

COMSATS University Islamabad, Sahiwal Campus

1. The following Program Educational Objectives (PEOs) for Bachelor of Science in Civil Engineering program, should be effective from Fall 2023:

Revised Program Educational Objectives (PEOs)

PEO1	Demonstrate competence in the professional practice of Civil Engineering.
PEO2	Fulfill the needs of society on identifying and solving technical challenges in the field of Civil Engineering using fundamental engineering principles with modern tools and practices in an ethical and socially responsible manner.
PEO3	Demonstrate competence while applying civil engineering practices by exhibiting organizational skills through professional growth and development activities.

Program Learning Outcomes (PLOs)

<i>PLO1</i>	Engineering Knowledge -Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.	<i>C</i>
<i>PLO2</i>	Problem Analysis -Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.	<i>C</i>
<i>PLO3</i>	Design/Development of Solutions -Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.	<i>C</i>
<i>PLO4</i>	Investigation -Conduct investigation into complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.	<i>C/P/A</i>
<i>PLO5</i>	Modern Tool Usage -Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the Limitations.	<i>C/P/A</i>
<i>PLO6</i>	The Engineer and Society -Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.	<i>C</i>
<i>PLO7</i>	Environment and Sustainability -Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.	<i>C/P/A</i>
<i>PLO8</i>	Ethics -Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.	<i>C</i>
<i>PLO9</i>	Individual and Team Work -Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.	<i>C/P/A</i>

PLO10	Communication -Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	C
PLO11	Project Management and Finance -Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	C
PLO12	Life-long Learning -Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	C/P/A

Nature of PLO (Legend)

