Program Outcomes (PO) Mapping with WP,EA & SDG
(As per National Board of Accreditation (NBA))

Differentiating Characteristic	Engineer Graduate	WP	EA	SDG
PO1:Engineering Knowledge	Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in **WK1 to WK4** respectively to develop to the solution of **complex engineering problems.**	**X**		
PO2: Problem Analysis	Identify, formulate, review research literature and analyze ***complex engineering problems*** reaching substantiated conclusions with consideration for ***sustainable development***. (**WK1 to WK4**)	**X**		**X**
PO3: Design/development of solutions	Design creative solutions for ***complex engineering problems*** and design/develop systems/components/processes to meet identified needs with consideration for the **public health and safety, whole-life cost, net zero carbon, culture, society and environment** as required. **(WK5)**	**X**		X
PO4: Investigation	Conduct investigations of ***complex engineering problems*** using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. **(WK8).**	**X**		
PO5: Tool Usage:	Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve ***complex engineering problems***. **(WK2 and WK6)**	**X**		

Program Outcomes (PO) Mapping with WP,EA & SDG
(As per National Board of Accreditation (NBA))

Differentiating Characteristic	Engineer Graduate	WP	EA	SDG
PO6:The Engineer and the World	Analyze and evaluate societal and environmental aspects while solving ***complex engineering problems*** for its **impact on sustainability** with reference to economy, health, safety, legal framework, culture and environment. **(WK1, WK5, and WK7)**.	**X**		**X**
PO7: Ethics	Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. **(WK9)**			
PO8: Individual and Collaborative Team work	Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.			
PO9: Communication	Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences		**X**	
PO10: Project Management and Finance	Apply 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, and to manage projects and in multidisciplinary environments.			

Program Outcomes (PO) Mapping with WP,EA & SDG
(As per National Board of Accreditation (NBA))

Differentiating Characteristic	Engineer Graduate	WP	EA	SDG
PO11: Lifelong learning	Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. **(WK8)**			

***Represented by the 17 UN Sustainable Development Goals (UN-SDG)**

Note :

WA1 to WA6 involve addressing 'complex engineering problems', while WA9 pertains to 'complex engineering activities'.
Courses corresponding to these WAs should incorporate CEP-Solution.
Notably,'sustainable development' is mentioned in WA2 and WA6 Therefore, the United Nations' Sustainable Development Goals (SDGs) must be included in these courses
WA3 covers public health and safety, wholelife cost, net zero carbon, resource, cultural, societal, and environmental considerations.
While not explicitly stated, the inclusion of SDGs is somewhat implied within WA3. Hence, integrating SDGs into the relevant courses is deemed 'good to have'.