# DEPARTMENT OF COMPUTER SCIENCE
# AND
# INDUSTRIAL TECHNOLOGY

## COMPUTER SCIENCE

The Department of Computer Science and Industrial Technology offers a four-year program leading to the Bachelor of Science degree in Computer Science. The program is accredited by the Computing Accreditation Commission ABET, 111 Market Place Suite 1050, Baltimore, MD 21202-4012--telephone 410-347-7700. This program is designed to provide the foundation necessary for computer science graduates to succeed in the computing profession as well as in graduate school.

The department also offers courses in computing applications designed to meet the needs of students in other disciplines.

## MAJORS

Students wishing to major, or co-major, in Computer Science must complete the following:
1. Forty-three or more semester hours of Computer Science course work as specified in the curriculum, below,
2. Six or more semester hours of mathematics course work, as specified in the curriculum, below,
3. Twelve or more semester hours of science course work, as specified in the curriculum, below, and
4. Thirty or more semester hours of broad, general education course work.

In addition, students must complete a departmentally specified, comprehensive computer science examination in their final semester.

## 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

A Computer Science minor consists of the following eighteen semester hours of coursework in Computer Science: CMPS 161, 257, 280, either 262, 285, or 293, and two 300- or 400-level computer science electives, which must be approved by the department head.

An Applied Computing minor consists of eighteen semester hours of coursework in Computer Science: twelve credits from CMPS 120, 225, 233, 234, 235, and 262, and six credits from CMPS 309, 335, and 409.

### CURRICULUM IN COMPUTER SCIENCE
### LEADING TO THE DEGREE OF BACHELOR OF SCIENCE
### INFORMATION SYSTEMS CONCENTRATION

#### FIRST YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Mathematics 200 | 5 | †Mathematics 201 | 5 |
| English 101 | 3 | English 102 | 3 |
| History Elective | 3 | †Computer Science 257[3] | 3 |
| †Computer Science 161 | 3 | †Computer Science 280 | 3 |
| Southeastern 101 | 0-3 | | |
| | 14 – 17 | | 14 |

#### SECOND YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 120 | 3 | †Computer Science 375 | 3 |
| †Computer Science 285 | 3 | †Computer Science 390 | 3 |
| †Computer Science 290 or 293 | 3 | Social Science Elective[2] | 3 |
| Communications 211 | 3 | English 230, 231, or 232 | 3 |
| Science Sequence I[5] | 4 | Science Sequence II[5] | 4 |
| | 16 | | 16 |

#### THIRD YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 401 | 3 | †Computer Science 383 | 3 |
| †Computer Science Elective (300-400 level) | 3 | †Computer Science 431 | 3 |
| English 322 | 3 | Economics 201 or 202 | 3 |
| Accounting 200 | 3 | Art/Music Elective[1] | 3 |
| Biology Elective[5] | 4 | Elective | 3 |
| | 16 | | 15 |

#### FOURTH YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 411 | 3 | †Computer Science 439 | 3 |
| †Computer Science Elective(300-400 level) | 3 | †Computer Science 481 | 1 |
| Arts/Social Science Elective[1,2] | 3 | Mathematics Elective[4] | 3 |

| Finance 381 .............................................................. 3 | Management 362 ..................................................... 3 |
|---|---|
| Mathematics 380 ...................................................... 3 | Electives ................................................................ 4 |
| 15 | 14 |

Total semester hours required                                        120-123

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

[1]Choose one from the following: Visual Arts, Music, Dance, or Theatre
[2]Choose one from the following: Anthropology, Geography, Psychology, Political Science, or Sociology.
[3]Mathematics 223 may be substituted for Computer Science 257
[4]Choose from Mathematics 312, 350, 360, 370, 410, or 414
[5]Science sequence: Choose from (Physics 221/223 & 222/224) or (Biology 151/152 & 153/154) or (Chemistry 121/123 & 122/124)
†Students must earn a grade of "C" or better in all Computer Science courses and in Math 200 and 201.
Note: Because Biology 151 and 153 satisfy the Biological Science requirement, students taking biology as their science sequence must take a physics or chemistry course, with a lab, to replace it.

