Manufacturing Technology

NORCO COLLEGE

Industrial Automation
23-24 unit certificate • 60 unit degree

The Industrial Automation program teaches how to use electronics, programmable logic control and fluid power systems to create and program new machinery used in industry.

Required Courses (to earn certificate)

ELE-10 Survey of Electronics (4 units)*
Basic electronic theory featuring electron-flow, Ohm's, Watt's, and Kirchoff's Laws, analog DC and AC devices, circuits, parameters and equations, diodes, transistors, thyristors, digital logic, integrated circuits, power supplies, amplifiers, oscillators, with laboratory test and measurement equipment.

ELE/ENE-27 Technical Communications (3 units)*
Procedures for organizing and presenting data through informal and formal documents and presentations.

ELE-74 Industrial Wiring and Controls (4 units)*
Industrial controls and electrical wiring of modern facilities, manufacturing or warehousing.

ELE/MAN-64 Programmable Logic Controllers (3 units)*
Advisory: ELE-10 or 21
Fundamentals of programmable logic controllers, with an emphasis on introductory programming of PLCs.
OR
ELE/MAN-67 Programmable Logic Controllers Using Siemens (3 units)

ENE-51 Blueprint reading (2 units)*
A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

ELE/MAN-55 Occupational Safety & Health Admin. [OSHA] Standards for General Industry (1 unit)
This course covers OSHA policies, procedures, and standards, as well as safety for general industry.

MAN-60 Hydraulic & Pneumatic Systems (3 units)
Advisory: ENE-60 or MAT 52
Basics of hydraulic and pneumatic systems including physical properties of liquids under pressure.

ENE-62 Math for Automated Systems (3 units)
Course concepts from arithmetic, algebra, geometry and scientific notation, extended and applied to problems in automation technology from electrical and mechanical engineering including metal work, welding, and building energy systems.

OR

MAT-36 Trigonometry (4 units)*
Prerequisite: MAT-35 and 53 or qualifying placement level
The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions.

*This class transfers toward one or more CSUSB or CalPoly majors. Visit www.assist.org or the Counseling office for details.

For more information regarding program, course sequencing or scheduling, contact the Norco College Counseling Department at 951 • 372 • 7101 or visit www.norcocollege.edu/counseling

NORCO COLLEGE

Industrial Automation

Tuition $46/unit • Duration of Study: 16 months

An AS Degree in Manufacturing Technology: Industrial Automation will be awarded upon completion of the required courses (23-24 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

Job & Wage Information

- Robotics Technician/Electro-Magnetic Tech
  Wage Range*: $23.93-38.52
  4% increase expected in CA 2019-2029; 220 openings annually
  More information: http://bit.ly/RoboticTechNC

- Electrical and Electronics Drafter
  Wage Range*: $23.64- 37.68
  2% increase expected in CA 2019-2029; 520 openings annually
  More information:
  http://bit.ly/ElectronicDrafterNC

- Electrical Engineering Technician
  Wage Range*: $29.06-41.99
  2% increase expected in CA 2019-2029; 2,330 openings annually
  More information:
  http://bit.ly/ElectronicsEngineeringTechNC

- Industrial Engineering Technician
  Wage Range*: $28.49-40.95
  4% increase expected in CA 2019-2029; 830 openings annually
  More information:
  http://bit.ly/EngineeringTechnicianNC

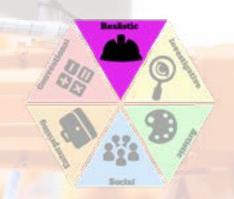*2020, Riverside/Ontario/San Bernardino Metro Area

What's Your School?

NORCO COLLEGE SCHOOL OF Science, Technology, Engineering & Mathematics

What type of interests might be a good fit for this career choice?

Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.

Visit www.norcocollege.edu/STEM
for more information about this program.

21/22 Course Catalog • NAS737/NAS737B/NAS737C/NCE737