

# Instrumentation Technology

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An Instrumentation Technology Associate of Applied Science degree program prepares graduates for entry-level careers as Instrument Technicians in the chemical processing industry. Through the use of state of the art simulation equipment, as well as hands-on applied technology training and general academic coursework, the student will develop the skills required to be a successful Instrument Technician.

Instrumentation technicians install, test, calibrate and perform general maintenance on some of the most sophisticated, extremely precise measuring and monitoring equipment in the world.

Most instrument technicians become certified at a national standard. Students learn to read, analyze, and produce electronic drafting documents.

## What Will I Learn?

Lee College gives students state of the art hands-on training throughout the Instrumentation Technology program. Graduates will be proficient in calibration, troubleshooting, and maintenance of hydraulic, pneumatic, electrical, and electronic control devices. They will also be able to function in the electrical maintenance and electrical distribution-related occupations, as well as have introductory-level knowledge of automation systems and designing, programming, and troubleshooting programmable logic controllers.

## What Can I Do with This Course of Study?

Instrumentation technicians work in refining, petrochemical, and manufacturing industries. They are valuable for the control of processes and environmental compliance.

This job will offer you challenging and interesting employment from day one. You may be employed in the following:

- Environmental quality and emission monitoring
- Metal refining
- Instrument manufacturing
- Building and amusement park automation
- Nuclear and conventional power plants
- Mining Pulp and paper production
- Petrochemical plants
- Offshore services
- Petroleum refining
- Automobile manufacturing
- Water and sewage treatment plants
- Plant construction
- Aerospace & defense technology
- Engineering and design services

## AAS: Instrumentation Technology

(Select Electrical Technology or Analytic Instrumentation Technology Specialization)

**Foundations:** These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

Course	Course Title	Counts Toward Certificate
INTC 1305	Introduction to Instrumentation	IR1
CTEC 1401	Applied Petrochemical Technology	IR1
TECM 1301	Industrial Mathematics	IR1
ELPT 1411	Basic Electrical Theory	IR1

**Knowledge Building:** These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

Course	Course Title	Counts Toward Certificate
INTC 1456	Instrumentation Calibration	IR1
ELPT 2319	Programable Logic Controllers I	IR1
	Guided Elective Select course based on a specialization listed at the end	IR1
	Guided Elective Select course based on a specialization listed at the end	IR1
	Guided Elective Select course based on a specialization listed at the end	IR1
INTC 1343	Application of Industrial Automatic Control	IR1
INTC 1441	Principles of Automatic Control	IR1
INTC 1350	Digital Measurement Controls	IR1
INTC 2433	Instrumentation Systems Installation	IR1

**Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.**

<b>Course</b>	<b>Course Title</b>	<b>Counts Toward Certificate</b>
ENGL 1301	English Composition I	
Social Behavioral Science/ History/ Government Political Science	Recommended: HIST 2301, GOVT 2306, ECON 2301 Other options: any SBS/ HIST/GOVT core course	
BCIS 1305 OR SPCH	Recommended: BCIS 1305 Other options: any SPCH course	
Life and Physical Sciences/Mathematics	Recommended: CHEM 1405, ENVR 1401, PHYS 1415 Other options: any LPS/ Math core course	
Creative Arts/LPC	Recommended: ENGL 2351, HUMA 2319, HIST 2381, ARCH 1311 <>Other options: any Creative Arts/LPC core course	

**Guided Elective Courses: Students should select a specialization.**

<b>Course</b>	<b>Course Title</b>	<b>Counts Toward Certificate</b>
<b>Electrical Technology Specialization - Take these three electrical courses.</b>		
ELPT 1441	Motor Control	IR1
ELPT 2331	AC/DC Drives	IR1
ELPT 2355	Programable Logic Controllers II	IR1
<b>Analytical Instrumentation Technology Specialization – Take these three analytical instrumentation courses.</b>		
INTC 1348	Analytical Instrumentation	IR1
INTC 1374	Analytical Instrumentation II	IR1
ITCC 1414	Introduction to Networks	IR1

### **IR1: Certificate of Completion — Instrumentation Technology**

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INTC 1441	Principles of Automatic Control	IR1
INTC 1350	Digital Measurement Controls	IR1
INTC 2433	Instrumentation Systems Installation	IR1

**Guided Elective Courses: Students should select a specialization**

<b>Course</b>	<b>Course Title</b>	<b>Counts Toward Certificate</b>
<b>Electrical Technology Specialization – Take these three electrical courses.</b>		
ELPT 1441	Motor Control	IR1
ELPT 2331	AC/DC Drives	IR1
ELPT 2355	Programmable Logic Controllers II	IR1

**Analytical Instrumentation Technology Specialization**  
**– Take these three analytical instrumentation courses.**

INTC 1348	Analytical Instrumentation	IR1
INTC 1374	Analytical Instrumentation	IR1 II
ITCC 1414	Introduction to Networks	IR1

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