



MANIPAL UNIVERSITY JAIPUR

School of Engineering

Department of Mechatronics Engineering

M.Tech in Industrial Automation and Robotics

PSO 1: acquire advanced knowledge of Mechatronics domain to carry out research, design and development in the field of industrial automation and robotics

PSO 2: implement advanced concepts of designing, manufacturing and control of autonomous systems

PSO 3: provide advanced and creative solutions for industry and societal needs through lifelong learning, professionalism and remain continuously employable.

M. Tech PROGRAM OUTCOMES (ENGINEERING)

The program outcomes are the well standard statements given by **National Board of Accreditation**, a regulating Govt. authority for evaluation of engineering programs in India.

PO1 Scholarship of Knowledge

Ability to acquire in-depth knowledge of specific discipline or professional area, including a wider and global perspective, with the capacity to discriminate, evaluate, analyze and synthesize existing and new knowledge.

PO2 Critical Thinking

Analyze complex engineering problems critically, apply independent judgement for synthesizing information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context.

PO3 Problem Solving

Thinking laterally and originally, conceptualize and solve engineering problems, evaluate a wider range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors, in the core areas of expertise.

PO4 Research Skills

Extract information pertinent to unfamiliar problems through researching the literature, apply appropriate research methodologies, techniques and tools, design, conduct experiments, analyse and interpret data, demonstrate higher order skill and a broader perspective, contribute individually/in group (s) to be development of scientific/technological knowledge in one or more domains of engineering.

PO5 Usage of Modern Tools

Create, select, learn 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.

PO6 Collaborative and Multidisciplinary Work

Possess knowledge and understanding of group dynamics, recognize opportunities and contribute positively on multi-disciplinary scientific research; demonstrate a capacity for self-management, team work and decision making, based on open mindedness, objectivity and rational analysis, in order to achieve common goals and further knowledge as well as self-knowledge.

PO7 Project management and finance

Demonstrate knowledge and understanding of engineering and management principles and apply the same to one's own work, as a member and leader of a team; manage projects efficiently in respective discipline multidisciplinary environments, after consideration of economics and financial factors.

PO8 Communication Skills

Communicate with the engineering community, and with society at large, on complex engineering activities, confidently and effectively-including being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentation, and give and receive clear instructions.

PO9 Life Long Learning

Recognize the need for, and have the preparedness and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.

PO10 Ethical Practice and Social Responsibility

Acquire professional and intellectual integrity. Conform to a professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society.

PO11 Independent and Reflective Learning

Observe and examine critically the outcomes of one's own action and take corrective measures. Learn from mistakes without depending on external feedback.