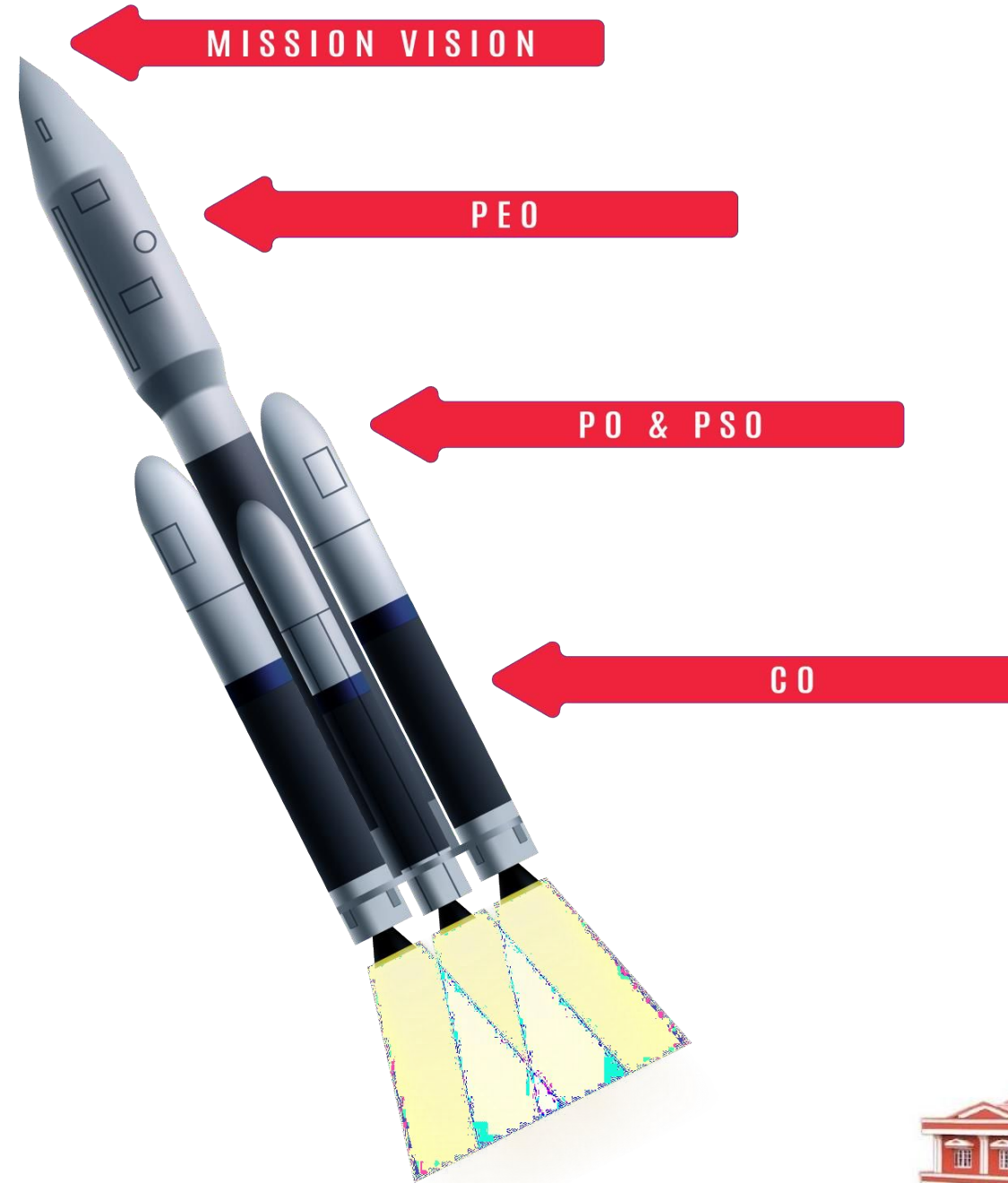


Vision Mission POE,PO,PSO & CO Links



Vision and Mission Achieved Outcomes

Mission Through



MARIAN VISION

- **“To be a transformational leader in education, facilitating and celebrating the full flowering of life in abundance”.**



