

SCHOOL OF BUSINESS AND TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND ENGINEERING TECHNOLOGY

FACULTY

Brad Bryant, Chair
Technology Stone Building, Room 108
Phone: (580) 774-3162
E-mail: brad.bryant@swosu.edu
<http://www.swosu.edu/tech/>

J. Asante	TBB 208	james.asante@swosu.edu	(580) 774-3123
R. Baugher	TBB 210	ric.baugher@swosu.edu	(580) 774-3163
B. Fitzgerald	TBB 209	brad.fitzgerald@swosu.edu	(580) 774-3161
R. Kurtz	TSB 102	dick.kurtz@swosu.edu	(580) 774-3164
J. Short	TSB 110	jeff.short@swosu.edu	(580) 774-3711
F. White	TBB 204	frank.white@swosu.edu	(580) 774-3160

DEPARTMENTAL GOALS

The Department of Industrial and Engineering Technology provides students the opportunity to prepare for professional opportunities in industry and education.

Particular areas of preparation attempt to address:

1. The delivery of broad-based technical programs that allow the graduate to accommodate new and advancing technologies.
2. The preparation of an adequate work force to meet area state and regional demands for technology in industry and education.
3. The maintenance of quality curriculum content, faculty, equipment and facilities to meet the standards set by appropriate state and national accrediting agencies.

PROGRAMS OF STUDY

Majors:	B.S. Engineering Technology
	Computer Engineering Technology
	Environmental Engineering Tech.
	Manufacturing Engineering Tech.
	B.S. Industrial Technology
	Electronics Technology
	Environmental Technology
	Industrial Supervision
	Manufacturing Technology
	General Technology
B.S.Ed. Technology Education	
Standard Tech. Ed. Certification	

Minors:	Computer Technology
	Electronics
	General Technology

Master:	M.Ed. Technology
	(See Graduate Catalog for more information.)

Certification:	Trade and Industrial Education
-----------------------	--------------------------------

GENERAL INFORMATION

Technology curricula allows for a variety of exciting opportunities in the areas of Industrial and Engineering Technology as well as Technology Education Certification for the secondary schools. Manufacturing Engineering Technology is currently accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – Telephone: (410) 347-7700. Industrial Technology is currently accredited by the National Association of Industrial Technology (NAIT), 3300 Washtenaw Avenue, Suite 220, Ann Arbor, MI 48104-4200 – Telephone: (734) 677-0720. Each major is capped by a research project or realistic internship experience to facilitate the transition from school to the actual job scene.

Career opportunities are numerous in all technology fields and command competitive salaries. Examples of recent graduate placement are manufacturing engineering technologists, quality assurance managers, plant and production supervisors, production analysts, planners and schedulers, and estimators. Approximately 30% of Oklahoma Technology Education teachers have at least one degree from SWOSU.

The student chapter of the Society of Manufacturing Engineers and the Technology Education Collegiate Association conduct numerous professional development and social activities for department majors and minors. Activities common to SME and TECA in addition to regular meetings include industrial tours, educational conferences, tool shows, and the sponsorship of leadership activities. The student professional organizations jointly host various academic competition activities for area secondary students.

For more information visit our web site at:
<http://www.swosu.edu/tech/>

BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY

GENERAL EDUCATION

Courses that are **required** are in bold type.
Courses that are *recommended* are in italics.

TOTAL HOURS.....43 - 44

Composition6
ENGL 1113 English Composition I
ENGL 1213 English Composition II

Mathematics.....3
MATH 1143 Math Concepts
MATH 1513 College Algebra OR a higher numbered math course

Computer Applications.....2
COMSC 1022 Computers & Information Access

Natural Sciences8
BIOL 1004 Biological Concepts (required)
SCI 1514 Concepts of Physical Science
ASTRO 1904 Astronomy
GEOL 1934 Physical Geology
CHEM 1004 General Chemistry OR higher numbered chemistry course

