

## DEPARTMENT OF INDUSTRIAL TECHNOLOGY

### DEFINITION OF INDUSTRIAL TECHNOLOGY

Industrial Technology is a profession, which requires such education and experience as is necessary to understand and apply technological and managerial sciences to industry.

### TYPICAL ELEMENTS

The Industrial Technology program is a management-oriented technical curriculum built upon a balanced program of studies drawn from a variety of disciplines related to manufacturing technology. Included are a sound knowledge and understanding of materials and production processes; principles of distribution and concepts of industrial management and human relations; experiences in communication skills, humanities, and social sciences; and a proficiency level in the physical sciences, mathematics, design, and technical skills to permit the graduate to resolve technical-managerial, and manufacturing production problems.

### THE INDUSTRIAL TECHNOLOGY GRADUATE

The Industrial Technology Graduate is a professional industrial technologist with a broad technical and managerial background. Typically included in this background are a functional knowledge and understanding of materials and production processes; industrial management and human relations; communication skills, the physical sciences, mathematics, and current technical skills to enable the graduate to effectively meet technical, managerial, and industrial requirements.

### Pre-Professional Programs

**PRE-ARCHITECTURE** Department of Industrial Technology

Students should plan to transfer after two years at Southeastern. Typical requirements include mathematics; physics; courses in design; English compositions, and speech. Consult advisor, since specific requirements differ widely among schools of architecture.

### MANUFACTURING TECHNOLOGY CONCENTRATIONS

Students must elect to study one of the manufacturing technology concentrations: Automated Systems, Drafting/Design, Industrial Internship, and Supervision. Upon satisfactory completion of the Industrial Technology core curriculum and the concentration area, the student will be awarded a

Bachelor of Science degree. The Industrial Technology program at Southeastern Louisiana University is accredited by the National Association of Industrial Technology (NAIT). Included in this section, are the curriculum sheets for the manufacturing technology concentrations.

## **INDUSTRIAL INTERNSHIP**

Students majoring in Industrial Technology may elect to participate in the Industrial Internship Program. This program is a cooperative venture between Southeastern Louisiana University and a variety of industries. It combines the student's academic and technical preparation at the University with actual on-the-job experiences in modern industrial enterprises. The program is designed to provide study on-campus and training off-campus as formal education and theory are blended with practice. In addition to regular classroom and laboratory experiences, the student gains valuable experiences in the world of work in a professional environment.

The Industrial Internship Program serves three primary functions: (1) provide students with an opportunity to observe and participate in industry by applying the principles learned in university courses; (2) provide students deeper insight into the courses they will take after each work experience period; and (3) establish evidence of the students' employability. The student, the employer, and the University departmental faculty work as a team in making the work experiences attain optimal learning value to prepare the students for taking their place as productive members in the industrial world.

To earn three (3) semester hours of credit, a student must be employed by an approved employer for a minimum of twenty (20) hours per week during a fall or spring semester or for a minimum of forty (40) hours per week during a summer session. For six (6) semester hours of credit, a student must be employed by an approved employer for a minimum of forty (40) hours per week during a fall or spring semester. A maximum of twelve (12) semester hours of credit may be earned in Industrial Internship.

To be eligible for the Industrial Internship Program the student must meet the following minimum criteria:

1. Have earned a minimum of thirty (30) semester hours of credit toward a degree in Industrial Technology.
2. Have a 2.5 minimum adjusted GPA (cumulative and major).
3. Make application (I.T. Form #107) to the Department Head of Industrial Technology.
4. Have application approved by the Industrial Technology Internship Committee.

A limited number of Industrial Internship positions are available each semester.

## **MAJOR**

A minimum of 33 hours of required I.T. courses, 18 hours of I.T. Concentration Courses, and an additional 3 hours of I.T. electives are required for a Bachelor of Science degree in Industrial Technology for a total of 54 hours of Industrial Technology.

## **HONORS DIPLOMA IN THE DISCIPLINE**

The department also offers an upper-division honors curriculum allowing its students to earn an honors diploma in the major at graduation. For information about requirements and honors courses in this department, please contact the Department Head.