MARIAN MISSION

- **Facilitate an enriching scholastic experience focused on higher order thinking and competencies.**
- **Create avenues for developing artistic, literary and sports talents, life skills, personal health and well-being.**





- **Nurture a collaborative learning community, open to free exchange of ideas in which research, creative ideation, innovation and entrepreneurship flourish.**
- **Influence the educational sector by strengthening and innovating outcome- based learning and assessments, fostering multidisciplinary engagements and integrating technologies.**
- **Bring in transformative impact on society - regional, national, and global- by attracting diverse talents and engaging with institutional partners.**



Programme Outcome



Program Outcomes (POs) are what knowledge, skills and attitudes a graduate should have at the time of graduation from an institution.



No agency has formally defined the POs of General Higher Education.



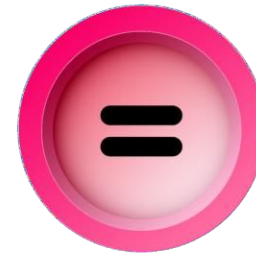
Marian College Programme Outcomes (POs)



DOMAIN
EXPERTISE



GLOBALIZED
CITIZENSHIP



THRIVE FOR
EQUALITY



SUSTAINABILITY
VALUES



CRITICAL THINKING AND
RESEARCH APTITUDE



TEAM WORK



HOLISTIC EMPOWERMENT
THROUGH EDUCATION



REFLECTIVE
RESPONSE TO ETHICAL
AND SOCIAL ISSUES



SELF-DIRECTED AND
LIFELONG LEARNING



Bloom's Taxonomy

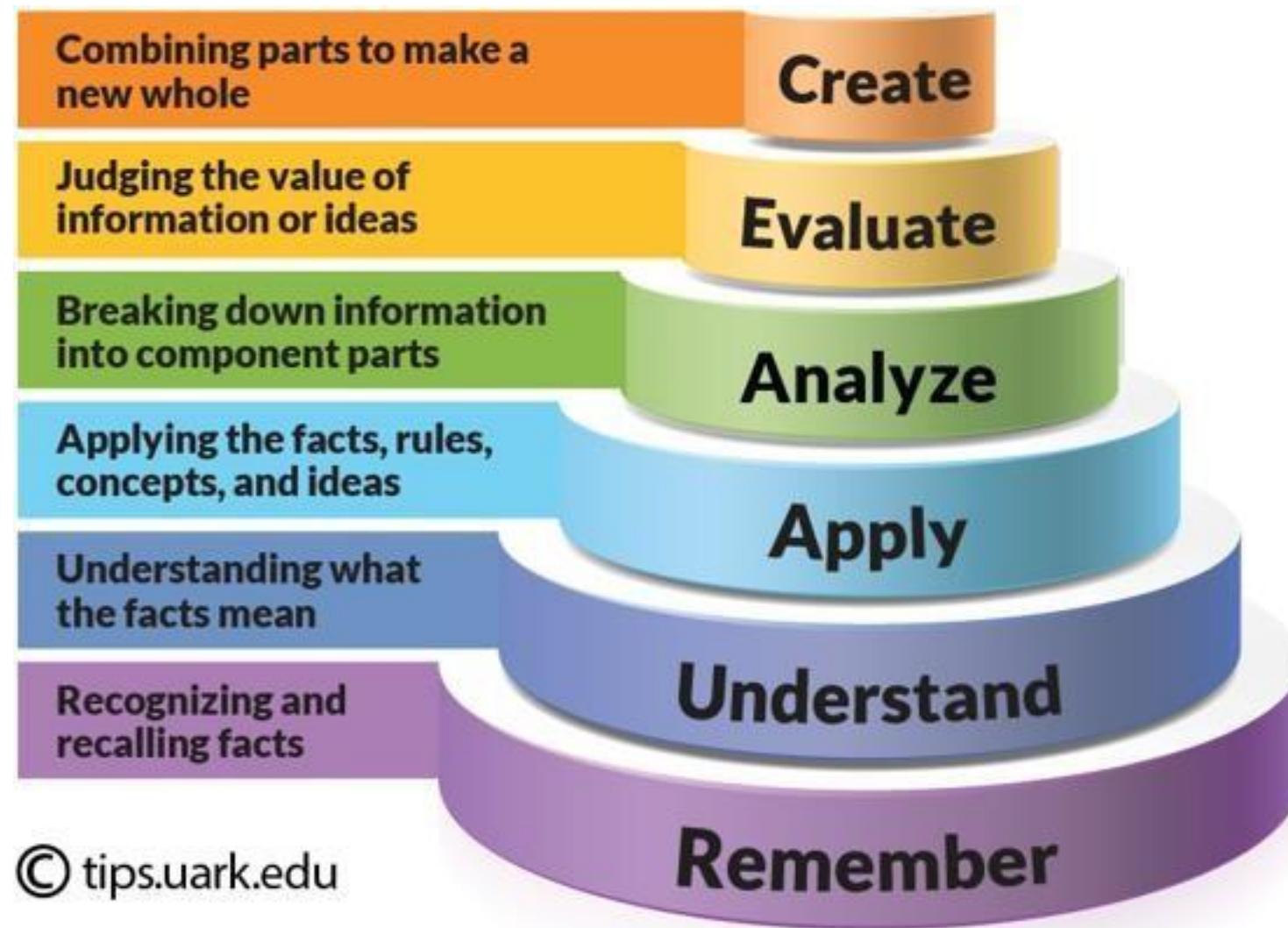
Bloom's Taxonomy is a classification of the different objectives and skills that educators set for their students