Humanities & Fine Arts6
ART 1223 Art Survey
LIT 2413 Intro to Literature
MUSIC 1013 Intro to Music I
PHILO 1453 Intro to Philosophy
COMM 1313 Intro to Public Speaking

U.S. History & Government.....6
POLSC 1103 American Government & Politics
HIST 1063 U.S. History

Economic & International Studies6
HIST 1033 World History
GEOG 1103 World Cultural Geography
ECONO 2263 Intro to Macroeconomics **OR**
ECONO 2363 Intro to Microeconomics

Behavioral, Social & Cultural Studies6 - 7
PSYCH 1003 General Psychology
SOCIO 1003 Introduction to Sociology
_____4 World Languages
TECH 1223 Technology and Society
KINES 1133 Wellness Concepts & Exercise Appl

**Engineering Technology Major/Minor
Code No. 131**

The Engineering Technology major/minor includes 53 hours of core requirements, a selected technical specialty, and electives approved by the department to total 130 hours. The Manufacturing Engineering Technology specialization is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – Telephone: (410) 347-7700.

Core Requirements53
COMSC 1433 Visual Basic Programming
MATH 1613 College Trigonometry
MATH 2823 Applied Calculus
MATH 3413 Statistical Methods I
MFET 4020 Prof Certification Requirements
PHY 1044 Basic Physics I
TECH 1101 Introduction to Technology
TECH 1203 Engineering Drafting
TECH 1713 Applied Electronics
TECH 2513 Fabrication Processes I
TECH 3113 Industrial Safety
TECH 3143 Technical Presentations
TECH 3203 Computer Aided Drafting I (CAD)
TECH 3263 Machine Drafting I
TECH 3463 Manufacturing Operations I
TECH 3613 Power Systems
TECH 4373 Economic Decision Analysis
TECH 4433 Quality Control
TECH 4493 Manufacturing Operations II

Majors must select one specialization from the following technical areas.

Manufacturing Engineering Technology
Manufacturing Requirements32
MFET 3183 Statics & Strengths
MFET 3433 Automation/Robotics
MFET 4443 Material Handling/Facility Planning
MFET 4951 Capstone I
MFET 4962 Capstone II
TECH 3413 Manufacturing Processes
TECH 3513 Materials Testing & Analysis
TECH 3523 Fabrication Processes II
TECH 3813 Electro/Mechanical Controls
TECH 4454 Computer Aided Manuf (CAM)
TECH 4514 Machine Tool Processes

Computer Engineering Technology33
Electronics Requirements15
TECH 3833 Communications Electronics
TECH 3843 Telecommunications
TECH 4813 Networking Electronics
TECH 4823 Digital Electronics
TECH 4833 Microcomputer Electronics

Electronics Electives.....3
TECH 3813 Electro/Mechanical Controls
TECH 3853 Electronic Instrumentation
TECH 3863 Electronic Troubleshooting
TECH 4843 Programmable Controllers

Computer Science Required.....6
COMSC 1033 Computer Science I
COMSC 1053 Computer Science II

Computer Science Electives9
Computer Science Electives (by advisement) to total 9 hours.

CONTINUED ON NEXT PAGE

Environmental Engineering Technology

Environmental Requirements 34

ALHLT	4355	Microbiology
CHEM	1203	General Chemistry I
CHEM	1252	General Chemistry I Lab
CHEM	1303	General Chemistry II
CHEM	1352	General Chemistry II Lab
CHEM	2114	Organic/Biochemistry
CHEM	2114L	Organic/Biochemistry Lab
CHEM	3244	Environmental Chemistry
CHEM	4254	Industrial Chem & Environ Reg
GEOL	1934	Physical Geology
TECH	3413	Manufacturing Processes

Electives (by advisement) to total..... 130

Engineering Technology is the specialty of applied engineering that emphasizes the production methods of industry. Specific curricular areas include:

1. Engineering Science
2. Computer Applications/Automation
3. Operations Management
4. Manufacturing Processes
5. Product Design
6. Environmental Health and Safety

Program Educational Objectives

The program educational objectives for the Engineering Technology program with Manufacturing Engineering Technology specialization are to provide students the education and experience necessary to understand, apply, and control the manufacturing process and the production methods of industry.