## **MINORS**

In order to minor in Industrial Technology, the student must complete twenty-one (21) semester hours from the following:

IT 111 – Engineering Drafting .....	3 semester hours
IT 112 – Descriptive Geometry .....	3 semester hours
IT 115 – Occupational Safety and Health .....	3 semester hours
IT 233 – Introduction to Basic Electricity and Electronics .....	3 semester hours
IT 242 – Materials and Processes .....	3 semester hours
IT 264 – Industrial Fluid Power .....	3 semester hours
IT 302 – Loss Prevention, OSH 115 - Occupational Safety & Hlth, or IT 311 – Industrial Design .....	3 semester hours
IT 308 – Production Planning and Control or	
IT 402 – Industrial Supervision .....	3 semester hours

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF BACHELOR OF SCIENCE**  
**AUTOMATED SYSTEMS CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
†Industrial Technology 111 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	†Industrial Technology 112 .....	3
English 101 .....	3	Mathematics 162 .....	3
Biological Science .....	4	English 102 .....	3
Sociology 101 or Psychology 101 .....	3	Chemistry 101 .....	3
Orientation 101 .....	0-1	Chemistry Laboratory 103 .....	1
	16-17	Computer Science 173 .....	3
			16
†Industrial Technology 242 .....	3	SECOND YEAR	
†Industrial Technology 264 .....	3	†Industrial Technology 233 .....	3
Mathematics 165 or 241 .....	3	†Industrial Technology 256 .....	3
English 230, 231 or 232 .....	3	Communication 211 .....	3
Physics 191 .....	3	Computer Science 273 .....	3
Physics Lab 193 .....	1	Natural Science .....	4
	16		16
†Industrial Technology 236 .....	3	THIRD YEAR	
†Industrial Technology 302 or		†Industrial Technology 215 .....	3
Occupational Safety & Health 115 .....	3	†Industrial Technology 322 .....	3
†Industrial Technology 351 .....	3	†Industrial Technology 331 .....	3
English 322 .....	3	Accounting 200 .....	3
Economics 201 .....	3	History 101, 102, 201 or 202 .....	3
	15		15
†Industrial Technology 405 .....	3	FOURTH YEAR	
†Industrial Technology 442 .....	3	†Industrial Technology 406 .....	3
Management 351 .....	3	†Industrial Technology 407 .....	3
Arts .....	3	†Industrial Technology 444 .....	3
†Technical Elective .....	3	†Technical Elective .....	3
	15		12
Total semester hours required			121-122

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

†Select Chemistry 102/104 or Physics 192/194.

‡Select one course in Art, Dance, Music or Theatre.

§Technical electives should be selected by students in consultation with their advisors. Three hours must be selected from Industrial Technology and an additional 3 hours from Computer Science, Industrial Technology, Management, Mathematics, or Physical Science. No 100-level course will be accepted without approval of the Department Head.

†A "C" (2.0 minimum adjusted) must be earned in all major courses and technical electives.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF BACHELOR OF SCIENCE**  
**DRAFTING DESIGN CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
†Industrial Technology 111 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	†Industrial Technology 112 .....	3
English 101 .....	3	Mathematics 162 .....	3
Biological Science .....	4	English 102 .....	3
Sociology 101 or Psychology 101 .....	3	Chemistry 101 .....	3
Orientation 101 .....	0-1	Chemistry Laboratory 103 .....	1
	16-17	Computer Science 173 .....	3
			16
†Industrial Technology 242 .....	3	SECOND YEAR	
†Industrial Technology 264 .....	3	†Industrial Technology 233 .....	3
Mathematics 165 or 241 .....	3	†Industrial Technology 256 .....	3
English 230, 231 or 232 .....	3	Communication 211 .....	3
Physics 191 .....	3	Computer Science 273 .....	3
Physics Lab 193 .....	1	Natural Science .....	4
	16		16
†Industrial Technology 236 .....	3	THIRD YEAR	
†Industrial Technology 302 or		†Industrial Technology 215 .....	3
Occupational Safety & Health 115 .....	3	†Industrial Technology 322 .....	3
†Industrial Technology 351 .....	3	Management 351 .....	3
English 322 .....	3	Accounting 200 .....	3
Economics 201 .....	3	History 101, 102, 201 or 202 .....	3
	15		15
†DDT 113, 114, 211, 212, 215, 218, or		FOURTH YEAR	
Industrial Technology 216 .....	6	†DDT 113, 114, 211, 212, 215, 218, or	
†Industrial Technology 405 .....	3	Industrial Technology 216 .....	3
Arts .....	3	†Industrial Technology 311 .....	3
†Technical Elective .....	3	†Industrial Technology 406 .....	3
	15	†Technical Elective .....	3
Total semester hours required			12
Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.			121-122

