Applied Engineering Technology

A40130 (Associate Degree), D40130 (Diploma), C40130A (Certificate), C40130B (Certificate)

Applied Engineering Technology is a course of study that prepares the students to use basic engineering principles and technical skills to solve technical problems in various types of industry. The course work emphasizes analytical and problem solving skills. The curriculum includes courses in safety, math, physics, electricity, engineering technology, and technology specific specialty areas. Graduates should qualify for employment in a wide range of positions in research and development, manufacturing, sales, design, inspection, or maintenance. Employment opportunities exist in automation, computer, electrical, industrial, or mechanical engineering fields, where graduates will function as engineering technicians.

In addition to the courses listed below, students may be required to take transition/co-requisite classes based on RISE criteria. These classes do not count toward hours required for graduation.

Title			Class/Lab/Credit		
I. General Education Courses					
COM 120	Interpersonal Communications		3	0	3
or					
COM 231	Public Speaking		3	0	3
ENG	111	Writing and Inquiry	3	0	3
MAT	121	Algebra/ Trigonometry	2	2	3
Select one course each from Humanities/Fine Arts and Social/Behavioral Sciences on page 79					
II. Major Courses					
A. Core Courses					
EGR	125	Applied Software for Technology	1	2	2
ISC	112	Industrial Safety	2	0	2
III. Concentration					
DFT	119	Basic CAD	1	2	2
ELC	131	Circuit Analysis I	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
ELC	128	Introduction to PLC	2	3	3
ATR	112	Introduction to Automation	2	3	3
IV. Other Major Courses					
Take 8 credits					
ELN	133	Digital Electronics	3	3	4
MAC	121	Introduction to CNC	2	0	2
MNT 110	Introduction to Maintenance Procedures		1	3	2
WBL	111	Work-Based Learning I	0	10	1
WBL	112	Work-Based Learning I	0	20	2
WBL	113	Work-Based Learning I	0	30	3
WBL	114	Work-Based Learning I	0	40	4
WBL	121	Work-Based Learning II	0	10	1
WBL	122	Work-Based Learning II	0	20	2

WBL	123	Work-Based Learning II	0	30	3
WBL	124	Work-Based Learning II	0	40	4
WBL	131	Work-Based Learning III	0	10	1
WBL	132	Work-Based Learning III	0	20	2
WBL	133	Work-Based Learning III	0	30	3
WBL	134	Work-Based Learning III	0	40	4
WBL	211	Work-Based Learning IV	0	10	1
WBL	212	Work-Based Learning IV	0	20	2
WBL	213	Work-Based Learning IV	0	30	3
WBL	214	Work-Based Learning IV	0	40	4

Take 23 credits

AHR	110	Introduction to Refrigeration	2	6	5
CIS	110	Introduction to Computers	2	2	3
ELN	233	Microprocessor Systems	3	3	4
EGR	150	Introduction to Engineering	1	2	2
MEC	130	Mechanisms	2	2	3
PHY	131	Physics-Mechanics	3	2	4
WLD	112	Basic Welding Processes	1	3	2

V. Other Required Courses

ACA	115	Success and Study Skills	0	2	1
ACA	220	Professional Transition	1	0	1

Total Credits: 67

Recommended Semester Schedule

First Year-Fall

ACA	115	Success and Study Skills	0	2	1
EGR	125	Applied Software for Tech	1	2	2
ELC	131	Circuit Analysis	3	3	4
ELN	133	Digital Electronics	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
ISC	112	Industrial Safety	2	0	2

First Year-Spring

CIS	110	Introduction to Computers	2	2	3
DFT	119	Basic CAD	1	2	2
ELC	128	Introduction to PLC	2	3	3
ENG	111	Writing and Inquiry	3	0	3
MNT	110	Introduction to Maintenance Procedures	1	3	2

First Year-Summer

MAT	121	Algebra/ Trigonometry	2	2	3
Humanities Elective			3	0	3
Social Science Elective			3	0	3

Second Year-Fall

AHR	110	Introduction to Refrigeration	2	6	5
ATR	112	Introduction to Automation	2	3	3
MAC	121	Introduction to CNC	2	0	2
MEC	130	Mechanisms	2	3	3
WLD	112	Basic Welding Processes	1	3	2