REGULATIONS PERTAINING TO GRADUATION

Minimum credit hours for graduation.....	130
Minimum credit hours in the liberal arts & sciences.....	55
Minimum credit hours in upper-division (3000/4000 courses).....	40
Minimum credit hours (3000/4000 courses) in major completed at SWOSU	8
Minimum credit hours at SWOSU (15 of the last 30).....	30
Minimum Grade Point Average in all coursework.....	2.00
Minimum Grade Point Average in major	2.00

ENGINEERING TECHNOLOGY (CODE 131)
COMPUTER ENGINEERING TECHNOLOGY SPECIALIZATION
Suggested Course Sequence

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient*.....1	1103 American Gov't.....3	1004 Biological Concepts4	1033 Computer Science I.....3
1022 Comp/Info Access.....2	1213 English Comp II.....3	1044 Basic Physics I4	1063 US History.....3
1101 Intro to Technology.....1	1433 Visual Basic Prog3	1713 Applied Electronics.....3	2513 Fabrication Proc I.....3
1113 English Comp I3	1613 College Trig.....3	2823 Applied Calculus.....3	Gen Educ Crses7
1203 Engineering Draft.....3	3203 CAD I.....3	Gen Educ Crses3	
1223 Tech & Society.....3	Gen Educ Crses.....3	English Proficiency Exam**	
1513 College Algebra3			
Total:16	Total:18	Total:.....17	Total:.....16

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1004 General Chemistry4	3143 Technical Pres.....3	4433 Quality Control.....3	3113 Industrial Safety3
1053 Computer Science II.....3	3613 Power Systems.....3	4813 Networking Elec.....3	3263 Machine Drafting I.....3
3413 Statistical Methods I.....3	3843 Telecommunications.....3	4823 Digital Electronics.....3	4020 Professional Cert.
3463 Mfg Oper I.....3	4493 Mfg Oper II.....3	4833 Microcomputer Elec.....3	4373 Econ Decision Analy3
3833 Communications Elec3	COMSC Elective3	COMSC Elective.....3	COMSC Elective.....3
	Gen Educ Crse3		Electronics Elective.....3
Total:16	Total:18	Total:.....15	Total:.....15

* First time entering Freshmen need to take 1001 Freshman Orientation.
** If applicable. See English Proficiency Program under the General Academic Information Section.

ENGINEERING TECHNOLOGY (CODE 131)
ENVIRONMENTAL ENGINEERING TECHNOLOGY SPECIALIZATION
Suggested Course Sequence

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient*.....1	1103 American Gov't.....3	1044 Basic Physics I4	1004 Biological Concepts4
1022 Comp/Info Access.....2	1213 English Comp II.....3	1063 US History.....3	1934 Physical Geology4
1101 Intro to Technology.....1	1433 Visual Basic Prog3	2823 Applied Calculus.....3	2513 Fabrication Proc I.....3
1113 English Comp I3	1613 College Trigonometry3	3203 CAD I3	Gen Educ Crse.....4
1203 Engineering Draft.....3	1713 Applied Electronics.....3	Gen Educ Crse.....3	
1223 Tech & Society.....3	Gen Educ Crse3	English Proficiency Exam**	
1513 College Algebra3			
Total:16	Total:18	Total:.....16	Total:.....15

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1203 Gen Chem I3	1303 Gen Chem II3	2114 Organic/Biochem4	3244 Environ Chem4
1252 Gen Chem I Lab.....2	1352 Gen Chem II Lab2	2114L Organic/Biochem Lab	4020 Professional Cert
3143 Technical Pres.3	3413 Mfg Processes.....3	3113 Industrial Safety3	4254 Industrial Chem.....4
3263 Machine Drafting I.....3	4373 Econ Decision Analysis.....3	3613 Power Systems.....3	4355 Microbiology.....5
3413 Stat Methods I3	Gen Educ Crses.....6	4433 Quality Control.....3	4493 Mfg Oper II3
3463 Mfg. Oper. I.....3		Gen Educ Crse.....3	
Total:17	Total:17	Total:.....16	Total:.....16

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.