\*Select Chemistry 102/104 or Physics 192/194.

†Select one course in Art, Dance, Music or Theatre.

‡Technical electives should be selected by students in consultation with their advisors. Three hours must be selected from Industrial Technology and an additional 3 hours from Computer Science, Industrial Technology, Management, Mathematics, or Physical Science. No 100-level course will be accepted without approval of the Department Head.

†A "C" (2.0 minimum adjusted) must be earned in all major courses and technical electives.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF BACHELOR OF SCIENCE**  
**INTERNSHIP CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
†Industrial Technology 111 .....	3	SECOND SEMESTER	
Mathematics 161 .....	3	†Industrial Technology 112 .....	3
English 101 .....	3	Mathematics 162 .....	3
Biological Science .....	4	English 102 .....	3
Sociology 101 or Psychology 101 .....	3	Chemistry 101 .....	3
Orientation 101 .....	0-1	Chemistry Laboratory 103 .....	1
	16-17	Computer Science 173 .....	3
			16
†Industrial Technology 242 .....	3	SECOND YEAR	
†Industrial Technology 264 .....	3	†Industrial Technology 233 .....	3
Mathematics 165 or 241 .....	3	†Industrial Technology 256 .....	3
English 230, 231 or 232 .....	3	Communication 211 .....	3
Physics 191 .....	3	Computer Science 273 .....	3
Physics Lab 193 .....	1	Natural Science .....	4
	16		16
†Industrial Technology 236 .....	3	THIRD YEAR	
†Industrial Technology 302 or		†Industrial Technology 322 .....	3
Occupational Safety & Health 115 .....	3	†Industrial Technology Elective .....	3
†Industrial Technology 351 .....	3	Management 351 .....	3
English 322 .....	3	Accounting 200 .....	3
Economics 201 .....	3	History 101, 102, 201 or 202 .....	3
	15		15
†Industrial Technology 391 .....	6	FOURTH YEAR	
†Industrial Technology 405 .....	3	†Industrial Technology 391 .....	6
Arts* .....	3	†Industrial Technology 406 .....	3
†Technical Elective* .....	3	† Technical Elective* .....	3
	15		12
Total semester hours required			121-122

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\*Select Chemistry 102/104 or Physics 192/194.

\*Select one course in Art, Dance, Music or Theatre.

\*Technical electives should be selected by students in consultation with their advisors. Three hours must be selected from Industrial Technology and an additional 3 hours from Computer Science, Industrial Technology, Management, Mathematics, or Physical Science. No 100-level course will be accepted without approval of the Department Head.

