

INDUSTRIAL TECHNOLOGY

Overview

Rapid advancements in the Industrial Technology areas make the need for up-to-date education and training essential. TTC's Industrial Technology programs combine classroom study and hands-on training emphasizing skill development, related technical knowledge and general education.

TTC offers a wide array of associate degrees, diplomas and certificates. The associate degree programs require two years of study. The certificate programs require two to four semesters of study and are offered when sufficient interest is generated to support class-size groups. Any of the programs may be completed on a part-time basis, though it will require more time to do so.

General Information

As with all TTC programs, students interested in Industrial Technology programs should consult with a faculty advisor to discuss program requirements, class times and frequency of offerings. For more information, call 843.574.6156.

Cancellation Policy

TTC reserves the right to cancel courses due to inadequate enrollment.

Programs of Study

Associate Degree Programs

General Technology
Horticulture Technology
Machine Tool Technology

Diploma Program

Cosmetology

Certificate Programs

Air Conditioning/Refrigeration Advanced
Air Conditioning/Refrigeration Beginning
Air Conditioning/Refrigeration Mechanics
Automatic Transmission Repair Specialist
Automotive Brakes and Alignment Specialist
Automotive Engine Performance Specialist
Automotive Engine Repair Specialist
Automotive Servicing
Basic Construction Trades
Basic Industrial Work Skills

Computer Numerical Control Operations
Cosmetology
Electrician: Automated Controls
Electrician: Construction
Electrician: Industrial
Esthetics
Golf Course Maintenance
Industrial Maintenance
Industrial Mechanic
Landscape Design
Landscape Management
Machine Tool Technology
Nail Technology
Welding Gas Metal Arc and Flux Cored Arc
Welding Gas Metal Arc and Flux Cored Arc
Advanced
Welding Gas Tungsten Arc
Welding Gas Tungsten Arc Advanced
Welding Shielded Metal Arc
Welding Shielded Metal Arc Advanced
Woodworking

General Technology

Associate in Occupational Technology

Air Conditioning/Refrigeration Course Display

Credit Requirements: 60-84 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

Core

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
IDS 201	Leadership Development	3
or		
ELE HUM	Select one course from Humanities Electives	3
ELE MAT	Select one course from Mathematics Electives	3
ECO 210	Macroeconomics	3
or		
PSY 201	General Psychology	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3

Primary Path

ACR 106	Basic Electricity for HVAC/R	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
ACR 111	Gas Heating	3
ACR 122	Principles of Air Conditioning	5
ACR 131	Commercial Refrigeration	4
ACR 206	Advanced Electricity	2
ACR 210	Heat Pumps	4
ACR 224	Codes and Ordinances	2

Secondary Path

(These are suggested courses. Other courses may be substituted from other primary technical programs. See your program advisor.)

MGT 101	Principles of Management	3
MGT 120	Small Business Management	3
MKT 101	Marketing	3
MKT 130	Customer Service Principles	3

Additional Requirements

ELE GBS	Select two courses from Business Electives	6
---------	--	---

General Technology

Associate in Occupational Technology

Air Conditioning/Refrigeration Mechanics Career Path

Credit Requirements: 60-84 Semester Credit Hours

Day

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

ACR 106	Basic Electricity for HVAC/R	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
		Total 9

Second Semester – Spring

ACR 111	Gas Heating	3
ACR 122	Principles of Air Conditioning	5
ACR 206	Advanced Electricity	2
		Total 10

Third Semester – Summer

ACR 131	Commercial Refrigeration	4
ACR 210	Heat Pumps	4
ACR 224	Codes and Ordinances	2
		Total 10

Fourth Semester – Fall

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
IDS 201	Leadership Development	3
or		
ELE HUM	Select one course from Humanities Electives	3
ECO 210	Macroeconomics	3
or		
PSY 201	General Psychology	3
		Total 12

Fifth Semester – Spring

MGT 101	Principles of Management	3
MGT 120	Small Business Management	3
MKT 101	Marketing	3
SPC 205	Public Speaking	3

or

SPC 209	Interpersonal Communication	3
		Total 12

Sixth Semester – Summer

ELE MAT	Select one course from Mathematics Electives	3
MKT 130	Customer Service Principles	3
ELE GBS	Select two courses from Business Electives	6
		Total 12

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

General Technology

Associate in Occupational Technology

Air Conditioning/Refrigeration Mechanics Career Path

Credit Requirements: 60-84 Semester Credit Hours

Evening

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

ACR 106	Basic Electricity for HVAC/R	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
		Total 9

Second Semester – Spring

ACR 111	Gas Heating	3
ACR 122	Principles of Air Conditioning	5
ACR 206	Advanced Electricity	2
		Total 10

Third Semester – Summer

ACR 131	Commercial Refrigeration	4
ACR 210	Heat Pumps	4
ACR 224	Codes and Ordinances	2
		Total 10

Fourth Semester – Fall

CPT 101	Introduction to Computers	3
		or
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
IDS 201	Leadership Development	3
		or
ELE HUM	Select one course from Humanities Electives	3
		Total 9

Fifth Semester – Spring

ECO 210	Macroeconomics	3
		or
PSY 201	General Psychology	3
ELE MAT	Select one course from Mathematics Electives	3
		Total 6

Sixth Semester – Summer

SPC 205	Public Speaking	3
		or
SPC 209	Interpersonal Communication	3
MGT 101	Principles of Management	3
		Total 6

Seventh Semester – Fall

MGT 120	Small Business Management	3
MKT 101	Marketing	3
MKT 130	Customer Service Principles	3
		Total 9

Eighth Semester – Spring

ELE GBS	Select two courses from Business Electives	6
		Total 6

Ninth Semester – Summer

*EET 113	Electrical Circuits I	4
*IMT 163	Problem Solving for Mechanical Applications	3
ECO 210	Macroeconomics	3
		or
PSY 110	Applied Psychology	3
		or
PSY 201	General Psychology	3
		Total 10

Tenth Semester – Fall

*EEM 131	Solid State Devices	4
		Total 7

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

General Technology

Associate in Occupational Technology

Automotive Technology Course Display

Credit Requirements: 60-84 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements. Automotive Technology students must have a valid driver's license.

Core Curriculum Requirements

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
IDS 201	Leadership Development	3
or		
ELE HUM	Select one course from Humanities Electives	3
ELE MAT	Select one course from Mathematics Electives	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
		Total 18

Primary Path

AUT 101	Engine Fundamentals	3
AUT 103	Engine Reconditioning	4
AUT 111	Brakes	3
AUT 116	Manual Transmission and Axle	4
AUT 122	Suspension and Alignment	4
AUT 131	Electrical Systems	3
AUT 133	Electrical Fundamentals	3
AUT 149	Ignition and Fuel Systems	4

Secondary Path

MGT 101	Principles of Management	3
MGT 120	Small Business Management	3
MKT 101	Marketing	3
MKT 130	Customer Service Principles	3

Additional Requirements

AUT 145	Engine Performance	3
AUT 152	Automatic Transmission	4
AUT 153	Automatic Transmission Diagnosis	3
AUT 211	Advanced Brakes	3
AUT 241	Automotive Air Conditioning	4
AUT 247	Electronic Fuel Systems	4
AUT 252	Advanced Automatic Transmission	4
or		
AUT 263	Advanced Automotive Machining	4

General Technology

Associate in Occupational Technology

Automotive Technology Career Path

Credit Requirements: 60-84 Semester Credit Hours

Day

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements. Automotive Technology students must have a valid driver's license.

Recommended Sequence of Courses

First Semester – Fall

AUT 101	Engine Fundamentals	3
AUT 111	Brakes	3
AUT 131	Electrical Systems	3
AUT 133	Electrical Fundamentals	3

Total 12

Second Semester – Spring

AUT 103	Engine Reconditioning	4
AUT 145	Engine Performance	3
AUT 149	Ignition and Fuel Systems	4
AUT 241	Automotive Air Conditioning	4

Total 15

Third Semester – Summer

AUT 116	Manual Transmission and Axle	4
AUT 122	Suspension and Alignment	4
AUT 152	Automatic Transmission	4

Total 12

Fourth Semester – Fall

**AUT 263	Advanced Automotive Machining	4
or		
**CWE	Cooperative Work Experience	3
ELE MAT	Select one course from Mathematics Electives	3
*MGT 120	Small Business Management	3
*MKT 101	Marketing	3

Total 12 or 13

Fifth Semester – Spring

AUT 153	Automatic Transmission Diagnosis	3
**AUT 252	Advanced Automatic Transmission	4
IDS 201	Leadership Development	3
CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
*MKT 130	Customer Service Principles	3

Total 15 or 19

Sixth Semester – Summer

AUT 211	Advanced Brakes	3
AUT 247	Electronic Fuel Systems	4
*MGT 101	Principles of Management	3
PSY 201	General Psychology	3
or		
PSY 110	Applied Psychology	3
or		
ECO 210	Macroeconomics	3

SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3

Total 16

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

***Select one course from this group.*

General Technology

Associate in Occupational Technology

Automotive Technology Career Path

Credit Requirements: 60-84 Semester Credit Hours

Evening

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements. Automotive Technology students must have a valid driver's license.