The taxonomy was proposed in 1956 by Benjamin Bloom, educational psychologist at the University of Chicago.

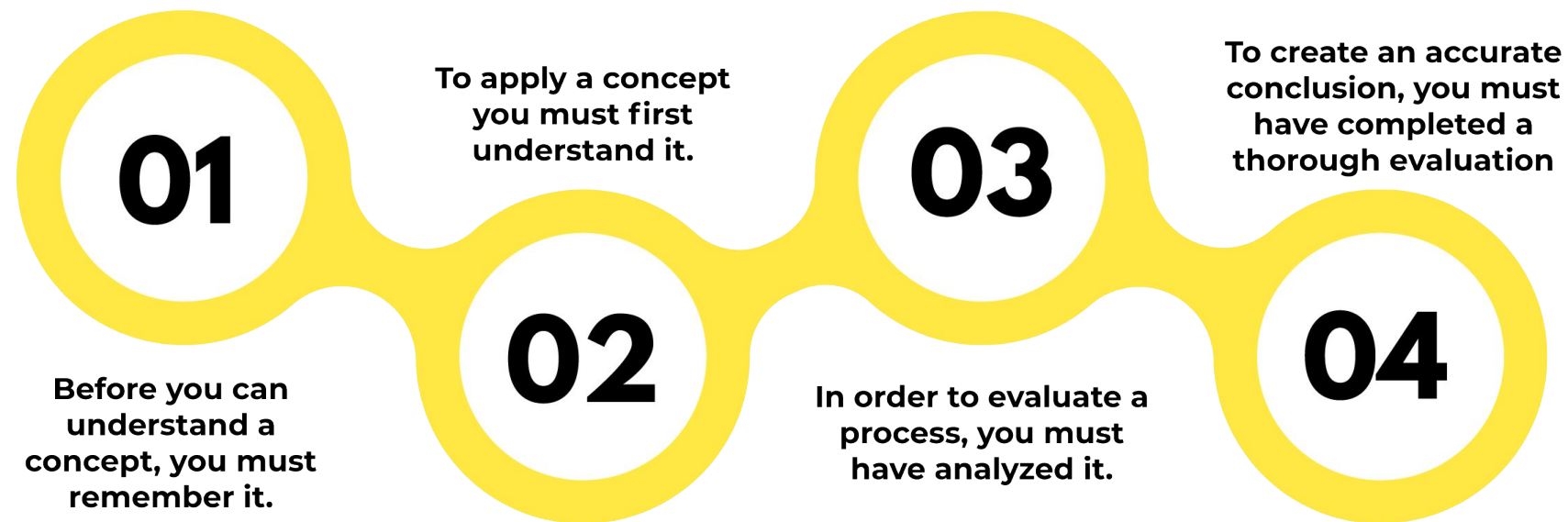
The terminology has been recently updated to include the following six levels of learning.