†A "C" (2.0 minimum adjusted) must be earned in all major courses and technical electives.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY  
LEADING TO THE DEGREE OF BACHELOR OF SCIENCE  
SUPERVISION CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
†Industrial Technology 111 .....	3	†Industrial Technology 112 .....	3
Mathematics 161 .....	3	Mathematics 162 .....	3
English 101 .....	3	English 102 .....	3
Biological Science .....	4	Chemistry 101 .....	3
Sociology 101 or Psychology 101 .....	3	Chemistry Laboratory 103 .....	1
Orientation 101 .....	0-1	Computer Science 173 .....	3
	16-17		16
†Industrial Technology 242 .....	3	SECOND YEAR	
†Industrial Technology 264 .....	3	†Industrial Technology 233 .....	3
Mathematics 165 or 241 .....	3	†Industrial Technology 256 .....	3
English 230, 231 or 232 .....	3	Communication 211 .....	3
Physics 191 .....	3	Computer Science 273 .....	3
Physics Lab 193 .....	1	Natural Science <sup>4</sup> .....	4
	16		16
†Industrial Technology 236 .....	3	THIRD YEAR	
†Industrial Technology 302 or Occupational Safety & Health 115 .....	3	†Industrial Technology 322 .....	3
†Industrial Technology 351 .....	3	†Industrial Technology 402 .....	3
English 322 .....	3	Management 351 .....	3
Economics 201 .....	3	Accounting 200 .....	3
	15	History 101, 102, 201 or 202 .....	3
†Industrial Technology 331 .....	3	.....	15
†Industrial Technology 405 .....	3	FOURTH YEAR	
†Industrial Technology 407 .....	3	†Industrial Technology 406 .....	3
Arts <sup>5</sup> .....	3	†Industrial Technology 308 .....	3
†Technical Elective <sup>6</sup> .....	3	†Industrial Technology 442 .....	3
	15	†Technical Elective <sup>6</sup> .....	3
Total semester hours required			12
			121-122

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

<sup>1</sup>Select Chemistry 102/104 or Physics 192/194.

<sup>2</sup>Select one course in Art, Dance, Music or Theatre.

<sup>3</sup>Technical electives should be selected by students in consultation with their advisors. Three hours must be selected from Industrial Technology and an additional 3 hours from Computer Science, Industrial Technology, Management, Mathematics, or Physical Science. No 100-level course will be accepted without approval of the Department Head.

<sup>4</sup>A "C" (2.0 minimum adjusted) must be earned in all major courses and technical electives.

## ASSOCIATE DEGREE PROGRAM IN INDUSTRIAL TECHNOLOGY

The Associate of Applied Science Degree program in the Department of Industrial Technology is designed to enable graduates to enter various fields of industry after completing two years of study. Graduates may also elect to continue their education in the four-year degree Manufacturing Technology Concentrations. Graduates of the two-year curriculum will be awarded the degree of Associate of Applied Science.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF ASSOCIATE OF APPLIED SCIENCE**  
**CONSTRUCTION TECHNOLOGY CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
English 101 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	English 102 .....	3
†Industrial Technology 111 .....	3	Mathematics 162 .....	3
†Occupational Safety & Health 115 or Industrial Technology 302 .....	3	Computer Science 173.....	3
†Construction Technology 101 .....	3	†Construction Technology 111.....	3
Orientation 101 .....	0-1	†Construction Technology 121 .....	3
	15-16	†Technical Elective .....	3
			18
Physics 191 .....	3	SECOND YEAR	
Physics Laboratory 193 .....	1	Chemistry 101 .....	3
Communication 211 or 215 .....	3	Chemistry Lab 103 .....	1
Psychology 101 or Sociology 101 <sup>1</sup> .....	3	†Industrial Technology 291 or 292.....	3
†Construction Technology 201 .....	3	†Technical Elective .....	6
†Technical Elective .....	3	†Construction Technology 271.....	3
	16		16
Total semester hours required			65-66

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

<sup>1</sup>Technical electives must be selected by students in consultation with their advisors.

<sup>2</sup>Social/Behavioral Sciences course must be selected by students in consultation with their advisors.