Recommended Sequence of Courses

First Semester – Fall

AUT 101	Engine Fundamentals	3
AUT 133	Electrical Fundamentals	3

Total 6

Second Semester – Spring

AUT 122	Suspension and Alignment	4
AUT 131	Electrical Systems	3

Total 7

Third Semester – Summer

AUT 111	Brakes	3
AUT 241	Automotive Air Conditioning	4

Total 7

Fourth Semester – Fall

AUT 116	Manual Transmission and Axle	4
AUT 152	Automatic Transmission	4

Total 8

Fifth Semester – Spring

AUT 145	Engine Performance	3
AUT 149	Ignition and Fuel Systems	4
Total		7

Sixth Semester – Summer

AUT 103	Engine Reconditioning	4
*MKT 101	Marketing	3
Total		7

Seventh Semester – Fall

**AUT 263	Advanced Automotive Machining	4
or		
**CWE	Cooperative Work Experience	3
CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ELE MAT	Select one course from Mathematics Electives	3
Total		9 or 10

Eighth Semester – Spring

AUT 153	Automatic Transmission Diagnosis	3
**AUT 252	Advanced Automatic Transmission	4
*MGT 101	Principles of Management	3
*MKT 130	Customer Service Principles	3
Total		9 or 13

Ninth Semester – Summer

AUT 211	Advanced Brakes	3
AUT 247	Electronic Fuel Systems	4
*MGT 120	Small Business Management	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
Total		13

Tenth Semester – Fall

ENG 101	English Composition I	3
IDS 201	Leadership Development	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
Total		9

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

***Select one course from this group.*

General Technology

Associate in Occupational Technology Basic Construction Trades Course Display Credit Requirements: 66-70 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
ELE HUM	Select one course from Humanities Electives	3
ELE MAT	Select one course from Mathematics Electives	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
SPC 209	Interpersonal Communication	3

Primary Path

BCT 102	Fundamentals of Building Construction	4
BCT 103	Construction Site Layout	4
BCT 112	Construction Print Reading	2
BCT 138	Residential Wiring	5
BCT 151	Introduction to Residential Plumbing	3
BCT 201	Principles of Roof Construction	4
BCT 203	Exterior and Interior Finishes	5
ELE BCT	Select one course from Basic Construction Trades Electives	1-5

Secondary Path

CET 127	Building Construction and Print Reading	4
CET 230	Construction Management	3
CET 238	Construction Planning and Scheduling	2
CET 245	Cost Estimating	3

Additional Requirements

CET 120	Construction Materials	3
CET 135	Construction Contracts	2
ELE BCT		
ADD	Select one course Basic Construction Trades Additional Electives	3

General Technology

Associate in Occupational Technology

Basic Construction Trades Career Path

Credit Requirements: 66-70 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

BCT 102	Fundamentals of Building Construction	4
BCT 103	Construction Site Layout	4
BCT 112	Construction Print Reading	2
BCT 201	Principles of Roof Construction	4

Total 14

Second Semester – Spring

BCT 138	Residential Wiring	5
BCT 151	Introduction to Residential Plumbing	3
BCT 203	Exterior and Interior Finishes	5

Total 13

Third Semester – Summer

CET 135	Construction Contracts	2
*CET 238	Construction Planning and Scheduling	2
CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
ELE HUM	Select one course from Humanities Electives	3

Total 13

Fourth Semester – Fall

CET 120	Construction Materials	3
*CET 127	Building Construction and Print Reading	4
ELE MAT	Select one course from Mathematics Electives	3
ELE BCT		
ADD	Select one course Basic Construction Trades Additional Electives	3

Total 13

Fifth Semester – Spring

*CET 230	Construction Management	3
*CET 245	Cost Estimating	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
SPC 209	Interpersonal Communication	3
ELE BCT	Select one course Basic Construction Trades Electives	1-5

Total 13-17

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

General Technology

Associate in Occupational Technology

Electrician: Automation and Industrial Course Display

Credit Requirements: 64 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. In many cases, the secondary paths can be substituted for courses in other programs. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

ENG 101	English Composition I	3
MAT 120	Probability and Statistics	3
or		
MAT 170	Algebra, Geometry and Trigonometry I	3
ELE CPT	Select one course from Computer Electives	3
ELE HUM	Select one course from Humanities Electives	3
ELE Oral	Select one course from Oral Electives	3
ELE SSC	Select one course from Behavioral and Social Sciences Electives	3

Primary Path Requirements

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
EEM 131	Solid State Devices	4
EEM 151	Motor Controls I	4
EEM 217	AC/DC Machines with Electrical Codes	4
EEM 221	DC/AC Drives	3
EEM 251	Programmable Controllers	3

Secondary Path Requirements

BCT 140	Commercial Wiring	3
EEM 252	Programmable Controllers Applications	3
IMT 131	Hydraulics and Pneumatics	4
IMT 163	Problem Solving for Mechanical Applications	3

Additional Requirements

BCT 158	Introductory Building Maintenance	5
---------	-----------------------------------	---

General Technology

Associate in Occupational Technology

Electrician: Automation and Industrial Career Path

Credit Requirements: 64 Semester Credit Hours

Recommended Sequence of Courses

First Semester – Fall

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
IMT 163	Problem Solving for Mechanical Applications	3
		Total 13

Second Semester – Spring

EEM 131	Solid State Devices	4
EEM 217	AC/DC Machines with Electrical Codes	4
EEM 251	Programmable Controllers	3
ELE Oral	Select one course from Oral Communications Electives	3
		Total 14

Third Semester – Summer

EEM 151	Motor Controls I	4
EEM 221	DC/AC Drives	3
IMT 131	Hydraulics and Pneumatics	4
ELE CPT	Select one course from Computer Electives	3
		Total 14

Fourth Semester – Fall

EEM 252	Programmable Controllers Applications	3
ENG 101	English Composition I	3
MAT 120	Probability and Statistics	3
or		
MAT 170	Algebra, Geometry and Trigonometry I	3
ELE SSC	Select one course from Behavioral and Social Sciences Electives	3
		Total 12

Fifth Semester – Spring

BCT 140	Commercial Wiring	3
BCT 158	Introductory Building Maintenance	5
ELE HUM	Select one course from Humanities Electives	3
		Total 11

General Technology

Associate in Occupational Technology Electrician: Construction and Industrial Course Display

Credit Requirements: 63 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. In many cases, the secondary paths can be substituted for courses in other programs. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

ENG 101	English Composition I	3
MAT 120	Probability and Statistics	3
or		
MAT 170	Algebra, Geometry and Trigonometry I	3
ELE CPT	Select one course from Computer Electives	3
ELE HUM	Select one course from Humanities Electives	3
ELE Oral	Select one course from Oral Communications Electives	3
ELE SSC	Select one course from Behavioral and Social Sciences Electives	3

Primary Path Requirements

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
EEM 131	Solid State Devices	4
EEM 151	Motor Controls I	4
EEM 217	AC/DC Machines with Electrical Codes	4
EEM 221	DC/AC Drives	3
EEM 251	Programmable Controllers	3

Secondary Path Requirements

BCT 120	Electrical Building Code License Preparation	2
BCT 140	Commercial Wiring	3
BCT 141	Fixtures and Installation	3
or		
CWE	Cooperative Work Experience	3
EEM 165	Residential/Commercial Wiring	4

Additional Requirements

BCT 158	Introductory Building Maintenance	5
---------	-----------------------------------	---

General Technology

Associate in Occupational Technology Electrician: Construction and Industrial Career Path Day

Recommended Sequence of Courses

First Semester – Fall

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
EEM 165	Residential/Commercial Wiring	4
		Total 14

Second Semester – Spring

BCT 140	Commercial Wiring	3
BCT 141	Fixtures and Installation	3
or		
CWE	Cooperative Work Experience	3
EEM 131	Solid State Devices	4
EEM 217	AC/DC Machines with Electrical Codes	4
		Total 14

Third Semester – Summer

BCT 120	Electrical Building Code License Preparation	2
EEM 151	Motor Controls I	4
EEM 221	DC/AC Drives	3
ELE CPT	Select one course from Computer Electives	3
		Total 12

Fourth Semester – Fall

ENG 101	English Composition I	3
MAT 120	Probability and Statistics	3
or		
MAT 170	Algebra, Geometry and Trigonometry I	3
ELE SSC	Select one course from Behavioral and Social Sciences Electives	3
ELE Oral	Select one course from Oral Communications Electives	3
		Total 12

Fifth Semester – Spring

BCT 158	Introductory Building Maintenance	5
EEM 251	Programmable Controllers	3
ELE HUM	Select one course from Humanities Electives	3
		Total 11

General Technology

Associate in Occupational Technology

Engineering Design Graphics Course Display

Credit Requirements: 70 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
HSS 201	Issues in Humanities	3
ELE MAT	Select one course from Mathematics Electives	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3