Levels of Learning in Bloom's Taxonomy



Sequence of Learning in Bloom's Taxonomy



Programme Specific Outcome



PSOs are statements that describe what the graduates of a specific educational program should be able to do.



Course Outcomes

What the students have gained or learned from that course Upon completion of the course, the students shall be able to:

- Remember
- Understand
- Evaluate
- Analyze
- Design
- Apply
- Create



Course Outcomes

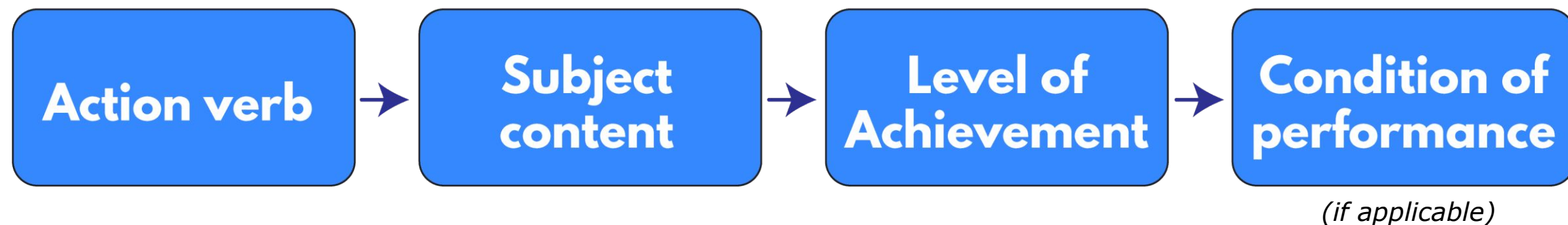
- Course Outcomes (COs) are central to your course curriculum. They articulate to students, faculty, and other stakeholders what students will achieve in each course and how their learning will be measured.
- A measurable, observable, and specific statement that clearly indicates what a student should know and be able to do as a result of learning.



Course Outcomes is..

- **Measurable, observable, and specific** statement that clearly indicates what a student should know and **be able to do** as a **result** of learning.

Well-written LOs involve the following parts:



Guidelines to Define Outcomes



Use a single, clear action verb for each learning outcome



Do not use vague terms such as 'know about, be familiar with, understand, be aware of



