

PROGRAM POTENTIAL AND FEATURES

Objectives:

Preparing a graduate knowledgeable of modern science, engineering, humanities, modern technology and information technology, capable of making decisions and dealing with crises and problems. Preparing professional, ethical, and competent graduates specialized in Mechatronics & Robotics engineering and aware of the challenging roles and responsibilities as a professional engineer, providing him with inter-relationship for national and global participation in the field with close linkages to industries that fulfill the needs of the society at national, regional, and international levels.



Mechatronics &
Robotics
Engineering
At AU

Mission:

To prepare skilful engineers with distinct competencies, in the field of Mechatronics & Robotics engineering, capable of competing in the local, regional and international markets.

Vision:

To aspire a globally recognized interdisciplinary academic program, that delivers competent engineers, serving efficiently the community and its scientific and practical institutions.



Examples of Working areas:

- Mobile and industrial robots
- Autonomous airplanes
- Autonomous vehicles
- High-tech prostheses
- Electronics users
- Space and defense
- Smart home and smart city

Career Opportunity:

For graduates of the Mechatronic and Robotics Engineering program, there are great opportunities for employment in companies that design, develop and manufacture smart devices, systems and equipment for the medical, automotive, communications, agriculture, construction and entertainment industries. Graduates from the Mechatronics and Robotics Engineering program can pursue graduate studies in mechanical, electrical or computer engineering.

FOR MORE INFORMATION CONTACT:

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STUDY PLAN

Fall	Spring
Level 0	
Mathematics-1 Mechanics-1 Physics-1 Engineering Drawing -1 Engineering Chemistry	Mathematics-2 Mechanics-2 Physics-2 Engineering Drawing - 2 Principles of Manufacturing Engineering English Language History of Engineering & Technology
Level 1	
Linear Algebra Machine Drawing Logic Circuits and Micro Processors Properties and Testing of Electromechanical Materials Electrical Circuits Thermodynamics-I	Differential Equations Electronics for Instrumentation Programming-I Electrical and Digital Measuring Instruments and Displays Probability and Statistics Fluid Mechanics-I
Level 2	
Mechanics of Machinery Signals and Systems Electrical Machines for Mechatronics Systems Strength of Materials-I	Design of Mechanical Systems Microcontroller Engineering 1 Introduction to Mechatronic Systems Power Electronics and Motor Drives 1
Automatic Control for Mechatronics Systems Technical Writing	Numerical Methods Critical Thinking
Level 3	
Law and Engineering Ethics Heat Transfer Mechanical Vibrations Design of Mechatronic Systems Industrial Automation 1 Elective-1	Industrial Communication and Network Systems Industrial Robotics Elective-2 Elective-3 Entrepreneurship Contemporary Issues
Level 4	
Fluid Power Systems Digital Control Systems Artificial Intelligence Elective-4 General Culture Project-1	Computer Vision Elective-5 Elective-6 Elective-7 Project-2 Computer Vision

Mechatronics & Robotics Engineering



Alexandria University
Faculty of Engineering

Specialized Scientific Programs for Prospective Students Applying for admission to the Faculty of Engineering , Alexandria University

