Mechatronics and Robotics Systems, AAS   2023-2024 Catalog

Award Granted Upon Completion: Associate in Applied Science in Mechatronics and Robotics Systems

Credits/Contacts Required: **60/60**

Major code: 03/338

CIP Code: 150403

Description

Mechatronics is an interdisciplinary field involving mechanical, electronic, computer, robotic, and control systems. Students will gain the technical knowledge and skills needed to install, repair and maintain electromechanical, fluid power, process control or robotic systems. Mechatronics and Robotics Systems graduates will be prepared for employment in a wide variety of jobs in a steadily growing field.

General Education Requirements (Min 15 Credits)

- ENGL 101 - Rhetoric & Composition **Credit(s): 3**
- BUSN 177 - Mathematics of Business **Credit(s): 3**
  OR MATH 105 **OR** MATH 107
- XXXX xxx - Social & Behavioral Science or Humanities Elective **Credit(s): 3**
- XXXX xxx - General Education Electives **Credit(s): 5-6**

Program Requirements (Min 32 Credits)

- ELEC 130 - Circuit Fundamentals I **Credit(s): 4**
- ELEC 145 - Basic Process Control **Credit(s): 4**
- ELEC 180 - Electrical Machinery & Controls **Credit(s): 4**
- ELEC 240 - Real Time Robotics Systems **Credit(s): 4**
- ELEC 245 - Robotic Vision Systems **Credit(s): 4**
- ELEC 285 - Fluid Power **Credit(s): 4**
- ELEC 290 - Introduction to Programmable Logic Controllers **Credit(s): 4**
- ELEC 295 - Mechatronics **Credit(s): 4**
- XXXX xxx - Approved Electives **Credit(s): 13**

Approved Elective (13 Credits)

- CNSS 130 - Introduction to Networks **Credit(s): 4**
- CNSS 150 - A plus Computer Maintenance **Credit(s): 4**
- CNSS 220 - Network Design **Credit(s): 4**
- ELEC 135 - Circuit Fundamentals II **Credit(s): 4**
- ELEC 160 - Electronics I **Credit(s): 4**
- ELEC 170 - Digital I Fundamentals **Credit(s): 4**
- ELEC 272 - Mechatronics Co-op Internship **Credit(s): 1-8**
- TECH 100 - Basic Machine Tool Operation **Credit(s): 4**
- TECH 101 - Blueprint Reading **Credit(s): 2**
- TECH 105 - Materials of Industry **Credit(s): 4**
- WELD 110 - Metal Processing Fundamentals **Credit(s): 3**
- WELD 120 - Arc Welding **Credit(s): 4**
- XXXX xxx - Any General Education Course **Credit(s): 3**

Suggested Sequences Per Semester

First Semester

- ENGL 101 - Rhetoric & Composition **Credit(s): 3**
- ELEC 130 - Circuit Fundamentals I **Credit(s): 4**
- ELEC 285 - Fluid Power **Credit(s): 4**
- XXXX xxx - Approved Elective **Credit(s): 4**
  First Semester Total - Credit(s): 15 | Contacts: 15

Second Semester

- XXXX xxx - Approved Elective **Credit(s): 4**
- ELEC 145 - Basic Process Control **Credit(s): 4**
- ELEC 180 - Electrical Machinery & Controls **Credit(s): 4**
- BUSN 177 - Mathematics of Business **Credit(s): 3 OR** MATH 105 **OR** MATH 107)
  Second Semester Total - Credit(s): 15-16 | Contacts: 15-16

Third Semester

- ELEC 240 - Real Time Robotics Systems **Credit(s): 4**
- ELEC 290 - Introduction to Programmable Logic Controllers **Credit(s): 4**
- XXXX xxx - Social & Behavioral Science or Humanities Elective **Credit(s): 3**
- XXXX xxx - General Education Elective **Credit(s): 3**
  Third Semester Total - Credit(s): 14 | Contacts: 14

Fourth Semester

- ELEC 245 - Robotic Vision Systems **Credit(s): 4**
- ELEC 295 - Mechatronics **Credit(s): 4**
- XXXX xxx - Approved Electives **Credit(s): 5**
- XXXX xxx - General Education Elective **Credit(s): 3**
  Fourth Semester Total - Credit(s): 16 | Contacts: 16

NOTES:

All Internships and Co-ops may require that the student pass a criminal background check.