



The field of intelligent systems and mechatronics merges technology-based engineering tools and digital skills with the expertise and resources of electrical and mechanical engineering. The field combines the principles of electrical engineering, mechanical engineering and computer science with the added components of automation and artificial intelligence. Intelligent mechatronic systems involve sensors, software, microcontrollers and actuators to develop systems such as robotics, advanced medical devices, automated manufacturing systems and much more.



Possible Career Options

- Electric Vehicles Engineer
- Data Scientist
- Mechatronics Engineer
- Product Developer
- Software Engineer
- Robotics Engineer
- Automation Engineer
- Control System Designer
- Machine Learning and AI Engineer
- Intelligent Manufacturing Engineer
- Embedded Systems Engineer
- Drone Systems Integrator
- UAV System Operator



Possible Employers

- Engineering Firms
- Colleges/Universities
- Contracting Firms
- Research Firms
- Non-profit Organizations
- Governmental Organizations
- Manufacturing Industry
- Aerospace Industry



Skills Acquired

- Knowledge of engineering tools
- Problem-solving skills
- Strong grasp of mathematical concepts
- Technical writing skills
- Ability to pay close attention to detail
- Data acquisition and analysis capabilities
- Critical-thinking skills
- Ability to interpret data
- Ability to work independently or as part of a team



Personal Attributes

- Capacity for analytical and logical thinking
- Skills with numbers
- Capacity for precision
- Resourceful
- Capacity for detail and order



Ways to Get Experience

- Doing an internship
- Working part-time or volunteering in an engineering firm
- Volunteering as a research assistant in a university's mechatronics engineering department
- Develop technical skills by attending conferences and reading books and articles
- Attend workshops related to the field