

MUFFAKHAM JAH COLLEGE OF ENGINEERING AND TECHNOLOGY



Electrical Engineering Department B.E. (Electronics and Instrumentation Engineering)

PROGRAM EDUCATIONAL OBJECTIVES

1. Graduates will demonstrate core competence and leadership skills in their chosen fields of employment by diagnosing, modeling and designing engineering solutions using latest tools and techniques.
2. Graduates will be successful as professional Engineers, Academicians, Researchers, Software developer and Entrepreneur appropriate to their background, interest and education equipped with soft skills, as an individual or in a team.
3. Graduates will demonstrate lifelong learning process by means of further studies and professional development.
4. Graduates will provide practical and sustainable solutions within social, environmental and ethical contexts.



MUFFAKHAM JAH

COLLEGE OF ENGINEERING
AND TECHNOLOGY

ELECTRICAL ENGINEERING DEPARTMENT

B.E. (ELECTRONICS AND INSTRUMENTATION ENGINEERING)

PROGRAM SPECIFIC OUTCOMES

Graduates will be able to:

- PS01:** Apply concepts of measurement and sensor selection to specify, calibrate, and troubleshoot various process instruments commonly used in industry.
- PS02:** Use basic engineering principles and knowledge of industrial control systems to design the control and safety systems for an industrial process.
- PS03:** Specify, select, design, and build microprocessor or microcontroller-based systems for engineering applications.
- PS04:** Use programmable logic controllers (PLC) and supervisory control systems for control of manufacturing and processing systems.

PROGRAM OUTCOMES

Graduates will be able to:

- PO1: ENGINEERING KNOWLEDGE** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: 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.
- PO3: 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.
- PO4: 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.
- PO5: MODERN TOOL USAGE** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: 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.
- PO7: 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.
- PO8: ETHICS** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: INDIVIDUAL AND TEAM WORK** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: 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.
- PO11: 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.
- 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.