Pennsylvania Institute of Technology

Why Choose P.I.T. for your Robotics Engineering Degree?

√ **Experienced Instructors**

√ **Intimate Learning Environment and Family Atmosphere**

√ **Portfolio Building and Interview Coaching**

√ **Learn at Your Own Pace with eLearning at P.I.T.**

√ **Free Tutoring**

A.S.
Robotics Engineering

Robotic automation engineering is no longer the future — it's NOW.

Achieve your goals fast and efficiently! In under two years, you can earn your associate degree with term schedules!

Why Robotics Engineering?

With an associate degree in Robotic Engineering, you will graduate with a functional understanding of robotic engineering principles and design while strengthening technical, communication, and problem solving skills that are required for career growth. Robotics is a dynamic, growing career field, with an unlimited future as more and more work functions become mechanized and digitized. The curriculum exposes students to a broad spectrum of robotic disciplines, including sensors, controls and manipulations, computer aided design (CAD) and inspections.

What kind of career will I have?

The possibilities continue to grow for robotic engineers. The variety within robotics means that you'll always be able to find a job in fields like:

- Applications Engineer
- Mechanical Engineer
- Robotics Engineer
- Software Automation Engineer
- Software Engineer
- Automation Technician
- Robotics Technician
- Electro-Mechanical Technician
- Systems Engineer
- Instrumentation Technician

Where can I go after P.I.T.?

P.I.T. launches you into a world of opportunity! In addition to being prepared for immediate employment, P.I.T. has transfer agreements with a number of colleges and universities in the area. These agreements enable you to transfer the college credits that you earned at P.I.T. and complete a bachelor's degree at any accredited college or university.

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800 Manchester Avenue, Media, PA 19063 | 610-892-1500 | PIT.EDU

ROBOTICS ENGINEERING (ROE)
Associate in Science (A.S.)
Recommended Course Sequence

Code	Course (Credits)
BME 103	Principles of Electronics (3)
ENG 108*	Composition (3)
ROE 101	Introduction to Robotics (3)
BME 105*	AC-DC Electronics (3)
ENG 215	Analytical Writing (3)
MTH 145*	College Algebra and Trigonometry (3)
BME 207*	Electronic Principles of Robotics (3)
ROE 115	Sensing and Sensors (3)
CCT 182	Introduction to Programmable Logic (3)
MTH 225*	Calculus (4)
ROE 120	Mechanics of Manipulation (3)
ROE 125	Manipulation, Estimation and Control (3)
EGR 198*	CAD I (3)
MET 277*	Fluid Mechanics (3)
COM 108	Communications and Social Interaction (3)
ROE 129	Robotic Infrastructure Inspections (3)
MET 156	Metrology (3)
HUM 140	Critical Thinking in the Modern Age (3)
ROE 201*	Robotic Design Capstone Project (4)
_____	Humanities / Social Science Elective (3)
NTE 101	Introduction to Nanotechnology

PROGRAM TOTAL 65

*Prerequisite coursework is required.

NOTE: Additional course(s) may be required based on the results of a placement test.

Course Highlights

ROE 101—Introduction to Robotics
This course introduces students to the operation and usage of robots in manufacturing as well as other applications. Students will learn the use of manipulators, drive systems, controllers, motion, payload, programming and vision systems used in the field of robotics. Course work will include hands-on projects.

ROE 115—Sensing and Sensors
In this course, students will learn the operational principles of robot electronic sensors. Also, students will compare and understand the similarities and differences between human sensing and robot electronic sensors. Further, students gain an understanding how sensors are integrated into robots through logic and computer programming.

EGR 198 - CAD I
This course provides an introduction to CAD and drafting principles, techniques, and equipment using the AutoCAD® program. Students learn the use of commands, including drawing and editing commands, layers, text, hatching, dimensioning, and plotting. Emphasis is given to understanding the features of CAD software and hardware.

TUITION INFORMATION

Number of Terms in Program
Traditional – 7 Terms

Academic or Certification Achievement
Associate Degree for transfer to university or for employment

Tuition and Fees for Associate Degree Programs
- Tuition: $390 per credit, plus tech fees
- Graduation Fee: $100
- May exclude books and supplies, course or program fees.
  *A detailed breakdown may be obtained in the financial aid office.