Second Year-Spring

ACA	220	Professional Transition	1	0	1
COM	120	Interpersonal Communications	3	0	3
EGR	150	Introduction to Engineering	1	2	2
ELN	233	Microprocessors Systems	3	3	4
PHY	131	Physics-Mechanics	3	2	4

Note: WBL 111, 112, 113, 114, 121, 122, 123, 124, 131, 132, 133, 134, 211, 212, 213, 214 may count for any of the following: ELN 133, MNT 110, MEC 130, WLD 112, PHY 131, EGR 150, ELN 233, ISC 112

Applied Engineering Diploma Program (D40130)

Title			Class/Lab/Credit		
I. General Education Courses					
COM	120	Interpersonal Communications	3	0	3
or					
COM	231	Public Speaking	3	0	3
ENG	111	Writing and Inquiry	3	0	3
II. Major Courses					
ATR	112	Introduction to Automation	2	3	3
DFT	119	Basic CAD	1	2	2
EGR	125	Applied Software Technology	1	2	2
ELC	128	Introduction to PLC	2	3	3
ELC	131	Circuit Analysis I	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
ISC	112	Industrial Safety	2	0	2
III. Other Major Courses					
Take 11 hours					
CIS	110	Introduction to Computers	2	2	3
ELN	233	Microprocessor Systems	3	3	4
MAC	121	Introduction to CNC	2	0	2
MNT	110	Introduction to Maintenance Procedures	1	3	2
WBL	111	Work-Based Learning I	0	10	1
WBL	112	Work-Based Learning I	0	20	2
WBL	121	Work-Based Learning II	0	10	1
WBL	122	Work-Based Learning II	0	20	2
WBL	131	Work-Based Learning III	0	10	1
WBL	132	Work-Based Learning III	0	20	2
WBL	211	Work-Based Learning IV	0	10	1

WBL	212	Work-Based Learning IV	0	20	2

IV. Other Required Courses

ACA	115	Success and Study Skills	0	2	1
ACA	220	Professional Transition	1	0	1

Total Credits: 38

Recommended Semester Schedule

First Year-Fall

ACA	115	Success and Study Skills	0	2	1
EGR	125	Applied Software Technology	1	2	2
ELC	131	Circuit Analysis I	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
ISC	112	Industrial Safety	2	0	2

First Year-Spring

DFT	119	Basic CAD	1	2	2
ELC	128	Introduction to PLC	2	3	3
ELN	233	Microprocessors Systems	3	3	4
ENG	111	Writing and Inquiry	3	0	3
MNT	110	Introduction to Maintenance Procedures	1	3	2

Second Year-Fall

ACA	220	Professional Transition	1	0	1
ATR	112	Introduction to Automation	2	3	3
CIS	110	Introduction to Computers	2	2	3
COM	120	Interpersonal Communication	3	0	3
MAC	121	Introduction to CNC	2	0	2

Applied Engineering Certificate Program (C40130A) Level I

Title			Class/Lab/Credit		
I. Major Courses					
ATR	112	Introduction to Automation	2	3	3
ELC	131	Circuit Analysis	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
MNT	110	Introduction to Maintenance Procedures	1	3	2

Total Credits: 12

Recommended Semester Schedule

First Year-Fall

ATR	112	Introduction to Automation	2	3	3
ELC	131	Circuit Analysis I	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3

First Year-Spring

MNT	110	Introduction to Maintenance Procedures	1	3	2

Applied Engineering Certificate Program (C40130B) Level II

Title			Class/Lab/Credit		
I. Major Courses					
ATR	112	Introduction to Automation	2	3	3
DFT	119	Basic CAD	1	2	2
ELC	131	Circuit Analysis	3	3	4
HYD	110	Hydraulics/Pneumatics I	2	3	3
ISC	112	Industrial Safety	2	0	2
II. Other Major Courses					
MNT 110		Introduction to Maintenance Procedures	1	3	2

Total Credits: 16

Recommended Semester Schedule

First Year-Fall					
ATR	112	Introduction to Automation	2	3	3
ELC	131	Circuit Analysis I	3	3	4
ISC	112	Industrial Safety	2	0	2
HYD	110	Hydraulics/Pneumatics I	2	3	3
First Year-Spring					
DFT	119	Basic CAD	1	2	2
MNT 110		Introduction to Maintenance Procedures	1	3	2