Primary Path

EGT 109	Introduction to Engineering Design Graphics	3
or		
EGR 275	Introduction to Engineering/Computer Graphics	3
EGT 115	Engineering Graphics II	4
EGT 130	Geometric Dimensioning and Tolerancing Applications	3
EGT 151	Introduction to CAD	3
EGT 152	Fundamentals of CAD	3
EGT 210	Engineering Graphics III	4
EGT 220	Structural and Piping Application	4
EGT 251	Principles of CAD	3
EGT 252	Advanced Computer Aided Design	3

Secondary Path

AET 202	History of Architecture	3
AET 110	Architectural Graphics I	3
AET 111	Architectural Computer Graphics I	3
AET 120	Architectural Graphics II	3
AET 221	Architectural Computer Graphics II	4

Additional Requirements

CET 120	Construction Materials	3
EGT 257	Advanced Civil CAD	3
EGT 265	CAD/CAM Applications	3

General Technology

Associate in Occupational Technology

Engineering Design Graphics Career Path

Credit Requirements: 70 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

EGR 275	Introduction to Engineering/Computer Graphics	3
or		
EGT 109	Introduction to Engineering Design Graphics	3
CET 120	Construction Materials	3
CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
Total 12		

Second Semester – Spring

AET 202	History of Architecture	3
EGT 115	Engineering Graphics II	4
EGT 151	Introduction to CAD	3
HSS 201	Issues in Humanities	3
PSY 201	General Psychology	3
or		
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
Total 16		

Third Semester – Summer

AET 110	Architectural Graphics I	3
EGT 152	Fundamentals of CAD	3
EGT 210	Engineering Graphics III	4
EGT 220	Structural and Piping Application	4
Total 14		

Fourth Semester – Fall

AET 111	Architectural Computer Graphics I	3
EGT 251	Principles of CAD	3
EGT 252	Advanced Computer Aided Design	3
EGT 257	Advanced Civil CAD	3
ELE MAT	Select one course from Mathematics Electives	3
Total 15		

Fifth Semester – Spring

*AET 120	Architectural Graphics II	3
*AET 221	Architectural Computer Graphics II	4
EGT 265	CAD/CAM Applications	3
EGT 130	Geometric Dimensioning and Tolerancing Applications	3
Total 13		

**These courses may be substituted as a group for a different technical subject area of at least 12 semester credit hours, which must be approved by your advisor.*

General Technology

Associate in Occupational Technology

Industrial Maintenance Mechanics Course Display

The Industrial Maintenance Mechanics Program prepares students for employment in industrial equipment maintenance. In addition to the College's core curriculum, students complete course work in at least two technical areas. The following is an example of a career path available. Interested students should talk with their advisors.

For entry into this program, a student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
ELE MAT	Select one course from Mathematics Electives	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
ELE SSC	Select one course from Behavior and Social Sciences Electives	3
ELE HUM	Select one course from Humanities Electives	3
Total 18		

Primary Path

BCT 158	Introductory Building Maintenance	5
EEM 117	AC/DC Circuits I	4
IMT 105	Mechanical Sketching	2
IMT 121	Drive Systems	2
IMT 124	Pumps	2
IMT 131	Hydraulics and Pneumatics	4
IMT 151	Piping Systems	3
IMT 160	Preventive Maintenance	3
IMT 163	Problem Solving for Mechanical Applications	3
Total 28		

Secondary Path

Select one group of courses from Secondary Path options, minimum of 12 credit hours:

Welding

WLD 111	Arc Welding I	4
WLD 118	Gas Metal Arc Welding Ferrous I	4
WLD 132	Inert Gas Welding Ferrous	4
		Total 12

Electrical and Automated Technology

EEM 118	AC/DC Circuits II	4
EEM 151	Motor Controls I	4
EEM 217	AC/DC Machines with Electrical Codes	4
		Total 12

Machine Tool

MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 141	Metals and Heat Treatment	3
MTT 143	Precision Measurements	2
		Total 12

Additional Requirements

Select one group of courses from Additional Requirements (match to Secondary Path group), minimum of five credit hours:

Welding

WLD 110	Welding Safety and Health	1
WLD 141	Weld Quality	2
WLD 201	Welding Metallurgy	2
		Total 5

Electrical and Automated Technology

EEM 107	Industrial Computer Techniques	2
EEM 251	Programmable Controllers	3
		Total 5

Machine Tool Technology

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
		Total 7

General Technology

Associate in Occupational Technology

Industrial Maintenance Mechanics Career Path

Evening

Primary Path Only

See advisor for secondary path sequence and other required courses.

Recommended Sequence of Courses

First Semester – Fall

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
IMT 163	Problem Solving for Mechanical Applications	3
ELE HUM	Select one course from Humanities Electives	3
		Total 9

Second Semester – Spring

IMT 131	Hydraulics and Pneumatics	4
IMT 151	Piping Systems	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
		Total 10

Third Semester – Summer

BCT 158	Introductory Building Maintenance	5
IMT 124	Pumps	2
ELE MAT	Select one course from Mathematics Electives	3
		Total 10

Fourth Semester – Fall

ENG 101	English Composition I	3
IMT 105	Mechanical Sketching	2
IMT 121	Drive Systems	2
		Total 7

Fifth Semester – Spring

EEM 117	AC/DC Circuits I	4
IMT 160	Preventive Maintenance	3
ELE SSC	Select one course from Behavioral and Social Sciences Electives	3
		Total 10

General Technology

Associate in Occupational Technology

Welding Course Display

Credit Requirements: 60-84 Semester Credit Hours

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other

programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Core Curriculum Requirements

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
ENG 101	English Composition I	3
ELE HUM	Select one course from Humanities Electives	3
ELE MAT	Select one course from Mathematics Electives	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3

Primary Path: Select any two concentration groups

Concentration Group 1: Shielded Metal Arc

WLD 101	Cutting Processes	1
WLD 111	Arc Welding I	4
WLD 113	Arc Welding II	4
WLD 114	Advanced Arc Welding	1
WLD 125	Arc Welding Stainless Steel	1
WLD 170	Qualification Welding	4

Concentration Group 2: Gas Tungsten Arc

WLD 132	Inert Gas Welding Ferrous	4
WLD 133	Inert Gas Welding Ferrous Tubing	1
WLD 152	Tungsten Arc Welding	4
WLD 153	Tungsten Arc Welding Stainless Steel Tubing	1
WLD 135	Inert Gas Welding of Aluminum	4
WLD 137	Inert Gas Welding Aluminum Tubing	1

Concentration Group 3: Gas Metal Arc and Flux Cored Arc

WLD 118	Gas Metal Arc Welding Ferrous I	4
WLD 119	Gas Metal Arc Welding Ferrous II	1
WLD 120	Flux Cored Arc Welding I	4
WLD 121	Flux Cored Arc Welding II	1
WLD 122	Gas Metal Arc Welding Nonferrous I	4
WLD 123	Gas Metal Arc Welding Nonferrous II	1

Secondary Path

EGT 109	Introduction to Engineering Design Graphics	3
EGT 114	Welding Print Basics	2
EGT 117	Welding Print Principles	2
EGT 151	Introduction to CAD	3
EGT 152	Fundamentals of CAD	3

Additional Requirements

WLD 110	Welding Safety and Health	1
WLD 141	Weld Quality	2
WLD 201	Welding Metallurgy	2
WLD 240	Robotic Welding and Manufacturing	4

General Technology

Associate in Occupational Technology

Welding Career Path

Credit Requirements: 60-84 Semester Credit Hours Evening

The General Technology major allows students to select course work necessary to become multiskilled technicians. In addition to completing the College's core curriculum, students also complete course work in at least two technical areas. The following is an example of a career path available. The secondary paths may be substituted for courses in other programs' primary path. Interested students should talk with their advisors.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
*WLD 132	Inert Gas Welding Ferrous	4
* WLD 133	Inert Gas Welding Ferrous Tubing	1
WLD 201	Welding Metallurgy	2

Total 10

Second Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
*WLD 152	Tungsten Arc Welding	4
*WLD 153	Tungsten Arc Welding Stainless Steel Tubing	1

Total 9

Third Semester – Summer

*WLD 135	Inert Gas Welding of Aluminum	4
*WLD 137	Inert Gas Welding Aluminum Tubing I	1
		Total 5

Fourth Semester – Fall

EGR 110	Introduction to Computer Environment	3
*WLD 118	Gas Metal Arc Welding Ferrous I	4
*WLD 119	Gas Metal Arc Welding Ferrous II	1
		Total 8

Fifth Semester – Spring

*WLD 120	Flux Cored Arc Welding I	4
*WLD 121	Flux Cored Arc Welding II	1
WLD 240	Robotic Welding and Manufacturing 4	4
		Total 9

Sixth Semester – Summer

*WLD 122	Gas Metal Arc Welding Nonferrous I	4
*WLD 123	Gas Metal Arc Welding Nonferrous II	1
		Total 5

Seventh Semester – Fall

EGT 109	Introduction to Engineering Design Graphics	3
ENG 101	English Composition I	3
PSY 110	Applied Psychology	3
		Total 9

Eighth Semester – Spring

EGT 151	Introduction to CAD	3
ELE MAT	Select one course from Mathematics Electives	3
ELE HUM	Select one course from Humanities Electives	3
		Total 9

Ninth Semester – Summer

EGT 152	Fundamentals of CAD	3
SPC 209	Interpersonal Communication	3
		Total 6

See Humanities Electives.