## CURRICULUM IN COMPUTER SCIENCE
## LEADING TO THE DEGREE OF BACHELOR OF SCIENCE
## INFORMATION TECHNOLOGY CONCENTRATION

### FIRST YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Mathematics 165 ................................... 3 | | †Mathematics 241 ................................... 3 | |
| English 101 ............................................. 3 | | English 102 ............................................ 3 | |
| History Elective ..................................... 3 | | †Computer Science 257[3] ......................... 3 | |
| †Computer Science 161 .......................... 3 | | †Computer Science 280 ......................... 3 | |
| Arts/Social Sci Elective[1,2] ..................... 3 | | Arts/Music Elective[1] ........................... 3 | |
| Southeastern 101 .............................. 0-3 | | | |
| 15 – 18 | | 15 | |

### SECOND YEAR

| | | | |
|---|---|---|---|
| †Computer Science 285 ......................... 3 | | †Computer Science 294 ......................... 3 | |
| †Computer Science 290 or 293 ............. 3 | | †Computer Science 375 ......................... 3 | |
| English 230, 231, or 232 ...................... 3 | | †Computer Science 390 ......................... 3 | |
| Communications 211 ............................ 3 | | English 322 ........................................... 3 | |
| Science Sequence I[5] .............................. 4 | | Social Science Elective[2] ......................... 3 | |
| 16 | | 15 | |

### THIRD YEAR

| | | | |
|---|---|---|---|
| †Computer Science 309 ........................ 3 | | †Computer Science 383 ......................... 3 | |
| †Computer Science 315 ........................ 3 | | †Computer Science 431 ......................... 3 | |
| †Computer Science 319 ........................ 3 | | Biology Elective[5] .................................. 4 | |
| Science Sequence II[5] ............................ 4 | | [x]Elective ............................................... 6 | |
| [x]Elective ............................................... 3 | | | |
| 16 | | 16 | |

### FOURTH YEAR

| | | | |
|---|---|---|---|
| †Computer Science 411 ........................ 3 | | †Computer Science 439 ......................... 3 | |
| †Computer Science 420 ........................ 3 | | †Computer Science 481 ......................... 1 | |
| [a]†Computer Science[4] ............................ 3 | | [b]†Computer Science[4] ............................ 3 | |
| [b]†Computer Science[4] ............................ 3 | | [x]Elective ............................................... 6 | |
| Elective ................................................. 3 | | | |
| 15 | | 13 | |

Total semester hours required                                        121-124

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

[a]Must be selected from CMPS 320, 389, 394, 409
[b] Must be selected from CMPS 391, 393, 401, 432, 441, 443, 479
[x] Must be selected to meet "application area" requirement (a minor or approved 18 hour minimum customize curriculum).
[1]Choose one from the following: Visual Arts, Music, Dance, or Theatre
[2]Choose one from the following: Anthropology, Geography, Psychology, Political Science, or Sociology.
[3]Mathematics 223 may be substituted for Computer Science 257
[4]Students are required to take additional mathematics if they wish to pursue some Computer Science electives.
[5]Science sequence: Choose from (Physics 221/223 & 222/224) or (Biology 151/152 & 153/154) or (Chemistry 121/123 & 122/124).
Note that some of these sequences require additional math prerequisites.
†Students must earn a grade of "C" or better in all Computer Science courses and in Math 165 and 241.
Note: Because Biology 151 and 153 satisfy the Biological Science requirement, students taking biology as their science sequence must take a physics or chemistry course, with a lab, to replace it.

## CURRICULUM IN COMPUTER SCIENCE
### LEADING TO THE DEGREE OF BACHELOR OF SCIENCE
### SCIENCE CONCENTRATION

### FIRST YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Mathematics 200 | 5 | †Mathematics 201 | 5 |
| English 101 | 3 | English 102 | 3 |
| History Elective | 3 | †Computer Science 257[3] | 3 |
| †Computer Science 161 | 3 | †Computer Science 280 | 3 |
| Southeastern 101 | 0-3 | | |
| | 14 - 17 | | 14 |

### SECOND YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 285 | 3 | †Computer Science 375 | 3 |
| †Computer Science 290 or 293 | 3 | †Computer Science 390 | 3 |
| Communications 211 | 3 | Social Science Elective[2] | 3 |
| Economics 201 or 202 | 3 | English 230, 231, or 232 | 3 |
| Science Sequence I[5] | 4 | Science Sequence II[5] | 4 |
| | 16 | | 16 |

### THIRD YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 401 | 3 | †Computer Science 431 | 3 |
| †Computer Science Elective(300-400 level) | 3 | †Computer Science Elective(300-400 level) | 3 |
| English 322 | 3 | Mathematics Elective[4] | 3 |
| Mathematics 380 | 3 | Art/Music Elective[1] | 3 |
| Biology Elective[5] | 4 | Elective | 3 |
| | 16 | | 15 |

