

DEPARTMENT OF INDUSTRIAL & ENGINEERING TECHNOLOGY

BACHELOR OF SCIENCE IN EDUCATION

INDUSTRIAL EDUCATION

The Industrial Education program is designed to prepare individuals to teach comprehensive, action-based industrial/technology education programs in the ninth through twelfth grades. The students will develop technical and teaching competencies in communications technology, energy and power technology, and materials and processes technology.

CURRICULUM CHECKLIST

UNIVERSITY STUDIES (53 hours)

<input type="checkbox"/> UI 100 First Year Seminar	3
<input type="checkbox"/> Artistic Expression	3
<input type="checkbox"/> Literary Expression	3
<input type="checkbox"/> SC 105 Fundamentals of Oral Communication (Oral Expression)	3
<input type="checkbox"/> EN 100 English Composition	3
<input type="checkbox"/> EN 140 Rhetoric & Critical Thinking (Written Expression)	3
<input type="checkbox"/> PY 222 (Behavioral Systems)	3
<input type="checkbox"/> BI/BS Course (Living Systems)	3
<input type="checkbox"/> MA 134 College Algebra (Logical Systems)	3
<input type="checkbox"/> CH 181/081/001 Basic Principles of Chemistry (Physical Systems)	5
<input type="checkbox"/> US 105 or US 107 (Development of a Major Civilization)	3
<input type="checkbox"/> Economic Systems	3
<input type="checkbox"/> PS 103 OR PS 104 (Political Systems)	3
<input type="checkbox"/> Social Systems	3
<input type="checkbox"/> UI 3xx Interdisciplinary University Studies Course (UI319 recommended)	3
<input type="checkbox"/> UI 3xx Interdisciplinary University Studies Course	3
<input type="checkbox"/> UI 4xx University Studies Senior Seminar	3
<input type="checkbox"/> WP 003 Writing Proficiency Test (to be taken after completing 75 hours)	0
<input type="checkbox"/> CCTST Critical Thinking Test (to be taken after completing 75 hours)	0
<input type="checkbox"/> CL001 <input type="checkbox"/> CL002 <input type="checkbox"/> CL003 <input type="checkbox"/> CL004 Career Linkages Requirements	0

SECONDARY PROFESSIONAL EDUCATION REQUIREMENTS (41 Hours)

Block I: 4 hours

<input type="checkbox"/> SE 200 Intro to MSE Technology	2
<input type="checkbox"/> SE 202 Intro to MSE Teaching	2

Block II: 14 hours*

<input type="checkbox"/> EF 304 School & Society	2
<input type="checkbox"/> SE 305 Secondary Block II Field Experience	2
<input type="checkbox"/> SE 306 Theories of Learning & Management	2
<input type="checkbox"/> SE 307 Teaching Reading/Secondary School	2
<input type="checkbox"/> SE 308 Fund of High School Education	3
<input type="checkbox"/> SE 275 Diversity in American Schools	3

Block III: 10 hours**

<input type="checkbox"/> EX 390 Psychology & Education of the Exceptional Child	3
<input type="checkbox"/> SE 300 Technology to Enhance Learning	2
<input type="checkbox"/> SE 316 Techniques of Teaching Technology Education	3
<input type="checkbox"/> SE 370 Secondary Block III Field Experience	2

Block IV: 13 hours

<input type="checkbox"/> EF 400 Seminar/Education Issues for Student Teachers	1
<input type="checkbox"/> SE 463 Student Teaching Secondary (1 st)	6
<input type="checkbox"/> SE 464 Student Teaching Secondary (2 nd)	6

*Enrollment in Block II requires admittance to Teacher Education Program

**Portions of Block III (SE 316 and SE 305) are fall only

INDUSTRIAL EDUCATION (45 Hours)

15 hours of the major need to be 300-400 level courses.

(A grade of "C" or better is required in all courses within the major.)

Communications Technology

Required:

<input type="checkbox"/> GM 200 Vector Bitmapped Graphics for Industry	3
<input type="checkbox"/> MN 120 Fundamentals of Engineering Design Process	3

Select 2 courses:

<input type="checkbox"/> CM 226 Residential Architectural Drafting and Design	
<input type="checkbox"/> GM 282 Electronic Publishing and Print Processing	
<input type="checkbox"/> GM 284 Photography Fundamentals	
<input type="checkbox"/> GM 386 Interactive Multimedia and Animation	
<input type="checkbox"/> MN 221 Solid Modeling & Rapid Prototyping	
<input type="checkbox"/> MN 324 Design Modeling & Processes	6

Industrial Education Requirements Continued on back of page...