†A grade of "C" must be earned in all major courses; a cumulative GPA of 2.0 is required to graduate.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF ASSOCIATE OF APPLIED SCIENCE**  
**DESIGN DRAFTER TECHNOLOGY CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
English 101 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	English 102 .....	3
†Industrial Technology 111 .....	3	Mathematics 162 .....	3
†Occupational Safety & Health 115.....	3	Computer Science 173.....	3
or Industrial Technology 302 .....	3	†Industrial Technology 112 .....	3
Psychology 101 or Sociology 101 <sup>1</sup> .....	3	†Industrial Technology 215 .....	3
Orientation 101 .....	0-1	†Technical Elective .....	3
	15-16		18
		SECOND YEAR	
Physics 191 .....	3	Chemistry 101 .....	3
Physics Laboratory 193 .....	1	Chemistry Lab 103 .....	1
Communication 211 or 215 .....	3	†Design Drafter Technology 211.....	3
†Design Drafter Technology 113 or 114.....	3	†Industrial Technology 291 or 292 .....	3
†Industrial Technology 216.....	3	†Technical Elective <sup>2</sup> .....	6
†Technical Elective .....	3		16
	16		65-66
Total semester hours required			

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

<sup>1</sup>Social/Behavioral Sciences course must be selected by students in consultation with their advisors.

<sup>2</sup>Technical electives must be selected by students in consultation with their advisors.

†A grade of "C" must be earned in all major courses; a cumulative GPA of 2.0 is required to graduate.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF ASSOCIATE OF APPLIED SCIENCE**  
**OCCUPATIONAL SAFETY AND HEALTH CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
English 101 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	English 102 .....	3
†Industrial Technology 111 .....	3	Mathematics 162 .....	3
†Occupational Safety & Health 115 or Industrial Technology 302 .....	3	Computer Science 173.....	3
†Occupational Safety & Health 120.....	3	†Occupational Safety & Health 121 .....	3
Orientation 101 .....	0-1	†Occupational Safety & Health 122 .....	3
	15-16	†Technical Elective .....	3
			18
Physics 191 .....	3	SECOND YEAR	
Physics Laboratory 193 .....	1	Chemistry 101 .....	3
Communication 211 or 215 .....	3	Chemistry Lab 103 .....	1
Psychology 101 or Sociology 101 <sup>1</sup> .....	3	†Industrial Technology 291 or 292 .....	3
†Occupational Safety & Health 123 .....	3	†Occupational Safety & Health 221 .....	3
†Technical Elective .....	3	†Technical Elective .....	6
	16		16
Total semester hours required			65-66

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

<sup>1</sup>Technical electives must be selected by students in consultation with their advisors.

<sup>2</sup>Social/Behavioral Sciences course must be selected by students in consultation with their advisors.

†A grade of "C" must be earned in all major courses; a cumulative GPA of 2.0 is required to graduate.

**CURRICULUM IN INDUSTRIAL TECHNOLOGY**  
**LEADING TO THE DEGREE OF ASSOCIATE OF APPLIED SCIENCE**  
**SUPERVISION CONCENTRATION (ACCREDITED BY NAIT)**

FIRST SEMESTER	S.H.	FIRST YEAR	S.H.
English 101 .....	3	SECOND SEMESTER	S.H.
Mathematics 161 .....	3	English 102 .....	3
†Industrial Technology 111 .....	3	Mathematics 162 .....	3
Psychology 101 or Sociology 101 <sup>1</sup> .....	3	Computer Science 173.....	3
†Occupational Safety & Health 115.....	3	†Industrial Technology 112 .....	3
or Industrial Technology 302 .....	3	†Industrial Technology 242 .....	3
Orientation 101 .....	0-1	†Technical Elective .....	3
	15-16		18
		SECOND YEAR	
Physics 191 .....	3	Chemistry 101 .....	3
Physics Laboratory 193 .....	1	Chemistry Lab 103 .....	1
Communication 211 or 215 .....	3	†Industrial Technology 264 .....	3
†Industrial Technology 233.....	3	†Industrial Technology 291 or 292 .....	3
†Industrial Technology 256 .....	3	†Technical Elective .....	6
†Technical Elective .....	3		16
	16		65-66
Total semester hours required			

Orientation 101 is not required of transfer or readmitted Southeastern students with 30 hours or more.

<sup>1</sup>Social/Behavioral Sciences course must be selected by students in consultation with their advisors.

<sup>2</sup>Technical electives must be selected by students in consultation with their advisors.

†A grade of "C" must be earned in all major courses; a cumulative GPA of 2.0 is required to graduate.