### FOURTH YEAR

| | S.H. | | S.H. |
|---|---|---|---|
| †Computer Science 391 | 3 | †Computer Science 479 | 3 |
| †Computer Science 411 | 3 | †Computer Science 481 | 1 |
| Arts/Social Science Elective[1,2] | 3 | Mathematics Elective[4] | 3 |
| Elective | 3 | Phys/Biol Science Elective[5] | 4 |
| Elective | 3 | Electives | 4 |
| | 15 | | 15 |

Total semester hours required      121-124

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

[1]Choose one from the following: Visual Arts, Music, Dance, or Theatre
[2]Choose one from the following: Anthropology, Geography, Psychology, Political Science, or Sociology.
[3]Mathematics 223 may be substituted for Computer Science 257
[4]Choose from Mathematics 312, 350, 360, 370, 410, or 414
[5]Science sequence: Choose from (Physics 221/223 & 222/224) or (Biology 151/152 & 153/154) or (Chemistry 121/123 & 122/124)
†Students must earn a grade of "C" or better in all Computer Science courses and in Math 200 and 201.
Note: Because Biology 151 and 153 satisfy the Biological Science requirement, students taking biology as their science sequence must take a physics or chemistry course, with a lab, to replace it.

## 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

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 major GPA.
3. Make application (I.T. Form #107) to the Department Head of Computer Science and Industrial Technology.

## MAJOR

A minimum of 36 hours of required I.T. courses, 15 hours of I.T. Concentration Courses, and an additional 6 hours of I.T. electives are required for a Bachelor of Science degree in Industrial Technology for a total of 57 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 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 308 – Pro Planning and Control or IT 402 – Industrial Supervision .....3 semester hours
OSHE 111 – Intro to Safety & Health or IT 311 – Industrial Design ........3 semester hours

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

#### FIRST YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 111 ................................... 3 | | †Industrial Technology 112 ...................................3 | |
| Mathematics 161[4] ................................................. 3 | | Mathematics 162 ...................................................3 | |
| English 101 ........................................................... 3 | | English 102 ...........................................................3 | |
| Biological Science ................................................ 4 | | Chemistry 101 .......................................................3 | |

Sociology 101or Psychology 101 .........................3  
Southeastern 101 ...............................................0-3  
Chemistry Laboratory 103 .....................................1  
Computer Science 173 ...........................................3  

16-19                                                    16

**SECOND YEAR**

†Industrial Technology 242 ...................................3  
†Industrial Technology 264 ...................................3  
Mathematics 165 or 241 .......................................3  
English 230, 231 or 232 .........................................3  
Physics 191 ............................................................3  
Physics Lab 193 .....................................................1  

16

†Industrial Technology 233 ...................................3  
†Industrial Technology 256 ...................................3  
Communication 211 ...............................................3  
Computer Science 273 ...........................................3  
Physical Science[1]....................................................4  

16

**THIRD YEAR**

†Industrial Technology 236 ...................................3  
†Industrial Technology 351 ...................................3  
Occupational Safety, Health & Enviro 111 ...........3  
Economics 201 ......................................................3  
English 322 ...........................................................3  

15

†Industrial Technology 215 ...................................3  
†Industrial Technology 322 ...................................3  
†Industrial Technology 331 ...................................3  
Accounting 200 .....................................................3  
History 101, 102, 201 or 202 ................................3  

15

**FOURTH YEAR**

†Industrial Technology 405....................................3  
†Industrial Technology 442 ..................................3  
Management 351.....................................................3  
Arts[2] ......................................................................3  
†Technical Elective[3] .............................................3  

15

†Industrial Technology 406 ..................................3  
†Industrial Technology 407 ...................................3  
†Industrial Technology 444 ...................................3  
†Technical Elective[3] .............................................3  

12

Total semester hours required                          121-124

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

[1]Select Chemistry 102/104 or Physics 192/194.  
[2]Select one course in Art, Dance, Music or Theatre.  
[3]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.  
[4]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.  
†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 YEAR**

FIRST SEMESTER                                    S.H.  
†Industrial Technology 111 ...................................3  
Mathematics 161[4] ................................................3  
English 101 ...........................................................3  
Biological Science ...............................................4  
Sociology 101or Psychology 101 .........................3  
Southeastern 101 ...............................................0-3  