Effective Fall 2008

Updated February 19, 2008

Energy and Power Technology**Required:**

___ ET 160 Basic Electricity & Electronics	3
___ ET 245 Logic Circuits	3

Select 2 courses:

___ TN 255 Microcomputer Maintenance and Troubleshooting	
___ TN 275 Network Fundamentals	
___ TN 375 Network Routing Protocols and Concepts	6

Materials and Process Technology**Required:**

___ MN 170 Engineering Materials & Testing	3
___ MN 203 Industrial Materials & Processes I	3
___ MN 204 Industrial Materials & Processes II	3

Select 2 courses:

___ CM 243 Construction Methods & Materials	
___ CM 310 Construction Building Costs	
___ CM 320 Construction Cost Estimating	
___ MN 356 Robotics Fundamentals	6

Professional:**Required:**

___ IM 102 Technical Communications	3
___ IE 401 Technology Education Management	3

EXAMPLE PROGRAM OF STUDY

BSE - Industrial Education

FRESHMAN FALL SEMESTER (18 hrs)

EN 100 English Comp
 MA 134 College Algebra
 PY 222 Development of the Adolescent
 MN120 Fund of Eng. Design Processes
 UI 100 First Year Seminar
 Living Systems (Choose a BS/BI course)
 CL001 Career Linkages 1st Requirement

SOPHOMORE FALL SEMESTER (18 hrs)

GM200 Vector and Bitmapped Graphics for Ind.
 ET 245 Logic Circuits
 SC 105 Fundamentals Oral Communication
 Artistic Expression
 Industrial Education Elective
 Industrial Education Elective

JUNIOR FALL SEMESTER (18 hrs)

***IE 401 Technology Education Management
 MN 203 Industrial Materials & Processes I
 PS 103 or PS104 (Political Systems)
 US 105 or US 107 (Dev of Major Civilization)
 Literary Expression
 Industrial Education Elective
 CL003 Career Linkages 3rd Requirement

SENIOR FALL SEMESTER (16 hrs)

EX 390 Psy & Ed Exceptional Child
 SE 300 Technology to Enhance Learning
 **SE 316 Tech of Teaching Techn Education
 **SE 370 Secondary Block III Field Exp
 UI 3xx (UI 319 Recommended)
 UI 4xx University Studies
 CL004 Career Linkages 4th Requirement

FRESHMAN SPRING SEMESTER (18 hrs)

CH181/081/001 Basic Principles of Chemistry
 EN 140 Rhetoric & Critical Thinking
 ET 160 Basic Electricity & Electronics
 IM 102 Technical Communication
 SE 200 Intro to MSE Technology
 SE 202 Intro to MSE Teaching
 CL002 Career Linkages 2nd Requirement

SOPHOMORE SPRING SEMESTER (17 hrs)

EF 304 School & Society
 MN 170 Industrial Materials and Testing
 SE 275 Diversity in American Schools
 *SE 305 Sec Block II Fld Exp
 SE 306 Theory of Learning & Mgt
 SE 307 Teaching Reading Sec School
 SE 308 Instr Comp of HS Teachers

JUNIOR SPRING SEMESTER (18 hrs)

MN 204 Industrial Materials & Processes II
 UI 3xx University Studies
 Economic Systems
 Social Systems
 Industrial Education Elective
 Industrial Education Elective
 WP 003 Writing Proficiency Exam
 CCTST California Critical Thinking Skills Test

SENIOR SPRING SEMESTER (16 hrs)

EF 400 Seminar/Educ Issues for Student
 Teachers
 SE 463 Student Teaching Exp I
 SE 464 Student Teaching Exp II
 Industrial Education Elective

139 Hours

*Enrollment in Secondary Block II requires admittance to teacher education program.

** SE-316 and SE-370 are fall – only courses. Please plan accordingly

*** IE-401 is taught in fall/alternating years

For More information on the College of Education and degree requirements see: <http://www.semo.edu/cea/>