ENGINEERING TECHNOLOGY (CODE 131)
MANUFACTURING ENGINEERING TECHNOLOGY SPECIALIZATION
Suggested Course Sequence

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient* 1	1213 English Comp II3	1004 Biological Concepts.....4	1063 US History 3
1022 Comp/Info Access.....2	1223 Tech & Society3	1044 Basic Physics I.....4	1713 Applied Elec. 3
1101 Intro to Technology1	1433 Visual Basic Prog3	2823 Applied Calculus.....3	3523 Fab Proc II 3
1103 American Gov't3	1613 College Trigonometry3	3203 CAD I.....3	Gen Educ Crses..... 6
1113 English Comp I3	2513 Fab. Proc. I3	Gen Educ Crses.....3	
1203 Engineering Draft.....3	Gen Educ Crses3	English Proficiency Exam**	
1513 College Algebra3			
Total: 16	Total: 18	Total: 17	Total: 15

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1004 General Chemistry4	3113 Industrial Safety.....3	3513 Materials Test3	4020 Professional Cert
3143 Tech. Pres..... 3	3263 Machine Drafting I.....3	3433 Automation/Robotics3	4373 Econ Decision Analy 3
3183 Statics & Strengths.....3	3413 Mfg Processes.....3	3613 Power Systems.....3	4443 Materials Handlg F/P 3
3413 Statistical Methods I3	3463 Mfg Oper I.....3	4433 Quality Control3	4454 Comp Aided Mfg 4
3813 Electro/Mech Controls.....3	Elective2	4514 Machine Tool Proc4	4493 3463 Mfg Oper II..... 3
	Gen Educ Crse3	4951 Capstone I1	4962 Capstone II..... 2
Total: 16	Total: 17	Total: 17	Total: 15

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.

BACHELOR OF SCIENCE INDUSTRIAL TECHNOLOGY

GENERAL EDUCATION

Courses that are **required** are in bold type.
Courses that are *recommended* are in italics.

TOTAL HOURS	43 - 44
Composition	6
ENGL 1113 English Composition I	
ENGL 1213 English Composition II	
Mathematics	3
MATH 1143 Math Concepts	
MATH 1513 College Algebra OR	
higher numbered math course	
Computer Applications	2
COMSC 1022 Computers & Information Access	
Natural Sciences	8
BIOL 1004 Biological Concepts	
SCI 1514 Concepts of Physical Science	
ASTRO 1904 Astronomy	
GEOL 1934 Physical Geology	
CHEM 1004 General Chemistry OR	
higher numbered chemistry course	
Humanities & Fine Arts	6
ART 1223 Art Survey	
LIT 2413 Intro to Literature	
MUSIC 1013 Intro to Music I	
PHILO 1453 Intro to Philosophy	
COMM 1313 Intro to Public Speaking	
U.S. History & Government	6
POLSC 1103 American Government & Politics	
HIST 1063 U.S. History	
Economic & International Studies	6
HIST 1033 World History	
GEOG 1103 World Cultural Geography	
ECONO 2263 Intro to Macroeconomics OR	
ECONO 2363 Intro to Microeconomics	
Behavioral, Social Science, & Cultural Studies	6-7
PSYCH 1003 General Psychology	
SOCIO 1003 Introduction to Sociology	
_____4 World Languages	
TECH 1223 Technology & Society	
KINES 1133 Wellness Concepts & Exercise Appl	

Industrial Technology Major/Minor Code No. 135

The Industrial Technology major/minor includes a 40-hour core requirement, 12 hours of management, 24 hours from a selected technology, and a balance of 3000/4000 electives approved by the department to total 120 hours.