16-19

SECOND SEMESTER                                    S.H.  
†Industrial Technology 112 ...................................3  
Mathematics 162 ...................................................3  
English 102 ...........................................................3  
Chemistry 101 .......................................................3  
Chemistry Laboratory 103 .....................................1  
Computer Science 173 ...........................................3  

16

**SECOND YEAR**

†Industrial Technology 242 ...................................3  
†Industrial Technology 264 ...................................3  
Mathematics 165 or 241 .......................................3  
English 230, 231 or 232 .........................................3  
Physics 191 ............................................................3  
Physics Lab 193 .....................................................1  

16

†Industrial Technology 233 ...................................3  
†Industrial Technology 256 ...................................3  
Communication 211 ...............................................3  
Computer Science 273 ...........................................3  
Physical Science[1]....................................................4  

16

**THIRD YEAR**

†Industrial Technology 236 ...................................3  
†Occupational Safety, Health & Enviro 111 .........3  
†Industrial Technology 351 ...................................3  
Economics 201 ......................................................3  
English 322 ...........................................................3  

15

†Industrial Technology 215 ...................................3  
†Industrial Technology 322 ...................................3  
Management 351.....................................................3  
Accounting 200 .....................................................3  
History 101, 102, 201 or 202 ................................3  

15

## FOURTH YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †DDT 113, 114, 211, 212, 215, 218, or IT 216 | 6 | †DDT 113, 114, 211, 212, 215, 218, or IT 216 | 3 |
| †Industrial Technology 405 | 3 | †Industrial Technology 311 | 3 |
| Arts[2] | 3 | †Industrial Technology 406 | 3 |
| †Technical Elective[3] | 3 | †Technical Elective[3] | 3 |
| | 15 | | 12 |

Total semester hours required        121-124

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

[1] Select Chemistry 102/104 or Physics 192/194.

[2] Select one course in Art, Dance, Music or Theatre.

[3] 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.

[4] Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.

† 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 YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 111 | 3 | †Industrial Technology 112 | 3 |
| Mathematics 161[4] | 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 |
| Southeastern 101 | 0-3 | Computer Science 173 | 3 |
| | 16-19 | | 16 |

### SECOND YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 242 | 3 | †Industrial Technology 233 | 3 |
| †Industrial Technology 264 | 3 | †Industrial Technology 256 | 3 |
| Mathematics 165 or 241 | 3 | Communication 211 | 3 |
| English 230, 231 or 232 | 3 | Computer Science 273 | 3 |
| Physics 191 | 3 | Physical Science[1] | 4 |
| Physics Lab 193 | 1 | | |
| | 16 | | 16 |

### THIRD YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 236 | 3 | †Industrial Technology 322 | 3 |
| †Occupational Safety, Health & Enviro 111 | 3 | †Industrial Technology Elective | 3 |
| †Industrial Technology 351 | 3 | Management 351 | 3 |
| Economics 201 | 3 | Accounting 200 | 3 |
| English 322 | 3 | History 101, 102, 201 or 202 | 3 |
| | 15 | | 15 |

### FOURTH YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 391 | 6 | †Industrial Technology 391 | 6 |
| †Industrial Technology 405 | 3 | †Industrial Technology 406 | 3 |
| Arts[2] | 3 | † Technical Elective[3] | 3 |
| †Technical Elective[3] | 3 | | |
| | 15 | | 12 |

Total semester hours required        121-124

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

[1] Select Chemistry 102/104 or Physics 192/194.

[2] Select one course in Art, Dance, Music or Theatre.

[3] 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.

[4] Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.

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

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

**FIRST YEAR**

</div>

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| †Industrial Technology 111 | 3 | †Industrial Technology 112 | 3 |
| Mathematics 161[4] | 3 | Mathematics 162 | 3 |
| English 101 | 3 | English 102 | 3 |
| Biological Science | 4 | Chemistry 101 | 3 |
| Sociology 101or Psychology 101 | 3 | Chemistry Laboratory 103 | 1 |
| Southeastern 101 | 0-3 | Computer Science 173 | 3 |
| | 16-19 | | 16 |

<div align="center">

**SECOND YEAR**

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| | | | |
|---|---|---|---|
| †Industrial Technology 242 | 3 | †Industrial Technology 233 | 3 |
| †Industrial Technology 264 | 3 | †Industrial Technology 256 | 3 |
| Mathematics 165 or 241 | 3 | Communication 211 | 3 |
| English 230, 231 or 232 | 3 | Computer Science 273 | 3 |
| Physics 191 | 3 | Physical Science[1] | 4 |
| Physics Lab 193 | 1 | | |
| | 16 | | 16 |