The course outcomes should be observable and measurable

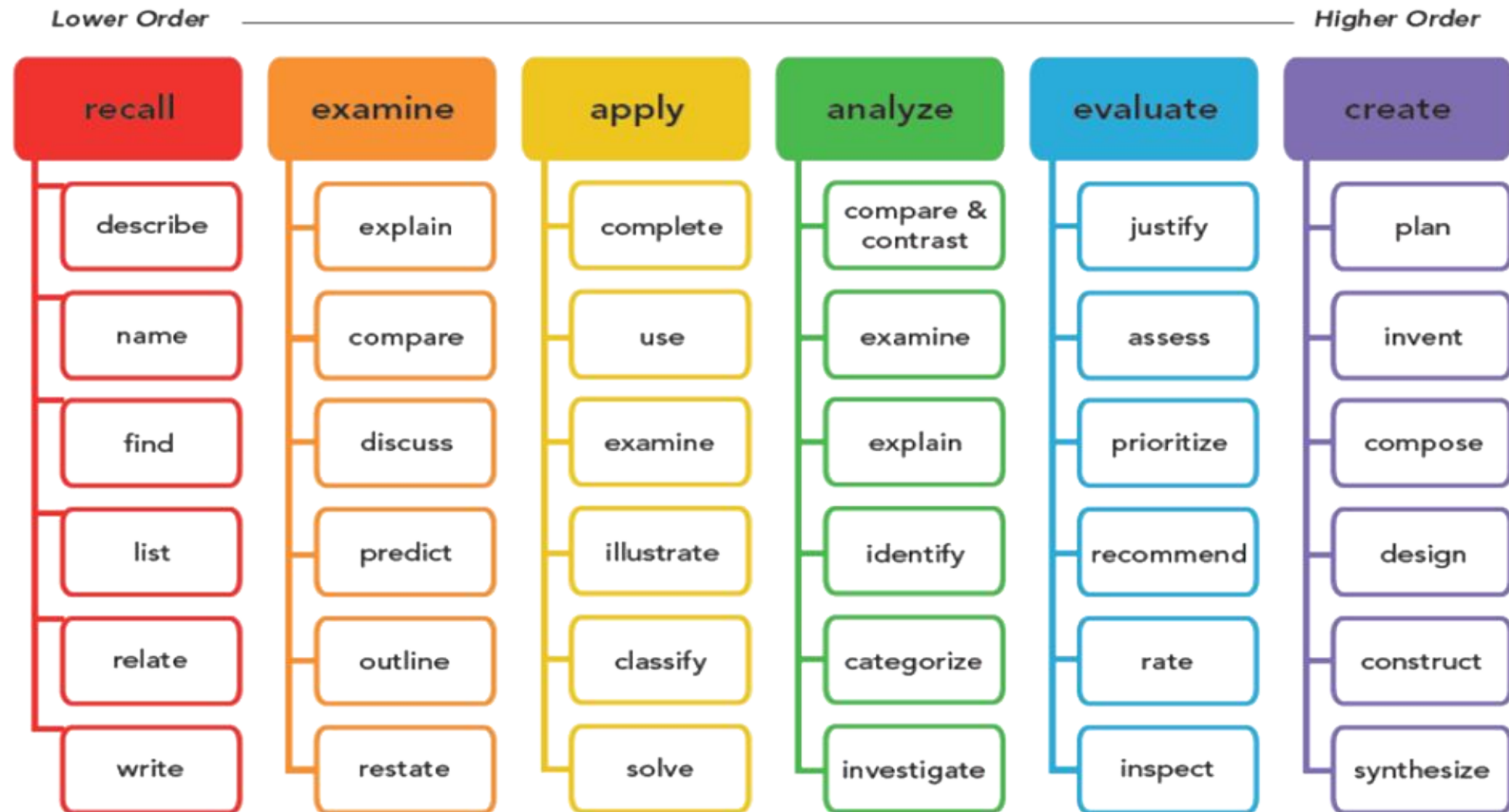


Course outcome should not be included if it is not possible to assess it



Action Verbs to Develop Outcomes Meeting Different Bloom's Taxonomy Levels

Generating LOs using *Bloom's Cognitive Taxonomy* (adapted 2019)



Programme Specific Outcomes BCA (Sample)

- **PSO1** An ability to apply mathematical foundations, algorithmic principles, and computer science theory and practice
- **PSO 2** An ability to model, design, implement and test software systems with
 - ethical concern
- **PSO 3** An ability to use new design methodologies, operating systems, languages, and other software development tools within
 - reasonable time constraints
- **PSO 4** An ability to function effectively on teams related to
 - software development
- **PSO 5** An ability to communicate with others, both orally and in writing, about technical subjects



Sample Course Outcomes of ITC

- **CO 101.1.** Identify the parts of the computer system.
- **CO 101.2.** Adequately explain functioning of computer components.
- **CO 101.3.** Explain the process of problem solving using computer.
- **CO 101.4.** Design an algorithmic solution for a given problem.
- **CO 101.5.** Ability to use computer systems with ethical concern.