Core Requirements	41
CHEM 1004 General Chemistry	
MATH 1613 College Trigonometry	
OR MATH 3413 Statistical Methods	
OR MATH 3433 Statistics	
MFET 4020 Professional Certification Requirements	
TECH 1101 Introduction to Technology	
TECH 1203 Engineering Drafting	
TECH 1313 Wood Materials & Processes	
TECH 1713 Applied Electronics	
TECH 2513 Fabrication Processes I	
TECH 3113 Industrial Safety	
TECH 3143 Technical Presentations	
TECH 3203 Computer Aided Drafting I (CAD)	
TECH 3453 Industrial Plastics	
TECH 3463 Manufacturing Operations I	
TECH 3613 Power Systems	
TECH 4123 Industrial Supervision	
Management electives (by advisement)	12
ACCTG 2213 Principles of Financial Accounting	
ACCTG 2313 Principles of Managerial Accounting	
COMSC 1433 Visual Basic Programming	
ECONO 2263 Introduction to Macroeconomics	
ECONO 2363 Introduction to Microeconomics	
GEBUS 3123 Legal Environment of Business	
MATH 3413 Statistical Methods	
OR MATH 3433 Statistics I	
MNGMT 3233 Management	
MNGMT 3333 Personnel/Human Resource Mngmt.	
MRKTG 3143 Principles of Marketing	
TECH 3173 Environmental Regulations	
TECH 4433 Quality Control	
TECH 4443 Material Handling and Facility Plng.	
TECH 4493 Manufacturing Operations II	
TECH 4900 Orientation to Industrial Internship	
TECH 4916 Industrial Internship	

Majors must select one specialization from the following technology areas.

Electronics Technology	24
Required Courses	18
TECH 1813 Electronic Circuit Analysis	
TECH 2813 Adv. Electronic Circuit Analysis	
TECH 3823 Industrial Electronics	
TECH 4823 Digital Electronics	
TECH 4833 Microcomputer Electronics	
TECH 4843 Programmable Controllers	
Approved Electives	6

(CONTINUED ON NEXT PAGE)

Environmental Technology..... 24
 Required Courses 21
 BIOL 2204 Introductory Zoology
 CHEM 1203 General Chemistry I
 CHEM 1252 General Chemistry I (Lab)
 CHEM 1303 General Chemistry II
 CHEM 1352 General Chemistry II (Lab)
 GEOL 1934 Physical Geology
 TECH 3173 Environmental Regulations
 Approved Electives..... 3

Industrial Supervision 24
 Required Courses 15
 MNGMT 3433 Organizational Theory
 TECH 3173 Environmental Regulations
 TECH 3413 Manufacturing Processes
 TECH 4433 Quality Control
 TECH 4493 Manufacturing Operations II
 Approved Electives 9
 (Certification from the American Production and Inventory
 Control Society (APICS) Recommended)

Manufacturing Technology..... 24
 Required Courses 20
 TECH 3263 Machine Drafting I
 TECH 3413 Manufacturing Processes
 TECH 3513 Materials Testing & Analysis
 TECH 3523 Fabrication Processes II
 TECH 4454 Computer Aided Manuf (CAM)
 TECH 4514 Machine Tool Processes
 Approved Electives 4

General Technology..... 24
 Approved Electives..... 24

2000-12 Extra institutional Learning Credit may be awarded for current professional licenses and certificates that have been evaluated and approved for credit by the Technology Department. Educational credit recommended by the American Council on Education (ACE), ACE/PONSI, and/or completion of a special skills examination may also be evaluated for credit.
 (1-12 credits lower division maximum 12)

4000-12 Extra institutional Learning credit may be awarded for current professional licenses and certificates that have been evaluated and approved for credit by the Technology Department. Educational credit recommended by the American Council on Education (ACE), ACE/PONSI, and/or completion of a special skills examination may also be evaluated for credit.
 (1-12 credits upper division maximum 12)

Electives (by advisement) to total..... 120

Industrial Technology articulates industrial management with a specialization in electronics technology, environmental technology, industrial supervision, manufacturing technology, and general technology. Technical concepts and experiences are supported with courses in applied mathematics, science, and management. A supervised industrial internship completes the program. Specific curricular emphases include:

1. The analysis of industrial materials.
2. The identification of production processes.
3. An examination of the concepts of industrial management and human relations.
4. The solving of technical problems found in industry.
5. The development of skills relating to a specific area of specialization.