<div align="center">

**THIRD YEAR**

</div>

| | | | |
|---|---|---|---|
| †Industrial Technology 236 | 3 | †Industrial Technology 322 | 3 |
| †Industrial Technology 351 | 3 | †Industrial Technology 402 | 3 |
| †Occupational Safety, Health & Enviro 111 | 3 | Management 351 | 3 |
| Economics 201 | 3 | Accounting 200 | 3 |
| English 322 | 3 | History 101, 102, 201 or 202 | 3 |
| | 15 | | 15 |

<div align="center">

**FOURTH YEAR**

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| | | | |
|---|---|---|---|
| †Industrial Technology 331 | 3 | †Industrial Technology 406 | 3 |
| †Industrial Technology 405 | 3 | †Industrial Technology 308 | 3 |
| †Industrial Technology 407 | 3 | †Industrial Technology 442 | 3 |
| Arts[2] | 3 | †Technical Elective[3] | 3 |
| †Technical Elective[3] | 3 | | |
| | 15 | | 12 |

Total semester hours required      121-124

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

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[1]Select Chemistry 102/104 or Physics 192/194.

[2]Select one course in Art, Dance, Music or Theatre.

[3]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.

[4]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.

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

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**CURRICULUM IN OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT**
**LEADING TO THE DEGREE OF BACHELOR OF SCIENCE**

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The Bachelor of Science Degree program in Occupational Safety, Health, and Environment is designed to enable graduates to enter business and industry as safety, industrial hygiene and environmental professionals.

<div align="center">

**FIRST YEAR**

</div>

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| English 101 | 3 | English 102 | 3 |
| Mathematics 161[4] | 3 | Mathematics 162 | 3 |
| †OSHE 111 | 3 | †OSHE 112 | 3 |
| General Biology 151 | 3 | †OSHE 121 | 3 |
| Biology Lab 152 | 1 | Psychology 101 | 1 |
| Computer Science 110 or 173 | 3 | | |
| Southeastern 101 | 0-3 | | |
| | 16-19 | | 15 |

<div align="center">

**SECOND YEAR**

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| | | | |
|---|---|---|---|
| Chemistry 101 | 3 | Physics 191 | 3 |
| Chemistry Lab 103 | 1 | Physics Lab 193 | 1 |
| Mathematics 241 | 3 | Chemistry 261 | 3 |
| Zoology 241 | 4 | Communication 211 | 3 |

| | | | |
|---|---|---|---|
| †OSHE 241 | 3 | †OSHE 251 | 3 |
| †OSHE 261 | 3 | †OSHE 242 | 3 |
| | **17** | | **16** |

### THIRD YEAR

| | | | |
|---|---|---|---|
| Economics 201 | 3 | Physical Science[1] | 4 |
| English 230 or 231 or 232 | 3 | History 101 or 102 or 201 or 202 | 3 |
| †OSHE 231 | 3 | †Industrial Technology 242 | 3 |
| †OSHE 281 | 3 | †Industrial Technology 322 | 3 |
| †OSHE 282 | 3 | | |
| | **15** | | **13** |

### FOURTH YEAR

| | | | |
|---|---|---|---|
| †OSHE 371 | 3 | †OSHE 321 | 3 |
| Management 351 | 3 | †OSHE 324 | 3 |
| Arts[2] | 3 | †OSHE 341 | 3 |
| †Professional Elective[3] | 3 | †Industrial Technology 391[3] | 3 |
| †Professional Elective[3] | 3 | †Professional Elective[3] | 3 |
| | **15** | | **15** |

Total semester hours required      122-125

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

[1]Select Chemistry 102/104 or Physics 192/194.
[2]Select one course in Art, Dance, Music or Theatre.
[3]Professional electives should be selected in consultation with advisors.
[4]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.
†A "C" (2.0 minimum adjusted) must be earned in all major courses and professional electives.

