

Department of Mathematics and Statistics
 School of Applied Science & Humanities
 VFSTR (Deemed to be University)
 B.Tech (All Programmes)

PO	Description
1	Apply knowledge of mathematics, natural science, computing , engineering fundamentals, and an engineering specialisation as specified in WK1 to WK4, respectively, to develop to a solution to complex engineering problems.
2	Identify, formulate, review, and analyse research literature to reach substantiated conclusions on complex engineering problems, considering the implications for sustainable development. (WK1 to WK4)
3	Design creative solutions for complex engineering problems and develop systems/ components/ processes to meet identified needs, considering public health and safety, whole-life cost, net-zero carbons, culture, society, and the environment as required. (WK5)
4	Conduct investigations of complex engineering problems using research-based knowledge, including design of experiments, modelling , analysis & interpretation of data to provide valid conclusions. (WK8).
5	Create, select , and apply appropriate techniques, resources, and modern engineering & IT tools , including prediction and modelling, recognising their limitations to solve complex engineering problems. (WK2 and WK6)
6	Analyse and evaluate societal and environmental aspects while solving complex engineering problems for their impact on sustainability with reference to economy, health, safety, legal framework, culture and environment . (WK1, WK5, and WK7).
7	Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
8	Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams
9	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
10	Apply knowledge and understanding of engineering management principles and economic decision-making , and apply these to one's work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
11	Recognise the need for, and have the preparation and ability for <ol style="list-style-type: none"> 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)