SHRI GOVINDRAM SEKSARIA INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE

DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING

PEO-PO Attainment

Program Educational Objectives (PEO)

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PEO 1:	**PROFESSIONAL DEVELOPMENT-** To develop in the students the ability to acquire knowledge of Mathematics, Science & Engineering and apply it professionally within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability with due ethical responsibility.
PEO2:	**CORE PROFICIENCY-** To provide ability to identify, formulate, comprehend, analyze, design and solve engineering problems with hands on experience in various technologies using modern tools necessary for engineering practice to satisfy the needs of society and the industry.
PEO3:	**TECHNICAL ACCOMPISHMENTS-** To equip the students with the ability to design, simulate experiment, analyze, optimize and interpret in their core applications through multi-disciplinary concepts and contemporary learning to build them into industry ready graduates.
PEO4:	**PROFESSIONALISIM-** To provide training, exposure and awareness on importance of soft skills for better career and holistic personality development as well as professional attitude towards ethical issues, team work, responsibility, accountability, multidisciplinary approach and capability to relate engineering issues to broader social context.
PEO5:	**LEARNING ENVIRONMENT-** To provide students with an academic environment and make them aware of excellence, develop the urge of discovery, creativity, inventiveness, leadership, written ethical codes and guidelines and the life-long learning to become a successful professional in Electronics and Communication Engineering.

Program Outcomes(POs)	
PO 1 :	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2 :	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3 :	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4 :	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO 5 :	**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.
PO 6 :	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO 7 :	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 8 :	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9 :	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10 :	**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.
PO 11 :	**Project management and finance:** Demonstrate knowledge and understanding of the 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.
PO 12 :	**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.

PEO–PO Articulation Matrix

The following matrix illustrates the correlation between each PEO and the corresponding POs. The correlation levels are defined as:

3: Strong correlation

2: Moderate correlation

1: Slight correlation

−: No correlation

PEO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
PEO1	3	3	3	2	3	–	–	–	2	2	2	2
PEO2	2	3	3	2	3	2	1	1	2	2	2	2
PEO3	1	1	2	–	2	2	2	3	3	3	3	2
PEO4	1	1	1	1	2	2	3	2	2	2	2	2
PEO5	2	2	2	3	3	1	1	1	2	2	2	3

Interpretation

PEO1 has a strong correlation with PO1 (Engineering knowledge), PO2 (Problem analysis), PO3 (Design/development of solutions), and PO5 (Modern tool usage), indicating a focus on technical competency.

PEO2 aligns strongly with PO2, PO3, and PO5, reflecting the emphasis on designing and analyzing multidisciplinary solutions.

PEO3 shows a strong correlation with PO8 (Ethics), PO9 (Individual and team work), PO10 (Communication), and PO11 (Project management and finance), highlighting the importance of ethical attitude and leadership qualities.

PEO4 is strongly correlated with PO7 (Environment and sustainability), emphasizing commitment towards sustainable development.

PEO5 has a strong correlation with PO4 (Conduct investigations of complex problems), PO5 (Modern tool usage), and PO12 (Life-long learning), indicating the pursuit of lifelong learning and innovative solutions.

PEO Attainment Criteria

PO-PEO MAP 60%
Placements 10%
Higher Studies 10%
Student Exit Survey 10%
Alumni Survey 10%

Batch 2018-22

PEO-PO articulation matrix

PEO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Avg. PEO	Avg. PEO %
PEO1	3	3	3	2	3	–	–	–	2	2	2	2	2.4	81
PEO2	2	3	3	2	3	2	1	1	2	2	2	2	2.1	69
PEO3	1	1	2	–	2	2	2	3	3	3	3	2	2.2	73
PEO4	1	1	1	1	2	2	3	2	2	2	2	2	1.8	58
PEO5	2	2	2	3	3	1	1	1	2	2	2	3	2.0	67
										Overall avg. PEO			**2.1**	70

PEO-PO attainment matrix

PEO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Avg. PEO	Avg. PEO %
PEO1	2.1	2.1	2.1	1.4	2.1	–	–	–	1.4	1.4	1.4	1.4	1.7	57
PEO2	1.4	2.1	2.1	1.4	2.1	1.4	0.7	0.7	1.4	1.4	1.4	1.4	1.5	49
PEO3	0.7	0.7	1.4	–	1.4	1.4	1.4	2.1	2.1	2.1	2.1	1.4	1.5	51
PEO4	0.7	0.7	0.7	0.63	1.4	1.4	2.1	1.4	1.4	1.4	1.4	1.4	1.2	41
PEO5	1.4	1.4	1.4	1.9	2.1	0.7	0.7	0.7	1.4	1.4	1.4	2.1	1.4	46
													1.5	**49**

Alumni Survey

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
PO attainment level	2.6	2.5	2.7	2.8	2.8	2.6	2.7	2.8	2.6	2.7	2.7	2.7	
%	86.7	83.3	90.0	93.3	93.3	86.7	90.0	93.3	86.7	90.0	90.0	90.0	
Correlation	3	3	3	3	3	3	3	3	3	3	3	3	3

Student Exit Survey

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
PO attainment level	2.6	2.7	2.6	2.4	2.5	2.6	2.8	2.7	2.7	2.6	2.5	2.7	
%	86.7	90.0	86.7	80.0	83.3	86.7	93.3	90.0	90.0	86.7	83.3	90.0	
Correlation	3	3	3	3	3	3	3	3	3	3	3	3	3

Placement Records

Total no. of students	58
No. of students placed	54
%	0.3

Higher Study Record

Total no. of students	58
No. of students for higher study	4
%	0.021

PEO Attainment

PO-PEO MAP 60%	**0.88**
Placements 10%	**0.03**
Higher Studies 10%	**0.002**
Student Exit Survey 10%	**0.30**
Alumni Survey 10%	**0.30**
PEO attainment	**1.5**
PEO attainment %	**50**