## ASSOCIATE DEGREE PROGRAM IN INDUSTRIAL TECHNOLOGY

    The Associate of Applied Science Degree program in the Department of Computer Science and 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 YEAR

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| English 101 | 3 | English 102 | 3 |
| Mathematics 161[3] | 3 | Mathematics 162 | 3 |
| †Industrial Technology 111 | 3 | Computer Science 173 | 3 |
| †Occupational Safety, Health & Enviro 111 | 3 | †Construction Technology 111 | 3 |
| †Construction Technology 101 | 3 | †Construction Technology 121 | 3 |
| Southeastern 101 | 0-3 | †Technical Elective[2] | 3 |
| | **15-18** | | **18** |

#### SECOND YEAR

| | | | |
|---|---|---|---|
| Physics 191 | 3 | Chemistry 101 | 3 |
| Physics Laboratory 193 | 1 | Chemistry Lab 103 | 1 |
| Communication 211 or 215 | 3 | †Industrial Technology 291 or 292 | 3 |
| Psychology 101 or Sociology 101[1] | 3 | †Technical Elective[2] | 6 |
| †Construction Technology 201 | 3 | †Construction Technology 271 | 3 |
| †Technical Elective[2] | 3 | | |
| | **16** | | **16** |

Total semester hours required      65-68

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

[1]Social/Behavioral Sciences course must be selected by students in consultation with their advisors.
[2]Technical electives must be selected by students in consultation with their advisors.
[3]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161.
†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 YEAR**

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| English 101 | 3 | English 102 | 3 |
| Mathematics 161[3] | 3 | Mathematics 162 | 3 |
| †Industrial Technology 111 | 3 | Computer Science 173 | 3 |
| †Occupational Safety, Health & Enviro 111 | 3 | †Industrial Technology 112 | 3 |
| Psychology 101 or Sociology 101[1] | 3 | †Industrial Technology 215 | 3 |
| Southeastern 101 | 0-3 | †Technical Elective[2] | 3 |
| | 15-18 | | 18 |

**SECOND YEAR**

| | S.H. | | S.H. |
|---|---|---|---|
| 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[2] | 6 |
| †Technical Elective[2] | 3 | | |
| | 16 | | 16 |

Total semester hours required — 65-68

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

[1]Social/Behavioral Sciences course must be selected by students in consultation with their advisors.
[2]Technical electives must be selected by students in consultation with their advisors.
[3]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.
†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, HEALTH AND ENVIRONMENT CONCENTRATION (ACCREDITED BY NAIT)**

**FIRST YEAR**

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| English 101 | 3 | English 102 | 3 |
| Mathematics 161[1] | 3 | Mathematics 162 | 3 |
| †OSHE 111 | 3 | †OSHE 112 | 3 |
| General Biology 151 | 3 | †OSHE 121 | 3 |
| Biology 152 | 1 | Psychology 101[1] | 3 |
| Computer Science 110 or 173 | 3 | | |
| Southeastern 101 | 0-3 | | |
| | 16-19 | | 15 |

**SECOND YEAR**

| | S.H. | | S.H. |
|---|---|---|---|
| Chemistry 101 | 3 | Physics 191 | 3 |
| Chemistry Laboratory 103 | 1 | Physics Lab 193 | 1 |
| Mathematics 241 | 3 | Chemistry 261 | 3 |
| Zoology 241[2] | 4 | Communication 211 | 3 |
| †OSHE 241 | 3 | †OSHE 251 | 3 |
| †OSHE 261 | 3 | †OSHE 242 | 3 |
| | 17 | | 16 |

Total semester hours required — 64-67

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

[1]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.
†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 YEAR**

| FIRST SEMESTER | S.H. | SECOND SEMESTER | S.H. |
|---|---|---|---|
| English 101 | 3 | English 102 | 3 |
| Mathematics 161[3] | 3 | Mathematics 162 | 3 |
| †Industrial Technology 111 | 3 | Computer Science 173 | 3 |

| | |
|---|---|
| Psychology 101 or Sociology 101[1] ........................ 3 | †Industrial Technology 112 .................................... 3 |
| †Occupational Safety, Health & Enviro 111 .......... 3 | †Industrial Technology 242 ................................... 3 |
| Southeastern 101 ................................................0-3 | †Technical Elective[2] ............................................ 3 |
| 15-18 | 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[2] ............................................. 6 |
| †Technical Elective[2] ............................................. 3 | |
| 16 | 16 |

Total semester hours required                                                 65-68

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

[1]Social/Behavioral Sciences course must be selected by students in consultation with their advisors.

[2] Technical electives must be selected by students in consultation with their advisors.

[3]Students with an ACT Math score of 20 or lower will take Math 155 (5 credit hours) in place of Math 161, which will increase 2 credit hours the total number of hours required for the degree.

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