

# INDUSTRIAL AUTOMATION (INAU)

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## **INAU 210. Automation Systems**

Credits: 3

Typically Offered: FALL

This course is focused on automated manufacturing systems, automated sorting and processing systems, and delivery systems. Other systems relevant to the workplace are also covered. In this course students configure machine communications systems and calibrate discrete, analog and smart sensors in these systems.

## **INAU 220. Machine Vision and Identification**

Credits: 3

Typically Offered: SPRING

Students discuss and demonstrate the applications and uses of systems used by machines to identify objects or their environment. The vision systems covered include RFID systems, barcode systems, color recognition systems, 2D vision systems, 3D vision systems, and other systems as they become relevant to the workplace.

## **INAU 230. Industrial Robotics**

Credits: 3

Typically Offered: SPRING

Students develop and demonstrate an industrial robot, including application, operation and programming. Students also perform troubleshooting of basic robotics and discuss related safety issues.

## **INAU 240. Integrated Systems, Design and Setup**

Credits: 3

Typically Offered: SPRING

This is a project-based class in which students design, build, and program a complete automated system using smart sensors to control a process, robots to move products, and a monitoring system to provide process control.

## **INAU 245. Integrated Systems, Troubleshooting and Quality Control**

Credits: 4

Typically Offered: SPRING

Building on the Integrated Systems, Design and Setup course, students learn techniques for troubleshooting the systems to ensure the quality of the products is consistent with specifications.