

Programme Outcomes (PO)

Mapping of the Programme Outcomes and Graduate Attributes

No	Programme Outcomes	EAC's Graduate Attributes
		<p>WA1: Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to the solution of complex engineering problems.</p> <p>WA2: Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. (WK1 to WK4)</p> <p>WA3: 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. (WK5)</p> <p>WA4: Conduct investigations of complex problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.</p> <p>WA5: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering problems, with an understanding of the limitations. (WK6)</p> <p>WA6: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems. (WK7)</p> <p>WA7: Understand and evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal and environmental contexts. (WK7)</p> <p>WA8: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice. (WK7)</p> <p>WA9: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.</p> <p>WA10: 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.</p> <p>WA11: Demonstrate knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments</p> <p>WA12: 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.</p>

1	Ability to acquire and apply knowledge of mathematics, science and engineering fundamentals to the solution of complex civil engineering problems.	√											
2	Ability to identify, formulate, research literature and analyse complex civil engineering problems in reaching substantiated conclusions using principles of mathematics, sciences and engineering knowledge.		√										
3	Ability to design systems, components or processes for solving complex civil engineering problems that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.			√									
4	Ability to conduct investigation on complex civil engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of findings to provide valid conclusions.				√								
5	Ability to utilise appropriate techniques, resources, and modern engineering and IT tools in predicting and modelling of complex civil engineering problems with an understanding of the limitations.					√							
6	Ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional civil engineering practice and solutions to complex engineering problems.						√						

7	Ability to understand and evaluate the sustainability and impact of professional civil engineering work in the solution of complex engineering problems in societal and environmental contexts.							√					
8	Ability to exercise professional civil engineering practices with ethical principles and commit to professional ethics and responsibilities.								√				
9	Ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.									√			
10	Ability to impart effectively complex engineering activities through presentations, written and verbal communications to the engineering community and society at large.										√		
11	Ability to demonstrate knowledge and understanding of civil engineering management principles and economic decision-making in a team to manage projects in multidisciplinary environments.											√	
12	Ability to recognise the need to undertake life-long learning and acquire the capacity to do so independently in the broadest context of technological change.												√

MAIN LEARNING DOMAIN FOR EC220 PROGRAMME OUTCOMES

AFFECTIVE
(HEART)
PO8, PO9, PO10,
PO12

COGNITIVE (HEAD)
PO1, PO2, PO3, PO5
PO6, PO7, PO11

PSYCHOMOTOR
(HAND)
PO4

With good attributes and skills, our graduates are able to work in any field and adapt to any environment