**Other Welding courses may be substituted as shown in the Primary Path above. Courses shown with * are the Gas Metal Arc and Flux Cored Arc and the Gas Tungsten Arc concentration.*

Horticulture Technology

Associate in Agriculture

Credit Requirements: 68-69 Semester Credit Hours

The Horticulture Technology program prepares students for positions in landscape design and construction, turf supervision, horticultural sales, nursery plant production and landscape maintenance. Students in horticulture must see an advisor for specific scheduling needs. Classes are taught in the Horticulture Technology building, the greenhouse and horticulture gardens. Some courses will transfer to Clemson University's horticulture program. See your advisor for more information.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Recommended Sequence of Courses

First Semester – Fall

HRT 106	Ornamentals	2
HRT 110	Plant Form and Function	4
HRT 111	Foliage Plants	2
HRT 144	Plant Pests	3
ELE	Select one course from the	
MAT/SCI	Mathematics/Natural Sciences Electives	3-4
		Total 14-15

Second Semester – Spring

HRT 102	Landscape Design	4
HRT 107	Woody Ornamentals	2
HRT 125	Soils	4
HRT 240	Pesticides	4
		Total 14

Third Semester – Summer

HRT 108	Annuals and Perennials	2
HRT 139	Plant Propagation	3
ENG 101	English Composition I	3
		Total 8

Fourth Semester – Fall

CPT 101	Introduction to Computers	3
HRT 153	Landscape Construction	3
HRT 171	Landscape Business Techniques	3
HRT 241	Turf Management	3
		Total 12

Fifth Semester – Spring

HRT 130	Greenhouse Production	3
ELE Oral	Select one course from Oral Communications Electives	3
ELE SSC	Select one course from Behavioral Social Sciences Electives	3
SPA 155	Technical Spanish I	3
		Total 12

Sixth Semester – Summer

HRT 121	Commercial Irrigation	3
HRT 254	Landscape Maintenance	2
ELE HUM	Select one course from the Humanities Electives	3
		Total 8

Machine Tool Technology

Associate in Industrial Technology**Credit Requirements: 74 Semester Credit Hours****Day**

The Machine Tool Technology program prepares students for employment in manufacturing industries as machinists, tool makers and machinery repairmen. It teaches basic skills required to operate conventional and computer-controlled machine tools, perform precision measurements and to read and properly interpret blueprints. Students are offered the option of participating in cooperative work experience in industry. The Automated Manufacturing Career Path of the Machine Tool Technology degree is designed to prepare students to work in automated production facilities.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Note: (1) Scheduled courses may be cancelled due to low enrollment. (2) Placement test scores required for entry into degree program.

Recommended Sequence of Courses**First Semester – Fall**

EGT 106	Print Reading and Sketching	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 143	Precision Measurements	2
MTT 240	Specifications	3
		Total 15

Second Semester – Spring

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 141	Metals and Heat Treatment	3
MTT 241	Jigs and Fixtures I	2
		Total 15

Third Semester – Summer

IDS 201	Leadership Development	3
EGT 109	Introduction to Engineering Design Graphics	3
ENG 101	English Composition I	3
		Total 9

Fourth Semester – Fall

IMT 163	Problem Solving for Mechanical Applications	3
MAT 170	Algebra, Geometry and Trigonometry I	3
MTT 125	Machine Tool Theory III	3
MTT 126	Machine Tool Practice III	4
		Total 13

Fifth Semester – Spring

EGT 151	Introduction to CAD	3
MTT 215	Tool Room Machining I	4
MTT 250	Principles of CNC	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
		Total 13

Sixth Semester – Summer

ENG 260	Advanced Technical Communications	3
MTT 253	CNC Programming and Operation	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
		Total 9

Machine Tool Technology

Associate in Industrial Technology

Credit Requirements: 74 Semester Credit Hours

Evening

The Machine Tool Technology program prepares students for employment in manufacturing industries as machinists, tool makers and machinery repairmen. It teaches basic skills required to operate conventional and computer-controlled machine tools, perform precision measurements and to read and properly interpret blueprints. Students are offered the option of participating in cooperative work experience in industry. The Automated Manufacturing Career Path of the Machine Tool Technology degree is designed to prepare students to work in automated production facilities.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Note: (1) Scheduled courses may be cancelled due to low enrollment. (2) Placement test scores required for entry into degree program.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
		Total 10

Second Semester – Spring

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 143	Precision Measurements	2
		Total 9

Third Semester – Summer

MTT 141	Metals and Heat Treatment	3
MTT 240	Specifications	3
		Total 6

Fourth Semester – Fall

MTT 125	Machine Tool Theory III	3
MTT 126	Machine Tool Practice III	4
		Total 7

Fifth Semester – Spring

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
MTT 215	Tool Room Machining I	4
MTT 241	Jigs and Fixtures I	2
		Total 9

Sixth Semester – Summer

EGT 109	Introduction to Engineering Design Graphics	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
		Total 6

Seventh Semester – Fall

EGT 151	Introduction to CAD	3
MAT 170	Algebra, Geometry and Trigonometry I	3
		Total 6

Eighth Semester – Spring

ENG 101	English Composition I	3
MTT 250	Principles of CNC	3
		Total 6

Ninth Semester – Summer

IMT 163	Problem Solving for Mechanical Applications	3
MTT 253	CNC Programming and Operation	3
SPC 205	Public Speaking	3
or		
SPC 209	Interpersonal Communication	3
		Total 9

Tenth Semester – Fall

ENG 260	Advanced Technical Communications	3
IDS 201	Leadership Development	3
		Total 6

Machine Tool Technology

Associate in Industrial Technology

Machine Tool Technology Automated Manufacturing Career Path

Credit Requirements: 75 Semester Credit Hours
Day

The Machine Tool Technology program prepares students for employment in manufacturing industries as machinists, tool makers and machinery repairmen. It teaches basic skills required to operate conventional and computer-controlled machine tools, perform precision measurements and to read and properly interpret blueprints. Students are offered the option of participating in cooperative work experience in industry. The Automated Manufacturing Career Path of the Machine Tool Technology degree is designed to prepare students to work in automated production facilities.

For entry into this program the student must be a high school graduate or possess a GED and take the College's placement test or meet the College's SAT or ACT requirements.

Note: (1) Scheduled courses may be cancelled due to low enrollment. (2) Placement test scores required for entry into degree program.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
IMT 102	Industrial Safety	2
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 143	Precision Measurements	2
MTT 240	Specifications	3
		Total 17

Second Semester – Spring

EEM 117	AC/DC Circuits I	4
EGT 109	Introduction to Engineering Design Graphics	3
MAT 170	Algebra, Geometry and Trigonometry I	3
MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
		Total 17

Third Semester – Summer

CPT 101	Introduction to Computers	3
or		
EGR 110	Introduction to Computer Environment	3
EEM 251	Programmable Controllers	3
ENG 101	English Composition I	3
IMT 163	Problem Solving for Mechanical Applications	3
MTT 250	Principles of CNC	3
		Total 15

Fourth Semester – Fall

EEM 252	Programmable Controllers Applications	3
EGT 151	Introduction to CAD	3
MTT 215	Tool Room Machining I	4
MTT 253	CNC Programming and Operation	3
ECO 210	Macroeconomics	3
or		
PSY 110	Applied Psychology	3
or		
PSY 201	General Psychology	3
		Total 16

Fifth Semester – Spring

IDS 201	Leadership Development	3
SPC 209	Interpersonal Communication	3
IMT 131	Hydraulics and Pneumatics	4
		Total 10

Cosmetology

Diploma: Business

Credit Requirements: 48 Semester Credit Hours
Day

The Cosmetology program prepares students for entry into the cosmetology career field by providing instruction in basic skills and theory.

Admission into this program requires qualifying scores on SAT, ACT or the TTC placement test. High school graduation is not required if you are at least 18 years old and can provide proof of 10th grade completion. (No correspondence schools.)

