

# INDUSTRIAL ROBOTICS AND AUTOMATION MINOR

The Industrial Robotics and Automation minor prepares students to design, build, and deploy industrial robotics and automation systems. Students engage in hands-on learning in the foundations of industrial robotics, programmable logic controllers, and mechatronics, and can specialize in these areas through the advanced electives.

All courses for the Industrial Robotics and Automation minor must be taken at EWU. A student wishing to take a course at another institution with the intention to transfer that course into this minor at EWU must receive prior approval from the Mechanical Engineering Program Coordinator.

**Grade Requirements:** Students completing a minor in the department must earn an average GPA  $\geq 2.5$  in all courses required for the minor.

## Required Courses

|                                      |  |           |
|--------------------------------------|--|-----------|
| MENG 385<br>& 385L                   | ROBOTICS AND AUTOMATION<br>and ROBOTICS AND AUTOMATION LAB                   | 5         |
| <b>Choose two from the following</b> |  | <b>10</b> |
| MENG 485<br>& 485L                   | ADVANCED ROBOTICS AND AUTOMATION<br>and ADVANCED ROBOTICS AND AUTOMATION LAB |           |
| MENG 486                             | PROGRAMMABLE LOGIC CONTROLLERS IN AUTOMATION                                 |           |
| MENG 487                             | MECHATRONICS   |           |

## Total Credits

15

### Students who earn an Industrial Robotics and Automation Minor from EWU should be able to:

- understand common use cases for industrial robotics, mechatronics, and automation in manufacturing and other industries;
- design industrial robotic work cells, and program and operate multiple types of industrial robots;
- design, build, and program process control systems using mechatronics;
- design and program automation systems controlled by programmable logic controllers (PLCs).