

# Industrial Sciences & Technology

Associate of Applied Science (A.A.S.)

(Emphasis: HVAC/Electronics & Instrumentation)

## Transfer Options

- Arkansas State University-Jonesboro
  - BAS Organizational Supervision
- University of Arkansas-Fort Smith
  - Bachelor of Applied Science

This degree option provides the Heating Ventilation Air Conditioning (HVAC) and Electronics and Instrumentation (E&I) training necessary for those desiring employment in these high demand and high paying fields. Opportunities abound with local area companies, as well as opportunities across the nation. Employment in the HVAC technician field is expected to grow 34% by 2020, much faster than the average for all occupations. The HVAC technician program is designed to provide students with the knowledge and skills necessary to safely install, troubleshoot, and repair HVAC equipment used in the home and light commercial applications.

The Electronics & Instrumentation program provides the knowledge and skills necessary to pursue an entry-level position as an instrumentation technician. Instrumentation and controls technicians install, maintain, troubleshoot, repair and replace process control equipment used in the production field, and ensure environmental protection, safety, and cost-effective operations. Instrumentation and control technicians work in any of a number of different industries such as, chemical, petrochemical, power generation, manufacturing, hospital/medical equipment, construction, and many others.

## Mission

The mission of the Industrial Sciences & Technology program is to provide quality education and training that enhance employment opportunities and increase the personal development of students including opportunity to complete a four-year degree.

## Program Goals

The Associate of Applied Science in Industrial Sciences & Technology will provide students the knowledge and skills necessary to obtain entry level employment in the applicable field of study and the first two years of a university program.

## Program Outcomes

- An ability to use the techniques, skills, and modern tools necessary for the appropriate field of study.
- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to identify, formulate, and solve problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.

## General Information

- Developmental coursework may be required in addition to the courses required for this degree and/or certificate(s).
- A [P] indicates that a prerequisite is required before the course can be taken. Refer to the prerequisites table listed below the degree plan or the course description in the College Catalog to determine the prerequisite.



DEGREE PLAN  
2019-2020

## Developmental Coursework

Course Number	Course Title
CO0143	Introduction to Language Arts
CO0243	Writing Workshop
MATH0133	Transitional Math 1
MATH0233	Transitional Math 2

## Semester I (16 hours)

Course Number	ACTS#	Course Title
<sup>1,3</sup> HVAC1003	N/A	NCCER HVAC Level I
<sup>1,2</sup> IMEI1003	N/A	NCCER E&I Level I
<sup>1</sup> MD1073	N/A	NCCER
MD2603	N/A	Industrial Safety
MIS1003	CPS11003	Introduction to Computers
GSTD1021	N/A	Student Success I

## Semester II (16 hours)

Course Number	ACTS#	Course Title
ENGL1113	ENGL1013	Composition I [P1]
<sup>1,3</sup> HVAC1013	N/A	NCCER HVAC Level II [P2]
<sup>1,2</sup> IMEI1013	N/A	NCCER E&I Level II [P3]
MATH1063	MATH1103	College Math [P1]
MD1403	N/A	Basic Blueprint Reading
GSTD1031	N/A	Student Success II

## Semester III (15 hours)

Course Number	ACTS#	Course Title
CO2213	ENGL2023	Technical Writing [P4]
EM2924	N/A	Programmable Logic Controller 1
<sup>1,3</sup> HVAC2003	N/A	NCCER HVAC Level III [P5] (also offered summer)
<sup>1,2</sup> IMEI2003	N/A	NCCER E&I Level III [P6] (also offered summer)
MD1052	N/A	Intro to Preventive Maintenance
GSTD2041	N/A	Student Success III

## Semester IV (12 hours)

Course Number	ACTS#	Course Title
CE2403	N/A	Internship
<sup>1,3</sup> HVAC2013	N/A	NCCER HVAC Level IV [P7] (also offered summer)
<sup>1,2</sup> IMEI2013	N/A	NCCER E&I Level IV [P8] (also offered summer)
CJ1003	CRJU1023	Introduction to Criminal Justice <b>or</b> ECON(Economics), GEOG, HIST, PSCI, PSYC, or SOC prefix

<sup>1</sup>Indicates Technical Certificate in **HVAC/Electronics & Instrumentation (24 hours)**.

<sup>2</sup>Indicates Certificate of Proficiency in **Electronics & Instrumentation (12 hours)**.

<sup>3</sup>Indicates Certificate of Proficiency in **HVAC (12 hours)**.

## PREREQUISITES

P1	Refer to the SAU Tech Placement Plan.
P2	HVAC1003-NCCER HVAC Level I.
P3	IMEI1003-NCCER E&I Level I.
P4	ENGL1113-Composition I.
P5	HVAC1013-NCCER HVAC Level II.
P6	IMEI1013-NCCER E&I Level II.
P7	HVAC2003-NCCER HVAC Level III.
P8	IMEI2003-NCCER E&I Level III.

**General Requirements**

- This degree requires successful completion of 60 credit hours.
- All degree-seeking students are required to take Student Success.
- A minimum 2.00 cumulative grade point average is required for graduation.
- Satisfaction of all financial obligations due to the college is required for graduation.

**ACTS Course Numbers**

The Arkansas Course Transfer System (ACTS) contains information about the transferability of courses within Arkansas public colleges and universities. Students are guaranteed the transfer of applicable credits and equitable treatment in the application of credits for admissions and degree requirements. Go to <http://acts.adhe.edu> for more information.