C: Cognitive

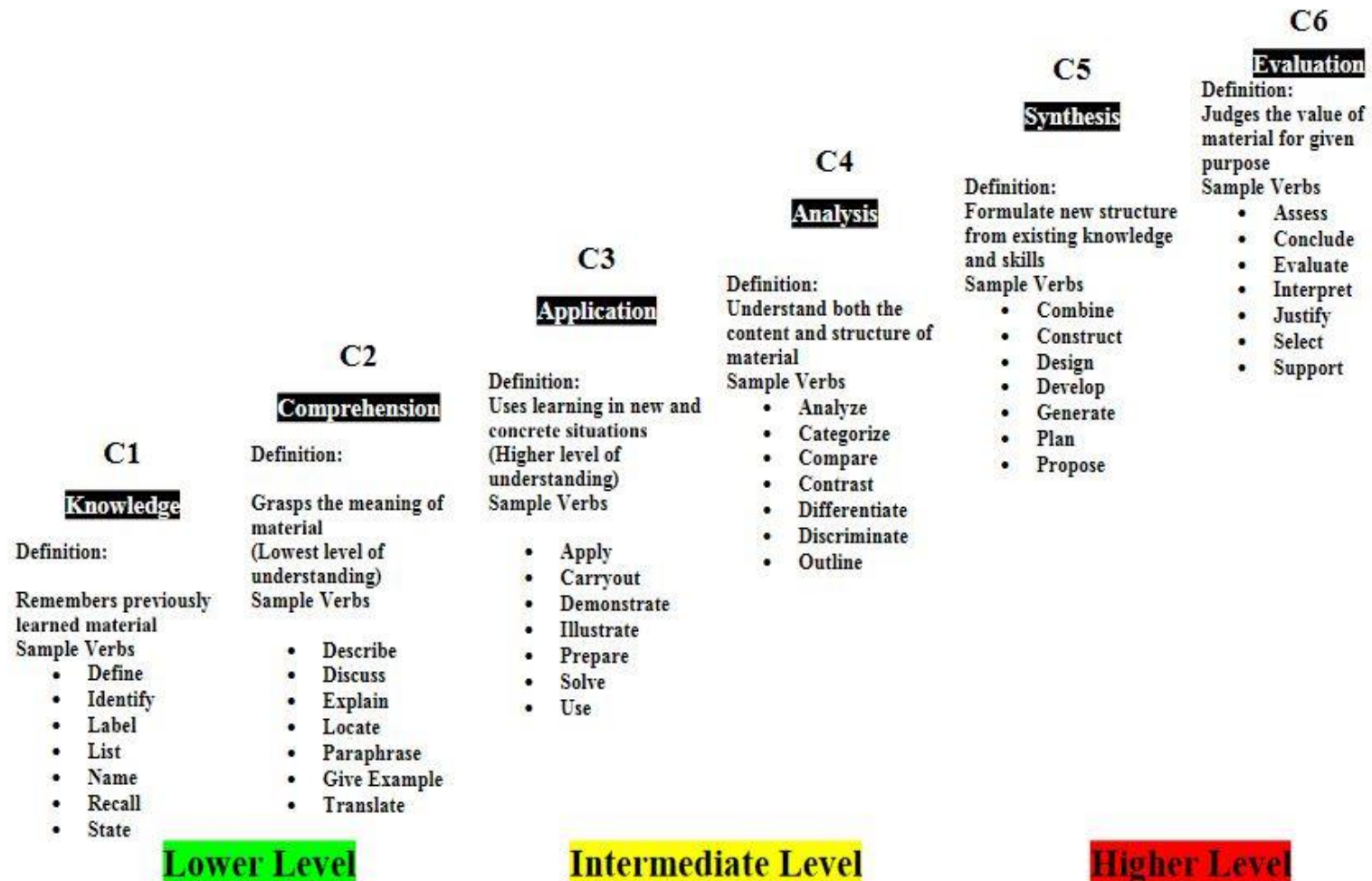
A: Affective

P: Psychomotor

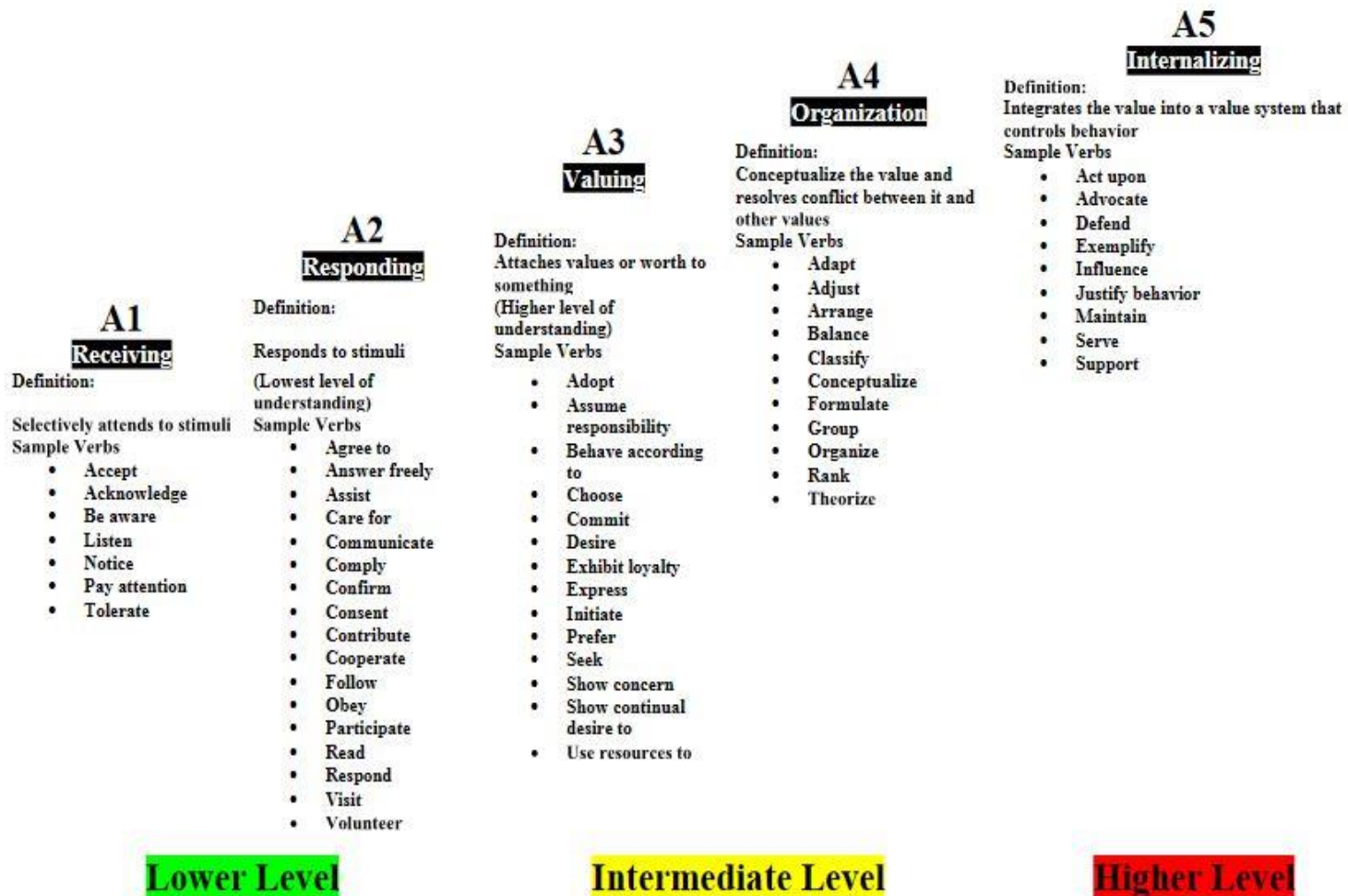
Mapping of PLOs with PEOs

Sr#	PLO	PEO 1	PEO 2	PEO 3
1	Engineering Knowledge	✓		
2	Problem Analysis	✓		
3	Design/Development of Solutions	✓		
4	Investigation	✓		
5	Modern Tool Usage		✓	
6	The Engineer and Society		✓	
7	Environment and Sustainability		✓	
8	Ethics		✓	
9	Individual and Team Work			✓
10	Communication			✓
11	Project Management			✓
12	Lifelong Learning			✓

Cognitive Domain (thinking, knowledge)



Affective Domain (feeling, attitudes)



Psychomotor Domain (doing, skills)

