INDUSTRIAL TECHNOLOGY (B.S.) ELECTRONIC SYSTEMS TECHNOLOGY CONCENTRATION

The electronics systems technology option is designed to provide students with both theoretical knowledge and practical skills in electronics systems that are essential in the 21st century. Courses included in this option provide experiences in devices and circuits, digital and instrumentation. Typical entry-level professions include electronics technologists, circuit designers, and electronic systems maintenance supervisors.

Introduction/Mission

The mission of the Industrial Systems and Technology program is to provide a nationally accredited program, which serves the technical, managerial, and communication needs of persons desiring to enter or advance professionally in an industrial technology-related career.

The JSU Industrial Technology Programs will:

1. Prepare our graduates to meet employer expectations for competent professional, and ethical practice.
2. Prepare our graduates to pursue advanced studies in the areas of technology or other fields.
3. Prepare our graduates to adapt and continuously practice life-long learning and continuing education.

Objectives

The objectives of the Industrial Systems and Technology program are as follows:

- To produce competent technologists with specialized educational experiences that will enable them to become capable of ascertaining managerial, supervisory and production positions in areas such as business, industry, and government.
- To produce students with the capability to perform quality research in technology.
- To produce students with the ability to perform and take leadership roles in local, state, and national arenas.

Accreditation

The Industrial Systems and Technology program at Jackson State University is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

Major Requirements

Electronic Systems Technology Concentration

Code	Title	Hours
IT 100	INTRO TO INDUSTRIAL TECHNOLOGY	1
IT 300	INTERNSHIP/INDUSTRIAL EXPERIEN	3
IT 490	SENIOR CAPSTONE	3
ITD 114	COMPUTER-AIDED DRAFTING	3
ITE 111 & 111	BASIC ELECTRONICS and BASIC ELECTRONICS (Lab)	4
ITE 112 & ITEL 112	INTERMEDIATE ELECTRONICS and INTERMEDIATE ELECTRONICS LAB	4
ITE 221 & ITEL 221	DEVICES AND CIRCUITS I and DEVICE AND CIRCUITS LAB I	4
ITE 320	Introduction to Robotics Process Automation	3
ITE 338 & ITEL 338	DIGITAL LOGIC and DIGITAL LOGIC LAB I	4
ITE 438	PROGRAMMABLE LOGIC CONTROLLER	3
ITE 449 & ITEL 449	NETWORK THEORIES and NETWORKING LAB	4
ITE 450	ANALOGICAL COMMUNICATION SYSTE	3
ITE 475	MICROPROCESSOR SOFTWARE/HARDWA	3
ITE 452 Fiber Optics and Communications		3
ITMA 105	INDUSTRIAL SAFETY & MANAGEMENT	3
ITE 180	Introduction to Robotics	3
ITMA 325	INDUSTRIAL PSYCHOLOGY	3
ITMA 420	LABOR & INDUSTRIAL RELATIONS	3
MNGT 351	MNGT INFORMATION SYSMS AND APP	3
ITE 410	Robotics Systems	3
Total Hours		**63**

Curriculum Map

Course	Title	Hours
Freshman		
Fall		
ENG 104 or ENG 103 or ENG 111	COMPOSITION I or English Composition I with Co-requisite Support or COMPOSITION & LITERATURE FOR L	3
CSC 115	DIGITAL COMPUTER PRINCIPLES	3
MATH 111	COLLEGE ALGEBRA	3
UNIV 100	UNIVERSITY SUCCESS	2
Humanities & Fine Arts Option		3
Social & Behavioral Science Option		3
	Hours	**17**
Spring		
ENG 105 or ENG 112	COMPOSITION II or COMPOSITION	3
MATH 112	PLANE TRIGONOMETRY	3
ITE 180	Introduction to Robotics	3
Pathway Option		3
CHEM 141 & CHML 141	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB	4
	Hours	**16**
Sophomore		
Fall		
IT 100	INTRO TO INDUSTRIAL TECHNOLOGY	1
ITE 111 & 111	BASIC ELECTRONICS and BASIC ELECTRONICS (Lab)	4
ITMA 105	INDUSTRIAL SAFETY & MANAGEMENT	3
ITD 114	COMPUTER-AIDED DRAFTING	3
Humanities & Fine Arts Option		3
Pathway Option		3
	Hours	**17**
Spring		
ITE 112 & ITEL 112	INTERMEDIATE ELECTRONICS and INTERMEDIATE ELECTRONICS LAB	4

PHY 201 & PHYL 201	BASIC PHYSICS I and BASIC PHYSICS LAB I	4
MATH 221	CALCULUS I INDUST OR BUS	3
MNGT 330	MANAGEMENT TO ORGANIZATIONS	3
UNIV 200	CIVIC ENGAGEMENT	1
Pathway Option		3
	Hours	**18**
Junior		
Fall		
ITE 221 & ITEL 221	DEVICES AND CIRCUITS I and DEVICE AND CIRCUITS LAB I	4
ITMA 325	INDUSTRIAL PSYCHOLOGY	3
ECO 211	PRINCIPLES OF MACROECONOMICS	3
MNGT 351	MNGT INFORMATION SYSMS AND APP	3
	Hours	**13**
Spring		
IT 300	INTERNSHIP/INDUSTRIAL EXPERIEN (S)	3
ITE 320	Introduction to Robotics Process Automation	3
ITE 338 & ITEL 338	DIGITAL LOGIC and DIGITAL LOGIC LAB I	4
Humanities & Fine Arts Option		3
	Hours	**13**
Senior		
Fall		
ITE 410	Robotics Systems	3
ITE 438	PROGRAMMABLE LOGIC CONTROLLER	3
ITE 449 & ITEL 449	NETWORK THEORIES and NETWORKING LAB	4
ITE 475	MICROPROCESSOR SOFTWARE/HARDWA	3
ITE 452 Fiber Optics & Communications		3
	Hours	**16**
Spring		
IT 490	SENIOR CAPSTONE (S)	3
ITE 450	ANALOGICAL COMMUNICATION SYSTE (S)	3
ITMA 420	LABOR & INDUSTRIAL RELATIONS (W)	3
Social & Behavioral Science Option		3
	Hours	**12**
	Total Hours	**122**

Notes:

- Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100 UNIVERSITY SUCCESS; however, the student must take 2 hours of general electives to replace the UNIV course.
- Online Graduation Clearance (**to be completed during the graduating semester only**).

Student Learning Outcomes

1. Demonstrate an understanding of the basic concepts of DC, AC, and analog circuits as well as an understanding of and use specialized instruments in a laboratory or workbench environment.
2. Understand the structure of a computing system, the design of its basic components and the interactions of hardware and software components
3. Demonstrate a basic knowledge of using, setting up, and maintaining personal computers and computer network systems
4. Demonstrate the skills needed to effectively manage a disaster scene.