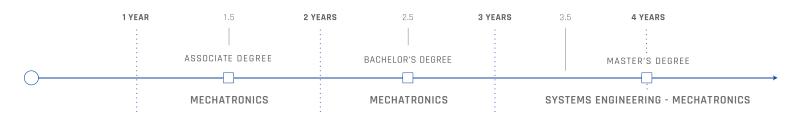**ecpi** UNIVERSITY

SYSTEMS ENGINEERING - MECHATRONICS

If you are creative, analytical, have critical thinking skills, and like to work with your hands, the field of mechatronics is where you could flourish. Mechatronics is an interdisciplinary approach to engineering that involves the design of autonomous machines or systems by applying knowledge of mechanical, electrical, robotic, and computer science engineering to create smart technologies that improve everyday functions. Today's industries are constantly looking for ways to simplify, increase productivity, and lower costs, which is why mechatronics is such an important field of study, and one where mechatronics engineers are in demand.

If a career in mechatronics peaks your interest, you could find yourself in various work environments ranging from high tech laboratories, manufacturing plants, automotive centers, aerospace organizations, and even the television and film industry to create props and special effects.

With this degree, students will have the opportunity to gain knowledge and experience through a hands-on learning approach necessary to building complex systems and understanding autonomous machines.

Through ECPI's year-round schedule, you could earn a Master of Science in Systems Engineering with a concentration in Mechatronics in as little as 12 months.

1 YEAR	1.5	2 YEARS	2.5	3 YEARS	3.5	4 YEARS
	ASSOCIATE DEGREE		BACHELOR'S DEGREE			MASTER'S DEGREE
	MECHATRONICS		MECHATRONICS		SYSTEMS ENGINEERING - MECHATRONICS	

Outcomes

Upon completion of the Master of Science in Systems Engineering, graduates will be able to:

‣ Apply principles of business, engineering, science, and mathematics to identify, formulate, and solve engineering problems related to complex systems.

‣ Apply the appropriate engineering design process to build complex systems that meet specified needs appropriate to the discipline from conception through decommissioning.

‣ Function effectively as a member or leader of a team that establishes goals, plans tasks, meets deadlines, creates a collaborative and inclusive environment, and communicates effectively with a range of audiences.

‣ Develop and conduct appropriate testing and evaluation processes to include data analysis and interpretation, quality assurance, and continuous improvement of complex systems.

‣ Demonstrate ethical and professional responsibility in making informed judgments that consider the global, cultural, social, environmental, economic, and other impacts of engineering solutions, as well as the implications for business operations, public health, and public safety.

‣ Recognize the ongoing need for the identification, acquisition, and application of new knowledge.

Possible Career Track

With this specific concentration, graduates could seek out the following careers:

‣ Robotics Engineer
‣ Data Scientist
‣ Electronics Engineer
‣ Manufacturing Engineer
‣ Application Engineer
‣ Software Engineer
‣ Mechanical Design Engineer

You could develop your skills in mechatronics in the following industries:

‣ Automotive
‣ Aerospace
‣ Computers
‣ Education
‣ Manufacturing
‣ Automation
‣ Research and Development
‣ TV & Film
‣ Healthcare
‣ Electronics
‣ Bioengineering
‣ Nanotechnology

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