RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES, BASAR

Mechanical Engineering Department

UNDER GRADUATE PROGRAM OUTCOMES (POs)

PO Description Number	PO Category	Engineering graduates will be able to
PO1	Engineering knowledge	Apply understanding of mathematics, science, engineering basics and an engineering specialization to the solution of difficult engineering problems.
PO2	Problem Analysis	Recognize, devise, evaluate and study intricate engineering problems in getting sustainable solutions using first principles of mathematics, natural sciences and engineering sciences.
PO3	Design/development of solutions	Design solutions for complicated engineering problems and design processes or system components that come across specified requirements with suitable concern for public health and safety, cultural, societal and environmental considerations.
PO4	Conduct investigations of complex problems	Employ research based knowledge and research techniques comprising design of experiments, analysis and interpretation of data and synthesis of information to provide justifiable conclusions.
PO5	Modern tool usage	Construct, choose and apply suitable techniques, resources and current engineering and IT tools including prediction and modeling to complex engineering activities with an empathize on the restrictions.
PO6	The engineer and society	Apply reasoning informed by appropriate knowledge to evaluate societal, safety, health, legal and cultural issues and the resultant responsibilities related to professional engineering practice.
PO7	Environment and sustainability	Realize the effect of professional engineering solutions in societal and environmental perspectives. Also exhibit the understanding of and want for sustainable development.
PO8	Ethics	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PO9	Individual and team work	Work efficiently as an entity and as an element or leader in various teams and in multi disciplinary settings.
PO10	Communication	Communicate effectively on intricate engineering activities

		with the engineering society and society at large, such as being able to understand and write valuable reports and design documentation, make helpful presentations and give and obtain clear directions.
PO11	Project management and finance	Exhibit knowledge and perception of engineering and management principles and relate these to one's own work, as a member and leader in a team, to manage projects and multi disciplinary environments.
PO12	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

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1	Apply the principles of collaborative and multi disciplinary approach for solving problems.
PSO2	Able to interact with industry and R&D institutions leading to startups/budding entrepreneurs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1	Plan, design, construct, maintain and improve mechanical engineering systems that are technically sound, economically feasible and socially acceptable to enhance quality of life.
PEO2	Apply modern computational, analytical, simulation tools and techniques to address the challenges faced in mechanical and allied engineering streams.
PEO3	Communicate effectively using innovative tools and demonstrate leadership and entrepreneurial skills.
PEO4	Exhibit professionalism, ethical attitude, team spirit and pursue lifelong learning to achieve career and organizational goals.

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POST GRADUATE PROGRAM OUTCOMES (POs)

PO	Post graduates will be able to
PO1	Apply the knowledge of advanced mathematics, advanced engineering mechanics, computational fluid dynamics and MATLAB programming in engineering system problem analysis.
PO2	Explore and evaluate different mechanical systems by using computational techniques in applied mechanics.
PO3	Design, simulate and conduct experiments to generate adequate information for understanding the process behavior and obtain optimal solutions by the application of technical computations.
PO4	Develop and validate models of different engineering systems using modern engineering and IT tools to solve complex real life problems.
PO5	Design and develop control systems for systems integration and production processes.
PO6	Conceptualize and analyze new problems leading to research and development.
PO7	Communicate effectively with diverse groups while leading and executing interdisciplinary projects.
PO8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PO9	Design and develop methodologies for mechanical systems by understanding and using the completely dominating computational method namely the Finite Element Method/FEM.
PO10	Resolve engineering problems by using well known commercial FE software.
PO11	Design and develop methodologies for institutional and industry integration adhering to professional, ethical, legal, security and social issues.
PO12	Engage in life-long learning as a means of enhancing knowledge and skills for professional advancements.

PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1	Apply the principles of collaborative and multi disciplinary approach for solving problems.
PSO2	Able to interact with industry and R&D institutions leading to startups/budding entrepreneurs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1	Apply modern computational, analytical, simulation tools and techniques to address the challenges faced in mechanical and allied engineering streams
PEO2	Communicate effectively using innovative tools and demonstrate leadership

PEO3	and entrepreneurial skills
PEO3	Exhibit professionalism, ethical attitude, team spirit and pursue lifelong learning to achieve career and organizational goals

COURSE OUTCOMES (COs)

CO Descriptive Number	At the end of the program the students shall be able to
CO1	Give an account of how computations are used in design process
CO2	Give an account of the theoretical basis of FEM
CO3	Give an account of theoretical and practical applications of Advanced Engineering Mechanics, Advanced CAD and Computational Fluid Dynamics.
CO4	Use a well known FE software to solve engineering problems.