The mission of the Industrial Technology Program is to provide students the education and experience necessary to successfully perform the functions of an industrial manager.

* SDE Guidelines and Procedures Handbook for Certification, page 3, and OK Regents for Higher Education Rule 11-2-24 state that courses classified as professional teacher education must be acquired from a four-year accredited program.

REGULATIONS PERTAINING TO GRADUATION

Minimum credit hours for graduation 120
 Minimum credit hours in the liberal arts & sciences..... 55
 Minimum credit hours in upper-division
 (3000/4000 courses)..... 40
 Minimum credit hours (3000/4000 courses)
 in major completed at SWOSU 8
 Minimum credit hours at SWOSU (15 of the last 30)..... 30
 Minimum Grade Point Average in all coursework 2.00
 Minimum Grade Point Average in major 2.00

**INDUSTRIAL TECHNOLOGY (CODE 135)
ELECTRONICS TECHNOLOGY SPECIALIZATION
Suggested Course Sequence**

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient*..... 1	1213 English Comp II..... 3	1103 American Gov't..... 3	1004 Biological Concepts..... 4
1022 Comp/Info Access..... 2	1223 Tech & Society 3	1514 Conc. Phy. Science..... 4	2513 Fabrication Proc I..... 3
1101 Intro to Technology..... 1	1613 College Trig 3	1813 Electr Circuit Analy 3	2813 Adv Elec Circuit Analy..... 3
1113 English Comp I 3	OR 3413 Stat Methods 3	Gen Educ Crses 6	Electronic Elective 3
1203 Engineering Draft..... 3	OR 3433 Statistics..... 3	English Proficiency Exam**	Gen Educ Crses 3
1313 Wood Mat & Proc 3	1713 Applied Electronics..... 3		
1513 College Algebra 3	Gen Educ Crse 3		
Total: 16	Total 15	Total: 16	Total: 16

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1004 General Chemistry 4	3113 Industrial Safety 3	3463 Mfg Oper I..... 3	3823 Industrial Electronics. 3
1063 US History..... 3	3143 Tech Presentation 3	4823 Digital Electronics..... 3	4123 Industrial Supv 3
3203 CAD I 3	3453 Industrial Plastics..... 3	4833 Microcomputer Elect..... 3	Electronic Elective 3
3613 Power Systems 3	4843 Program Controllers..... 3	Gen Educ Crse..... 6	Management Elective..... 6
Management Elective..... 3	Management Elective..... 3		
Total: 16	Total: 15	Total: 15	Total: 15

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.

**INDUSTRIAL TECHNOLOGY (CODE 135)
ENVIRONMENTAL TECHNOLOGY SPECIALIZATION
Suggested Course Sequence**

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient*..... 1	1213 English Comp II..... 3	1004 Gen Chem..... 3	1004 Biological Concepts..... 4
1022 Comp/Info Access..... 2	1223 Tech & Society 3	1063 US History..... 3	1103 American Gov't..... 3
1101 Intro to Technology..... 1	1613 College Trig 3	1514 Conc Physical Sci..... 4	1203 Gen Chem I 3
1113 English Comp I 3	OR 3413 Stat Methods 3	Gen. Educ. Crses..... 6	1252 Gen Chem I Lab..... 2
1203 Engineering Draft..... 3	OR 3433 Statistics..... 3	English Proficiency Exam**	2513 Fabrication Proc I..... 3
1313 Wood Mat & Proc 3	1713 Applied Electronics..... 3		
1513 College Algebra 3	Gen Educ Crses 3		
Total: 16	Total: 15	Total: 16	Total: 15