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Assessment of Outcomes



KUTTIKANAM PO, PEERMADE, IDUKKI DISTRICT, KERALA, 685531

Sample Course Outcomes of ITC

Item	Activity		Attainment
CARS 7.5	Seminar	4	CO1
	Assignment	3.5	CO2
CADL 7.5	Video Presentation	4	CO1,CO2
	Group Activity	3.5	CO2,CO4
	News analysis		AO1
CA1	Exam 1	5	CO1,CO2
CA2	Exam 2	7.5	CO3
CA3	Exam 3	7.5	CO4,CO5
SEE	Final Exam	60	CO1,CO2,CO3,CO4,CO5



Mapping Convention Followed To Connect COs with POs and PSOs

➤ Weightage	0	Nil	0%
➤ Weightage	1	Low	1-50%
➤ Weightage	2	Moderate	51-70%
➤ Weightage	3	Significant	71-100%



Sample CO-PO MAPPING

CO	P01	P02	P03	P04	P05	P06	P07	P08	P09
CO101.1	2	2	0	0	0	0	0	0	1
CO101.2	3	2	2	3	0	0	0	3	1
CO101.3	1	0	0	0	3	2	0	0	0
CO101.4	1	1	0	0	0	0	1	2	2
CO101.5	1	3	0	0	1	2	1	0	1



Sample CO-PSO MAPPING

CO	PS01	PS02	PS03	PS04	PS05
CO101.1	3	1	1	1	0
CO101.2	1	3	0	0	1
CO101.3	0	1	2	1	3
CO101.4	1	1	0	0	0
CO101.5	1	3	0	0	1



Attainment by student Sebastian in Continuous Assessment (CA)

Activity		COs	% Marks Awarded	Mapping
Seminar Assignment	4	CO1	40	1
	3.5	CO2	85	3
Video Presentation Group Activity	4	CO3	70	2
	3.5	CO2,CO4	85	3
Exam 1	5	CO1,CO2	55	2
Exam 2	7.5	CO3	75	3
Exam 3	7.5	CO4,CO5	40	1
Final Exam	60	CO1,CO2,CO3, CO4,CO5		



Calculation of Attainment of COs (CA) (Sebastian) based on CA marks

➤ **CO101.1** $(1+2)/2 = 1.5$

➤ **CO101.2** $(3+3+2)/3 = 2.6$

➤ **CO101.3** $(2+3)/2 = 2.5$

➤ **CO101.4** $(3+1)/2 = 2$

➤ **CO101.5** $1/1 = 1$



Calculation of Attainment of COs (CA) (Sebastian) based on CA marks

A. Semester End Examinations (SEE)

Student Name/Roll No	% Score for questions addressing CO1	Weightage
Sebastian X2	56	2
X3	73	3
---	35	1
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X60	62	2

0 - 50% : Weightage 1

71 - 100%: Weightage 3

50 - 70%: Weightage 2



CO FINAL CALCULATION

CO101.1

- 80% CA AND 20% SEE
- CO1 attainment in CA → 1.5
- CO1 attainment in SEE → 2
- FINAL = $1.5 * 80 / 100 + 2 * 20 / 100 = 1.2 + 0.4 = 1.6$



Attainment of PO (Sebastian)

Calculation of Attainment of POs from COs: PO1

Contributing COs	CO Attainment level	Level of Mapping to PO1	Attainment Level (Direct)	Attainment Level (Weighted Value)
CO101.1	2.16	3		2.23
CO101.2	1.85	0		
CO101.3	2.52	2		
CO101.4	2.01	3		
CO101.5	2.56	1		

$$(2.16*3+1.85*0+2.52*2+2.01*3+2.56*1)/9$$

Similarly Attainment levels are to be evaluated for all POs of the Program (PO1 to PO9) AND PSOs



1. PO attainment level will be based on attainment levels of **Direct Assessment** and **Indirect Assessment**
2. For a UG Program in an autonomous college, 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.



Final calculation

➤ PO1 Domain Knowledge

➤ Direct assessment 2.16

➤ Indirect 3.00(Through surveys)

➤ Final = = 2.32

$$2.16 * 80 / 100 + 3 * 20 / 100$$





THANK YOU

