

**Industrial Systems Technology (A50240)**

Official Program Description registered with the NC Community College System:

The Industrial Systems Technology curriculum is designed to prepare or upgrade individuals to service, maintain, repair, or install equipment for a wide range of industries. Instruction includes theory and skill training needed for inspecting, testing, troubleshooting, and diagnosing industrial equipment and physical facilities.

Students will learn technical skills in blueprint reading, electricity, hydraulics/pneumatics, machining, welding, and various maintenance procedures. Practical application in these industrial systems will be emphasized and additional advanced course work may be offered.

Upon completion of any of the various levels of this curriculum, graduates should gain the necessary practical skills and related technical information to qualify for employment or advancement in the various areas of industrial maintenance technology.

**Program Learning Outcomes**

Upon successful completion of the Industrial Systems Technology program, the graduate will be able to:

- Demonstrate a working knowledge of mechanical systems, plumbing systems, hydraulic and pneumatic systems, and electrical and electronic systems.
- Create, interpret and modify industrial blueprints and schematics.
- Perform preventive maintenance and troubleshoot a variety of industrial systems.
- Maintain air conditioning and heating systems for equipment and facilities.
- Operate machine shop equipment.
- Demonstrate basic welding skills.
- Identify and requisition parts.

**Degree Awarded**

The Associate in Applied Science Degree-Industrial Systems Technology is awarded by the College upon completion of this program.

**Note**

Students will be required to purchase basic hand tools and personal safety equipment.

**For More Information**

The Industrial Systems Technology program is in the Applied Technology Division. For more information call (919) 735-5151, ext. 357 or visit us at our web site at <http://www.waynecc.edu>.

**Admissions**

- A high school diploma or equivalent is required.
- A placement test in English, mathematics, reading and computer skills are required to determine entry-level courses that match individual needs.

**First Step to Enroll:**

Call the Admissions and Records Office at (919) 735-5151, ext. 238.

	Contact Hours	Semester Credit Hours
<b>FIRST SEMESTER</b>		
ACA 111 College Student Success.....	1	1
EGR 110 Intro to Engineering Tech.....	3	2
ELC 125 Diagrams and Schematics.....	3	2
ELC 127 Software for Technicians.....	4	2
ELC 131 DC/AC Circuit Analysis .....	7	5
ENG 111 Expository Writing .....	3	3
WLD 112 Basic Welding Processes .....	4	2
		17

**SECOND SEMESTER**

ELC 120 Intro to Wiring .....	4	3
ELN 133 Digital Electronics .....	6	4
ISC 132 Manufacturing Quality Control .	5	3
MAT 121 Algebra/Trigonometry I .....	3	3
OR		
MAT 171 Precalculus Algebra .....	3	3
Humanities/Fine Arts Elective ..	3	3
		16

**SUMMER TERM**

ISC 112 Industrial Safety .....	2	2
MNT 110 Intro to Maint. Procedures .....	4	2
PCI 162 Instrumentation Controls.....	5	3
		7

**THIRD SEMESTER**

ELC 128 Intro to PLC.....	5	3
ELN 231 Industrial Controls .....	5	3
ENG 114 Prof Research & Reporting.....	3	3
HYD 110 Hydraulics/Pneumatics I .....	5	3
MNT 165 Mechanical Industrial Sys .....	4	2
		14

**FOURTH SEMESTER**

ELC 233 Energy Management .....	4	3
HYD 121 Hydraulics/Pneumatics .....	4	2
MEC 111 Machine Processes I .....	5	3
PCI 264 Process Control with PLCs .....	6	4
WLD 212 Inert Gas Welding .....	4	2
Social/Behavioral Science Elective .....	3	3
		17

Total Credit Hours 71