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1303 Gen Chem II..... 3	3113 Industrial Safety 3	3463 Mfg Oper I..... 3	1934 Physical Geology 4
1352 Gen Chem II Lab..... 2	3173 Environ Reg 3	Management Elective..... 6	3143 Technical Pres 3
2204 Intro Zoology 4	3453 Industrial Plastics..... 3	Gen Educ Crse..... 3	4123 Industrial Supv 3
3203 CAD I 3	3613 Power Systems 3	Tech Elective..... 3	Management Elective..... 3
Management Elective..... 3	Gen Educ Crse 3		
Total: 15	Total: 15	Total: 15	Total: 13

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.

INDUSTRIAL TECHNOLOGY (CODE 135)
MANUFACTURING TECHNOLOGY SPECIALIZATION
Suggested Course Sequence

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient* 1	1022 Comp/Info Access.....2	1004 General Chemistry4	1103 American Gov't.....3
1004 Biological Concepts 4	1101 Intro to Technology1	1313 Wood Mat & Proc.....3	1713 Applied Elec3
1113 English Comp I 3	1203 Engineering Draft.....3	3203 CAD I.....3	2513 Fabrication Proc I3
1223 Technology & Society 3	1213 English Comp II.....3	Gen Educ Crse6	Gen Educ Crses9
1513 College Algebra 3	1514 Conc Physical Sci4	English Proficiency Exam**	
	1613 College Trig3		
	OR 3413 Stat Methods3		
	OR 3433 Statistics3		
Total: 14	Total:16	Total:16	Total: 18

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
3143 Technical Pres 3	1063 US History3	4514 Machine Tool Proc4	4123 Industrial Supv3
3463 Manufacturing Ops I 3	3263 Machine Drafting I.....3	Manufact Electives4	4454 Computer Aided Mfg.....4
3513 Materials Testing 3	3413 Manufact Processes.....3	Management Electives6	Managmt Elective6
3113 Industrial Safety 3	3453 Industrial Plastics3		
3613 Power Systems 3	3523 Fabrication Process II3		
Total: 15	Total:15	Total:14	Total: 13

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.

INDUSTRIAL TECHNOLOGY (CODE 135)
INDUSTRIAL SUPERVISION SPECIALIZATION
Suggested Course Sequence

FIRST YEAR		SECOND YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
1001 Freshman Orient* 1	1103 American Gov't3	1004 Biological Concepts.....4	1004 General Chemistry3
1101 Intro to Technology..... 1	1213 English Comp II.....3	1063 US History3	2513 Fabrication Proc3
1113 English Comp I 3	1223 Tech & Society3	1514 Conc Physical Sci4	Management Elective3
1203 Engineering Draft..... 3	1613 College Trig3	Gen Educ Crses.....5	Gen Educ Crses6
1313 Wood Mat & Proc 3	OR 3413 Stat Methods3	English Proficiency Exam**	
1513 College Algebra 3	OR 3433 Statistics3		
Gen Educ Crses 3	1713 Applied Elec.....3		
Total: 17	Total:15	Total:16	Total: 15

THIRD YEAR		FOURTH YEAR	
FIRST SEMESTER	SECOND SEMESTER	FIRST SEMESTER	SECOND SEMESTER
3203 CAD I 3	3113 Industrial Safety3	3143 Technical Pres3	3173 Environ Regulations3
3463 Manufacturing Ops I 3	3413 Manufact Processes.....3	3433 Admin Theory.....3	4123 Industrial Supv3
Managmt Elective 3	3453 Industrial Plastics3	4433 Quality Control3	Management Elective3
Gen Educ Crse..... 4	3613 Power Systems3	Management Elective3	Approved Elective6
	4493 Manufact Oper II.....3	Approved Elective3	
Total: 13	Total:15	Total:15	Total: 15

* First time entering Freshmen need to take 1001 Freshman Orientation
** If applicable. See English Proficiency Program under the General Academic Information Section.