Recommended Sequence of Courses

First Semester – Fall

COS 112	Shampoo and Rinses	4
COS 108	Nail Care	3
COS 120	Manikin Practice	3
COS 206	Chemical Hair Waving	3
		Total 13

Second Semester – Spring

COS 110	Scalp and Hair Care	3
COS 101	Fundamentals of Cosmetology	3
COS 106	Facials and Makeup	3
COS 220	Cosmetology Clinical Practice I	3
		Total 12

Third Semester – Summer

COS 116	Hair Styling I	4
COS 210	Hair Coloring	3
MAT 155	Contemporary Mathematics	3
		Total 10

Fourth Semester – Fall

COS 114	Hair Shaping	4
COS 222	Cosmetology Clinical Practice II	3
ENG 150	Basic Communications	3
PSY 110	Applied Psychology	3
		Total 13

Air Conditioning/ Refrigeration Beginning Certificate

Certificate: Industrial Technology

Credit Requirements: 14 Semester credit Hours

This is a basic ACR fundamentals certificate designed to offer documentation of basic knowledge in the ACR field. This prepares students for entry positions where multiple trades are required such as in apartment and/or building maintenance. Other positions such as counter/distributor HVAC sales would also benefit.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester-Fall

ACR 106	Basic Electricity	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
		Total 9

Second Semester-Spring

ACR 122	Principles of Air Conditioning	5
		Total 5

Air Conditioning/ Refrigeration Mechanics

Certificate: Industrial Technology

Credit Requirements: 29 Semester Credit Hours Day

The Air Conditioning/Refrigeration Mechanics program prepares students for entry-level positions in the residential and light commercial heating and air conditioning field.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

ACR 106	Basic Electricity for HVAC/R	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
		Total 9

Second Semester – Spring

ACR 111	Gas Heating Principles	3
ACR 122	Principles of Air Conditioning	5
ACR 206	Advanced Electricity	2
		Total 10

Third Semester – Summer

ACR 131	Commercial Refrigeration	4
ACR 210	Heat Pumps	4
ACR 224	Codes and Ordinances	2
		Total 10

Air Conditioning/ Refrigeration Advanced Certificate

Certificate: Industrial Technology

Credit Requirements: 13 Semester Credit Hours

This certificate covers more advanced principles in ACR for individuals who have been in the field and desire more formal education or students who have an excellent understanding of basic ACR principles and desire more specific training on equipment and/or troubleshooting. It is strongly recommended that students who do not have a solid fundamental ACR foundation start with the ACR Beginning Certificate

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Fall Start

First Semester-Fall

ACR 210	Heatpumps	4
ACR 131	Commercial Refrigeration	4
		Total 8

Second Semester-Spring

ACR 111	Gas Heating	3
ACR 206	Advanced Electricity	2
		Total 5

Spring Start

First Semester-Spring

ACR 111	Gas Heating	3
ACR 206	Advanced Electricity	2
		Total 5

Second Semester-Fall

ACR 131	Commercial Refrigeration	4
ACR 210	Heatpumps	4
		Total 8

Automatic Transmission Repair Specialist

Certificate: Industrial Technology

Credit Requirements: 11 Semester Credit Hours

The Automatic Transmission Repair Specialist certificate program provides instruction on the theory, service and repair of automobile manual and automatic transmission, and transaxle and conventional drive axles. Graduates of this program should be able to perform most phases of transmission repair including diagnosis, disassembly, measurement, preassembly checks, reassembly and unit testing. Graduates with the required work experience should be prepared for the ASE certification tests in Automatic Transmission and Transaxle and Manual Drive Train and Axles.

Admission into this program requires a valid driver's license and qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

AUT 152	Automatic Transmission	4
AUT 153	Automatic Transmission Diagnosis	3
		Total 7

Second Semester – Summer

*AUT 252	Advanced Automatic Transmission	4
		Total 4

* Prerequisite AUT 152

Automotive Brakes and Alignment Specialist

Certificate: Industrial Technology

Credit Requirements: 10 Semester Credit Hours

The Automotive Brakes and Alignment Specialist program provides instruction in the theory, diagnosis and repair of automobile steering and braking systems. Graduates of this program should be able to service and repair the hydraulic, vacuum and mechanical components of automobile braking systems, and to diagnose, adjust and repair components of manual and power assist steering systems. Graduates with the required work experience should be prepared for the ASE certification tests in Brakes and Suspension and Steering.

Admission into this program requires a valid driver's license and qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

AUT 122	Suspension and Alignment	4
		Total 4

Second Semester – Summer

AUT 111	Brakes	3
AUT 211	Advanced Brakes	3
		Total 6

Automotive Engine Performance Specialist

Certificate: Industrial Technology

Credit Requirements: 11 Semester Credit Hours

This certificate program provides instruction on the theory, diagnosis and repair of engine fuel, electrical and emission control systems. Graduates of this program should be able to evaluate, diagnose and repair carbureted and fuel-injected automobile fuel systems, conventional and electronic ignition systems, emission control systems, and on-board, computer-managed engine systems. Graduates with the required work experience should be prepared for the ASE certification test in Engine Performance.

Admission into this program requires a valid driver's license, qualifying scores on SAT, ACT or TTC's placement test, and successful completion of AUT 133 or departmental approval. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

*AUT 145	Engine Performance	3
AUT 149	Ignition and Fuel Systems	4
		Total 7

Second Semester – Summer

*AUT 247	Electronic Fuel Systems	4
		Total 4

*AUT 149 Prerequisite

Automotive Engine Repair Specialist

Certificate: Industrial Technology

Credit Requirements: 11 Semester Credit Hours

The Automotive Engine Repair Specialist certificate program provides instruction on the theory, service and repair of automobile engines. Graduates of this program should be able to perform all phases of engine repair including diagnosis, disassembly, measurement, machining and reconditioning of components, reassembly and run-in of engines. Graduates with the required work experience should be prepared for the ASE certification test in Engine Repair.

Admission into this program requires a valid driver's license and qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

AUT 101	Engine Fundamentals	3
		Total 3

Second Semester – Summer

AUT 103	Engine Reconditioning	4
		Total 4

Third Semester – Fall

AUT 263	Advanced Automotive Machining	4
		Total 4

Automotive Servicing

Certificate: Industrial Technology

Credit Requirements: 39 Semester Credit Hours

Day

The Automotive Servicing program prepares students for employment in the automotive servicing industry. This program teaches the basic skills required for the diagnosis, maintenance and repair of passenger cars and light trucks, through theory and shop instruction.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

AUT 101	Engine Fundamentals	3
AUT 111	Brakes	3
AUT 131	Electrical Systems	3
AUT 133	Electrical Fundamentals	3
		Total 12

Second Semester – Spring

AUT 103	Engine Reconditioning	4
AUT 145	Engine Performance	3
AUT 149	Ignition and Fuel Systems	4
AUT 241	Automotive Air Conditioning	4
		Total 15

Third Semester – Summer

AUT 116	Manual Transmission and Axle	4
AUT 122	Suspension and Alignment	4
AUT 152	Automatic Transmission	4
		Total 12

Automotive Servicing

Certificate: Industrial Technology

Credit Requirements: 39 Semester Credit Hours

Evening

The Automotive Servicing program prepares students for employment in the automotive servicing industry. This program teaches the basic skills required for the diagnosis, maintenance and repair of passenger cars and light trucks, through theory and shop instruction.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

AUT 101	Engine Fundamentals	3
AUT 133	Electrical Fundamentals	3
Total		6

Second Semester – Spring

AUT 122	Suspension and Alignment	4
AUT 131	Electrical Systems	3
Total		7

Third Semester – Summer

AUT 111	Brakes	3
AUT 241	Automotive Air Conditioning	4
Total		7

Fourth Semester – Fall

AUT 116	Manual Transmission and Axle	4
AUT 152	Automatic Transmission	4
Total		8

Fifth Semester – Spring

AUT 145	Engine Performance	3
AUT 149	Ignition and Fuel Systems	4
Total		7

Sixth Semester – Summer

AUT 103	Engine Reconditioning	4
Total		4

Basic Construction Trades

Certificate: Industrial Technology

Credit Requirements: 27 Semester Credit Hours

This certificate program teaches basic residential construction skills. A combination of credit courses is used to teach and build a house. The program prepares students for entry into the residential construction industry.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

BCT 102	Fundamentals of Building Construction	4
BCT 103	Construction Site Layout	4
BCT 112	Construction Print Reading	2
BCT 201	Principles of Roof Construction	4
Total		14

Second Semester – Spring

BCT 138	Residential Wiring	5
BCT 151	Introduction to Residential Plumbing	3
BCT 203	Exterior and Interior Finishes	5
Total		13

Basic Industrial Work Skills

Certificate: Industrial Technology

Credit Requirements: 25 Semester Credit Hours

This certificate is designed to offer employability skills for the industrial environment and to prepare the student for various entry level positions at industrial and manufacturing work sites. Topics such as safety, communication, problem solving and computer use are introduced.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Summer

IMT 102	Industrial Safety	2
*CWE 114	Cooperative Work Experience	4
Total		6

Second Semester – Fall

IMT 163	Problem Solving for Mechanical Applications	3
ENG 150	Basic Communications	3
		Total 6

Third Semester – Spring

BCT 158	Introductory Building Maintenance	5
*CWE 122	Cooperative Work Experience	2
		Total 7

Fourth Semester – Summer

QAT 110	Manufacturing Methods	3
CPT 101	Introduction to Computers	3
		Total 6

* Students may substitute the following for CWE 114 and CWE 122: 6 credit hours from one of the following categories: IMT, WLD, ACR, MTT or EEM. Courses selected must be from the same course category and are subject to advisor approval.

Computer Numerical Control Operations

Certificate: Industrial Technology

Credit Requirements: 19 Semester Credit Hours

Day

The Computer Numerical Control Operations program provides instruction in the theory, operation and programming of Computer Numerical Control (CNC) machine tools. This program teaches the basic skills required to read and interpret blueprints, operate CNC turning centers and machining centers, perform setups for CNC machine tools, perform tool off-sets, generate CNC program code manually or using computer software, edit CNC programs, upload and download CNC programs from off-line computers to CNC machine tools, and measure and inspect parts produced using CNC technology.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
MTT 101	Introduction to Machine Tool	2
		Total 5

Second Semester – Spring

EGT 109	Introduction to Engineering Design Graphics	3
MTT 143	Precision Measurements	2
		Total 5

Third Semester – Summer

EGT 265	CAD/CAM Applications	3
MTT 250	Principles of CNC	3
		Total 6

Fourth Semester – Fall

MTT 253	CNC Programming and Operation	3
		Total 3

Computer Numerical Control Operations

Certificate: Industrial Technology

Credit Requirements: 19 Semester Credit Hours

Evening

The Computer Numerical Control Operations program provides instruction in the theory, operation and programming of Computer Numerical Control (CNC) machine tools. This program teaches the basic skills required to read and interpret blueprints, operate CNC turning centers and machining centers, perform setups for CNC machine tools, perform tool off-sets, generate CNC program code manually or using computer software, edit CNC programs, upload and download CNC programs from off-line computers to CNC machine tools, and measure and inspect parts produced using CNC technology.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
MTT 101	Introduction to Machine Tool	2
		Total 5

Second Semester – Spring

EGT 109	Introduction to Engineering Design Graphics	3
MTT 143	Precision Measurements	2
		Total 5

Third Semester – Summer

EGT 265	CAD/CAM Applications	3
MTT 250	Principles of CNC	3
		Total 6

Fourth Semester – Fall

MTT 253	CNC Programming and Operation	3
		Total 3

Cosmetology

Certificate: Business

Credit Requirements: 39 Semester Credit Hours
Day

The curriculum for this certificate prepares students for entry into the cosmetology career field by providing instruction in basic salon service skills.

Admission into this program requires qualifying scores on SAT, ACT or the TTC placement test. High school graduation is not required if you are at least 18 years old and can provide proof of 10th grade completion (no correspondence schools).

Recommended Sequence of Courses

First Semester – Fall

COS 206	Chemical Hair Waving	3
COS 108	Nail Care	3
COS 112	Shampoo and Rinses	4
COS 120	Manikin Practice	3
		Total 13

Second Semester – Spring

COS 110	Scalp and Hair Care	3
COS 106	Facials and Makeup	3
COS 101	Fundamentals of Cosmetology	3
COS 220	Cosmetology Clinical Practice I	3
		Total 12

Third Semester – Summer

COS 116	Hair Styling I	4
COS 210	Hair Coloring	3
		Total 7

Fourth Semester – Fall

COS 114	Hair Shaping	4
COS 222	Cosmetology Clinical Practice II	3
		Total 7

Electrician: Automated Controls

Certificate: Industrial Technology

Credit Requirements: 28 Semester Credit Hours
Day

The Electrician: Automated Controls certificate program prepares you for employment in industry as an automated controls maintenance technician. Emphasis is placed on electrical/electronic theory,

programmable controllers and their applications, and hydraulic and pneumatic systems.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
		Total 10

Second Semester – Spring

BCT 158	Introductory Building Maintenance	5
EEM 251	Programmable Controllers	3
		Total 8

Third Semester – Summer

IMT 131	Hydraulics and Pneumatics	4
		Total 4

Fourth Semester – Fall

EEM 252	Programmable Controllers Applications	3
IMT 163	Problem Solving for Mechanical Applications	3
		Total 6

Electrician: Automated Controls

Certificate: Industrial Technology

Credit Requirements: 28 Semester Credit Hours
Evening

The Electrician: Automated Controls certificate program prepares you for employment in industry as an automated controls maintenance technician. Emphasis is placed on electrical/electronic theory, programmable controllers and their applications, and hydraulic and pneumatic systems.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
		Total 8

Second Semester – Summer

BCT 158	Introductory Building Maintenance	5
EEM 107	Industrial Computer Techniques	2
		Total 7

Third Semester – Fall

EEM 251	Programmable Controllers	3
IMT 163	Problem Solving for Mechanical Applications	3
		Total 6

Fourth Semester – Spring

EEM 252	Programmable Controllers Applications	3
IMT 131	Hydraulics and Pneumatics	4
		Total 7

Electrician: Construction

Certificate: Industrial Technology

Credit Requirements: 27 Semester Credit Hours

Day

The Electrician: Construction certificate program prepares you for employment in the electrical construction trade. Emphasis is placed on electrical theory, wiring techniques, electrical equipment installations and license preparation in accordance with the latest edition of the National Electrical Code.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
EEM 165	Residential/Commercial Wiring	4
		Total 14

Second Semester – Spring

BCT 140	Commercial Wiring	3
BCT 158	Introductory Building Maintenance	5
BCT 141	Fixtures and Installation	3
or		
CWE	Cooperative Work Experience	3
		Total 11

Third Semester – Summer

BCT 120	Electrical Building Code License Preparation	2
		Total 2

Electrician: Construction

Certificate: Industrial Technology

Credit Requirements: 27 Semester Credit Hours

Evening

The Electrician: Construction certificate program prepares you for employment in the electrical construction trade. Emphasis is placed on electrical theory, wiring techniques, electrical equipment installations and license preparation in accordance with the latest edition of the National Electrical Code.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
		Total 8

Second Semester – Summer

BCT 158	Introductory Building Maintenance	5
EEM 107	Industrial Computer Techniques	2
		Total 7

Third Semester – Fall

BCT 140	Commercial Wiring	3
BCT 141	Fixtures and Installation	3
or		
CWE	Cooperative Work Experience	3
		Total 6

Fourth Semester – Spring

BCT 120	Electrical Building Code License Preparation	2
EEM 165	Residential/Commercial Wiring	4
		Total 6

Electrician: Industrial

Certificate: Industrial Technology

Credit Requirements: 31 Semester Credit Hours

Day

The Electrician: Industrial certificate program prepares you for employment as an industrial maintenance electrician. Emphasis is placed on electrical/electronic theory and industrial electrical equipment such as motors, transformers, motor control systems, drive systems and programmable controllers. Special emphasis is placed on developing troubleshooting skills.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EEM 107	Industrial Computer Techniques	2
EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
		Total 10

Second Semester – Spring

BCT 140	Commercial Wiring	3
EEM 131	Solid State Devices	4
EEM 217	AC/DC Machines with Electrical Codes	4
EEM 251	Programmable Controllers	3
		Total 14

Third Semester – Summer

EEM 151	Motor Controls I	4
EEM 221	DC/AC Drives	3
		Total 7

Electrician: Industrial

Certificate: Industrial Technology

Credit Requirements: 31 Semester Credit Hours

Evening

The Electrician: Industrial certificate program prepares you for employment as an industrial maintenance electrician. Emphasis is placed on electrical/electronic theory and industrial electrical equipment such as motors, transformers, motor control systems, drive systems and programmable controllers. Special emphasis is placed on developing troubleshooting skills.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

EEM 117	AC/DC Circuits I	4
EEM 118	AC/DC Circuits II	4
		Total 8

Second Semester – Summer

EEM 107	Industrial Computer Techniques	2
EEM 131	Solid State Devices	4
		Total 6

Third Semester – Fall

EEM 221	DC/AC Drives	3
EEM 251	Programmable Controllers	3
		Total 6

Fourth Semester – Spring

EEM 217	AC/DC Machines with Electrical Codes	4
		Total 4

Fifth Semester – Summer

EEM 151	Motor Controls I	4
		Total 4

Sixth Semester – Fall

BCT 140	Commercial Wiring	3
		Total 3

Esthetics

Certificate: Business

Credit Requirements: 24 Semester Credit Hours

This certificate program teaches basic skin care, various facials, makeup application, hair removal, sanitation procedures and salon management practices.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old and can provide proof of 10th grade completion (no correspondence schools).

Recommended Sequence of Courses

First Semester

COS 151	Dermatology	3
COS 152	Hygiene and Sanitation	2
COS 153	Structure and Function of Human Systems	3
COS 156	Fundamentals of Massage	2
COS 158	Facial Treatments	2
COS 160	Electric Current Facial Treatments	1
COS 162	Hair Removal	1
		Total 14

Second Semester

COS 164	Basic Makeup and Application	3
COS 165	Business Practice	3
COS 221	Facial Practice I	2
COS 223	Facial Practice II	2
		Total 10

Note: Palmer Campus sequence of course varies. See your advisor.

Golf Course Maintenance

Certificate: Agriculture

Credit Requirements: 23 Semester Credit Hours

The Golf Course Maintenance certificate program provides short-term training for individuals employed in golf course maintenance and those wishing to enter the field. The program is structured so that novice students can develop basic skills, and those individuals currently employed at golf courses can upgrade their skills through formal course work combined with on-the-job training. This on-the-job training consists of supervised work experience in which students are placed at a golf course for hands-on practice with chemical and fertilizer application equipment as well as training in routine maintenance practices. Students must see the Horticulture faculty for more information.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

HRT 110	Plant Form and Function	4
HRT 144	Plant Pests	3
HRT 241	Turf Management	3
		Total 10

Second Semester – Spring

HRT 125	Soils	4
HRT 240	Pesticides	4
		Total 8

Third Semester – Summer

CWE 112	Cooperative Work Experience	2
HRT 121	Commercial Irrigation	3
		Total 5

Industrial Maintenance

Certificate: Industrial Technology

Credit Requirements: 22 Semester Credit Hours

Evening

The Industrial Maintenance program prepares students for employment in commercial and industrial building and plant maintenance. This program teaches basic skills required for maintenance, installation, troubleshooting and repair of air conditioning and electrical systems.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

ACR 106	Basic Electricity for HVAC/R	4
ACR 108	Refrigeration Fundamentals	3
ACR 109	Tools and Service II	2
		Total 9

Second Semester – Spring

BCT 138	Residential Wiring	5
		Total 5

Third Semester – Summer

BCT 158	Introductory Building Maintenance	5
		Total 5

Fourth Semester – Fall

BCT 140	Commercial Wiring	3
		Total 3

Industrial Mechanic

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Evening

The Industrial Mechanic program prepares students for employment in industrial mechanics. This program teaches skills required for troubleshooting, maintenance and repair of mechanical systems.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

IMT 160	Preventive Maintenance	3
IMT 163	Problem Solving for Mechanical Applications	3
		Total 6

Second Semester – Spring

IMT 131	Hydraulics and Pneumatics	4
IMT 151	Piping Systems	3
		Total 7

Third Semester – Summer

BCT 158	Introductory Building Maintenance	5
IMT 124	Pumps	2
		Total 7

Fourth Semester – Fall

IMT 105	Mechanical Sketching	2
IMT 121	Drive Systems	2
		Total 4

Landscape Design

Certificate: Agriculture

Credit Requirements: 16 Semester Credit Hours

The Landscape Design certificate program provides training for individuals involved in landscape design and installation. The program is useful for those with practical experience in landscape installation, but with little or no formal training in plant arrangements and plant selection. Students must see the Horticulture faculty for advising.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

HRT 106	Ornamentals	2
HRT 153	Landscape Construction	3
		Total 5

Second Semester – Spring

HRT 102	Landscape Design	4
HRT 107	Woody Ornamentals	2
		Total 6

Third Semester – Summer

HRT 108	Annuals and Perennials	2
HRT 212	Commercial Landscape Design	3
		Total 5

Landscape Management

Certificate: Agriculture

Credit Requirements: 17 Semester Credit Hours

The Landscape Management certificate is ideal if you want to take courses in a specific area of landscape maintenance and management. The objective of this certificate is to create confidence and professionalism in the landscaper and nursery

worker by broadening his or her horticultural knowledge and increasing exposure to modern techniques and materials used in landscape management.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

HRT 101	Introduction to Horticulture	3
HRT 106	Ornamentals	2
HRT 241	Turf Management	3
		Total 8

Second Semester – Spring

HRT 107	Woody Ornamentals	2
MGT 120	Small Business Management	3
		Total 5

Third Semester – Summer

HRT 108	Annuals and Perennials	2
HRT 254	Landscape Maintenance	2
		Total 4

Machine Tool Technology

Certificate: Industrial Technology

Credit Requirements: 34 Semester Credit Hours

Day

The Machine Tool Technology certificate program prepares you for entry-level employment in the metal working industry.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 143	Precision Measurements	2
MTT 240	Specifications	3
		Total 15

Second Semester – Spring

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 141	Metals and Heat Treatment	3
MTT 241	Jigs and Fixtures I	2
		Total 12

Third Semester – Fall

MTT 125	Machine Tool Theory III	3
MTT 126	Machine Tool Practice III	4
		Total 7

Machine Tool Technology

Certificate: Industrial Technology

Credit Requirements: 34 Semester Credit Hours

Fall Semester Start / Evening

The Machine Tool Technology certificate program prepares you for entry-level employment in the metal-working industry.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EGT 106	Print Reading and Sketching	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
		Total 10

Second Semester – Spring

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 143	Precision Measurements	2
		Total 9

Third Semester – Summer

MTT 141	Metals and Heat Treatment	3
MTT 240	Specifications	3
MTT 241	Jigs and Fixtures I	2
		Total 8

Fourth Semester – Fall

MTT 125	Machine Tool Theory III	3
MTT 126	Machine Tool Practice III	4
		Total 7

Machine Tool Technology

Certificate: Industrial Technology

Credit Requirements: 34 Semester Credit Hours

Spring Semester Start / Evening

The Machine Tool Technology certificate program prepares you for entry-level employment in the metal working industry.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

EGT 106	Print Reading and Sketching	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
		Total 10

Second Semester – Summer

MTT 141	Metals and Heat Treatment	3
MTT 143	Precision Measurements	2
MTT 240	Specifications	3
		Total 8

Third Semester – Fall

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 241	Jigs and Fixtures I	2
		Total 9

Fourth Semester – Spring

MTT 125	Machine Tool Theory III	3
MTT 126	Machine Tool Practice III	4
		Total 7

Nail Technology

Certificate: Business

Credit Requirements: 24 Semester Credit Hours

Day

This program teaches basic nail care, various nail additions, repair wraps, sanitation procedures and basic salon management practices.

Admission into this program requires qualifying scores on SAT, ACT or the TTC placement test. High school graduation is not required if you are at least 18 years old and can provide proof of 10th grade completion (no correspondence schools).

Recommended Sequence of Courses

First Semester

COS 130	Professional Image	2
COS 131	Bacteria and Other Infectious Agents	2
COS 132	Science of Nail Technology	2
COS 133	Basic Procedures	3
COS 135	The Business of Nail Technology	2
COS 136	Fundamentals of Artificial Nail Application	4
COS 137	Fundamentals of Nail Art	1

COS 224	Nail Practice I	4
COS 226	Nail Practice II	4
		Total 24

Welding Gas Metal Arc and Flux Cored Arc

Certificate: Industrial Technology
Credit Requirements: 28 Semester Credit Hours
Spring Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas metal arc and flux cored arc welding in preparation for entry into the welding fields of manufacturing, construction, transportation and maintenance.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Welding Gas Metal Arc and Flux Cored Arc

Certificate: Industrial Technology
Credit Requirements: 28 Semester Credit Hours
Fall Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas metal arc and flux cored arc welding in preparation for entry into the welding fields of manufacturing, construction, transportation and maintenance.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 118	Gas Metal Arc Welding Ferrous I	4
WLD 119	Gas Metal Arc Welding Ferrous II	1
WLD 201	Welding Metallurgy	2
		Total 10

Second Semester – Spring

EGT 117	Welding Print Principles	2
WLD 120	Flux Cored Arc Welding I	4
WLD 121	Flux Cored Arc Welding II	1
WLD 141	Weld Quality	2
WLD 240	Robotic Welding and Manufacturing	4
		Total 13

Third Semester – Summer

WLD 122	Gas Metal Arc Welding Nonferrous I	4
WLD 123	Gas Metal Arc Welding Nonferrous II	1
		Total 5

Recommended Sequence of Courses

First Semester – Spring

WLD 110	Welding Safety and Health	1
WLD 118	Gas Metal Arc Welding Ferrous I	4
WLD 119	Gas Metal Arc Welding Ferrous II	1
WLD 240	Robotic Welding and Manufacturing	4
		Total 10

Second Semester – Summer

WLD 120	Flux Cored Arc Welding I	4
WLD 121	Flux Cored Arc Welding II	1
		Total 5

Third Semester – Fall

EGT 114	Welding Print Basics	2
WLD 122	Gas Metal Arc Welding Nonferrous I	4
WLD 123	Gas Metal Arc Welding Nonferrous II	1
WLD 201	Welding Metallurgy	2
		Total 9

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
		Total 4

Welding Gas Metal Arc and Flux Cored Arc

Certificate: Industrial Technology

Credit Requirements: 28 Semester Credit Hours

Summer Term Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas metal arc and flux cored arc welding in preparation for entry into the welding fields of manufacturing, construction, transportation and maintenance. Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Summer

WLD 118	Gas Metal Arc Welding Ferrous I	4
WLD 119	Gas Metal Arc Welding Ferrous II	1
		Total 5

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 120	Flux Cored Arc Welding I	4
WLD 121	Flux Cored Arc Welding II	1
WLD 201	Welding Metallurgy	2
		Total 10

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 122	Gas Metal Arc Welding Nonferrous I	4
WLD 123	Gas Metal Arc Welding Nonferrous II	1
WLD 141	Weld Quality	2
WLD 240	Robotic Welding and Manufacturing	4
		Total 13

Welding Gas Metal Arc and Flux Cored Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Fall Semester Start

This certificate teaches advanced welding students pipe welding skills using the gas metal arc and flux cored arc welding processes. Requirements for entry into this program are prerequisite courses WLD 119 and WLD 121; current welder

qualification documentation of gas metal arc and flux cored arc in 3G and 4G positions on carbon steel; or skills evaluation by the Welding instructor at TTC.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

WLD 231	Gas Metal Arc/Flux Cored Arc Welding Pipe I	4
WLD 232	Gas Metal Arc/Flux Cored Arc Welding Pipe II	2
		Total 6

Second Semester – Spring

WLD 110	Welding Safety and Health	1
WLD 141	Weld Quality	2
		Total 3

Third Semester – Fall

EGT 114	Welding Print Basics	2
WLD 201	Welding Metallurgy	2
		Total 4

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
		Total 2

Welding Gas Metal Arc and Flux Cored Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Spring Semester Start

This certificate teaches advanced welding students pipe welding skills using the gas metal arc and flux cored arc welding processes. Requirements for entry into this program are: prerequisite courses WLD 119 and WLD 121; current welder qualification documentation of gas metal arc and flux cored arc in 3G and 4G positions on carbon steel; or skills evaluation by the Welding instructor at TTC.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

WLD 231	Gas Metal Arc/Flux Cored Arc Welding Pipe I	4
WLD 232	Gas Metal Arc/Flux Cored Arc Welding Pipe II	2
		Total 6

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 201	Welding Metallurgy	2
		Total 5

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
		Total 4

Welding Gas Tungsten Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Fall Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas tungsten arc welding carbon steel, aluminum and stainless steel sheet metal, plate and tubing.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate program in any semester.

Recommended Sequence of Courses

First Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 132	Inert Gas Welding Ferrous	4
WLD 133	Inert Gas Welding Ferrous Tubing	1
WLD 201	Welding Metallurgy	2
		Total 10

Second Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
WLD 152	Tungsten Arc Welding	4
WLD 153	Tungsten Arc Welding Stainless Steel Tubing	1
		Total 9

Third Semester – Summer

WLD 135	Inert Gas Welding of Aluminum	4
WLD 137	Inert Gas Welding Aluminum Tubing I	1
		Total 5

Welding Gas Tungsten Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Spring Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas tungsten arc welding carbon steel, aluminum and stainless steel sheet metal, plate and tubing.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate program in any semester.

Recommended Sequence of Courses

First Semester – Spring

WLD 110	Welding Safety and Health	1
WLD 132	Inert Gas Welding Ferrous	4
WLD 133	Inert Gas Welding Ferrous Tubing	1
		Total 6

Second Semester – Summer

WLD 152	Tungsten Arc Welding	4
WLD 153	Tungsten Arc Welding Stainless Steel Tubing	1
		Total 5

Third Semester – Fall

EGT 114	Welding Print Basics	2
WLD 135	Inert Gas Welding of Aluminum	4
WLD 137	Inert Gas Welding Aluminum Tubing I	1
WLD 201	Welding Metallurgy	2
		Total 9

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
		Total 4

Welding Gas Tungsten Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Summer Term Start

This certificate teaches beginning and intermediate welding students the principles and practices of gas tungsten arc welding carbon steel, aluminum and stainless steel sheet metal, plate and tubing. Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate program in any semester.

Recommended Sequence of Courses

First Semester – Summer

WLD 132	Inert Gas Welding Ferrous	4
WLD 133	Inert Gas Welding Ferrous Tubing	1
		Total 5

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 152	Tungsten Arc Welding	4
WLD 153	Tungsten Arc Welding Stainless Steel Tubing	1
WLD 201	Welding Metallurgy	2
		Total 10

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 135	Inert Gas Welding of Aluminum	4
WLD 137	Inert Gas Welding Aluminum Tubing I	1
WLD 141	Weld Quality	2
		Total 9

Welding Gas Tungsten Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Fall Semester Start

This certificate teaches advanced welding students pipe welding skills using the gas tungsten arc welding process.

Requirements for entry into this program are prerequisite courses WLD 133, WLD 137 and WLD 153; current welder qualification documentation of

gas tungsten arc welding in 3G and 4G positions of carbon steel, aluminum and stainless steel; or skills evaluation by the welding instructor at TTC.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

WLD 228	Inert Gas Welding Pipe I	4
WLD 229	Inert Gas Welding Pipe II	2
		Total 6

Second Semester – Spring

WLD 110	Welding Safety and Health	1
WLD 141	Weld Quality	2
		Total 3

Third Semester – Fall

EGT 114	Welding Print Basics	2
WLD 201	Welding Metallurgy	2
		Total 4

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
		Total 2

Welding Gas Tungsten Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Spring Semester Start

This certificate teaches advanced welding students pipe welding skills using the gas tungsten arc welding process.

Requirements for entry into this program are prerequisite courses WLD 133, WLD 137 and WLD 153; current welder qualification documentation of gas tungsten arc welding in 3G and 4G positions of carbon steel, aluminum and stainless steel; or skills evaluation by the welding instructor at TTC.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Spring

WLD 228	Inert Gas Welding Pipe I	4
WLD 229	Inert Gas Welding Pipe II	2

Total 6

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 201	Welding Metallurgy	2

Total 5

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2

Total 4

Welding Shielded Metal Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Fall Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of shielded metal arc welding in preparation for entry into the welding fields of construction, fabrication and maintenance.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate program in any semester.

Recommended Sequence of Courses

First Semester – Fall

EGT 114	Welding Print Basics	2
WLD 101	Cutting Processes	1
WLD 110	Welding Safety and Health	1
WLD 111	Arc Welding I	4
WLD 201	Welding Metallurgy	2

Total 10

Second Semester – Spring

EGT 117	Welding Print Principles	2
WLD 113	Arc Welding II	4
WLD 114	Advanced Arc Welding	1
WLD 141	Weld Quality	2

Total 9

Third Semester – Summer

WLD 125	Arc Welding Stainless Steel	1
WLD 170	Qualification Welding	4

Total 5

Welding Shielded Metal Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Spring Semester Start

This certificate teaches beginning and intermediate welding students the principles and practices of shielded metal arc welding in preparation for entry into the welding fields of construction, fabrication and maintenance.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate program in any semester.

Recommended Sequence of Courses

First Semester – Spring

WLD 101	Cutting Processes	1
WLD 110	Welding Safety and Health	1
WLD 111	Arc Welding I	4

Total 6

Second Semester – Summer

WLD 113	Arc Welding II	4
WLD 114	Advanced Arc Welding	1

Total 5

Third Semester – Fall

EGT 114	Welding Print Basics	2
WLD 125	Arc Welding Stainless Steel	1
WLD 170	Qualification Welding	4
WLD 201	Welding Metallurgy	2

Total 9

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2

Total 4

Welding Shielded Metal Arc

Certificate: Industrial Technology

Credit Requirements: 24 Semester Credit Hours

Summer Term Start

This certificate teaches beginning and intermediate welding students the principles and practices of shielded metal arc welding in preparation for entry into the welding fields of construction, fabrication and maintenance. Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate programs in any semester.

Recommended Sequence of Courses

First Semester – Summer

WLD 101	Cutting Processes	1
WLD 111	Arc Welding I	4
		Total 5

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 113	Arc Welding II	4
WLD 114	Advanced Arc Welding	1
WLD 201	Welding Metallurgy	2
		Total 10

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 125	Arc Welding Stainless Steel	1
WLD 141	Weld Quality	2
WLD 170	Qualification Welding	4
		Total 9

Welding Shielded Metal Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Spring Semester Start

This certificate teaches advanced welding students pipe welding skills using the shielded metal arc welding process. Requirements for entry into this program are: prerequisite courses WLD

170 and WLD 125; current welder qualification documentation of shielded metal arc welding in 3G and 4G positions; or skills evaluation by the welding instructor at TTC. Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate in Fall or Spring semesters.

Recommended Sequence of Courses

First Semester – Spring

WLD 225	Arc Welding Pipe I	4
WLD 226	Arc Welding Pipe II	1
WLD 227	Arc Welding Pipe III	1
		Total 6

Second Semester – Fall

EGT 114	Welding Print Basics	2
WLD 110	Welding Safety and Health	1
WLD 201	Welding Metallurgy	2
		Total 5

Third Semester – Spring

EGT 117	Welding Print Principles	2
WLD 141	Weld Quality	2
		Total 4

Welding Shielded Metal Arc Advanced

Certificate: Industrial Technology

Credit Requirements: 15 Semester Credit Hours

Fall Semester Start

This certificate teaches advanced welding students pipe welding skills using the shielded metal arc welding process. Requirements for entry into this program are: prerequisite courses WLD 170 and WLD 125; current welder qualification documentation of shielded metal arc welding in 3G and 4G positions; or skills evaluation by the welding instructor at TTC. Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Students can enter the certificate in Fall or Spring semesters.

Recommended Sequence of Courses

First Semester – Fall

WLD 225	Arc Welding Pipe I	4
WLD 226	Arc Welding Pipe II	1
WLD 227	Arc Welding Pipe III	1
		Total 6

Second Semester – Spring

WLD 110	Welding Safety and Health	1
WLD 141	Weld Quality	2
		Total 3

Third Semester – Fall

WLD 201	Welding Metallurgy	2
EGT 114	Welding Print Basics	2
		Total 4

Fourth Semester – Spring

EGT 117	Welding Print Principles	2
		Total 2

Woodworking

Certificate: Industrial Technology

Credit Requirements: 8 Semester Credit Hours

The Woodworking certificate prepares students to work with and install trim, doors, stair parts, cabinets, counters, baseboards, casings and shelving.

Admission into this program requires qualifying scores on SAT, ACT or TTC's placement test. High school graduation is not required if you are at least 18 years old.

Recommended Sequence of Courses

First Semester – Fall

BCT 106	Beginning Woodworking	2
		Total 2

Second Semester – Spring

BCT 204	Cabinet Making	4
		Total 4

Third Semester – Summer

BCT 108	Finish Trim	2
		Total 2

