

COMPUTER AIDED DESIGN (CAD) TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (AAS) DEGREE

DESCRIPTION: This associate degree program is designed for students who want to work in the field of engineering and design at the applied level in positions such as engineering technician, designer, and/or CAD operator. The program emphasizes a hands-on approach to design from the use of hand tools to the utilization of the latest software and computers recommended by industry. Theoretical, scientific, and mathematical topics are utilized and serve as a basis for the research and development of new designs. Two technical electives allow for the customization of the program with courses ranging from manufacturing to electronics. Graduates can move on to complete a four-year degree in the field of Engineering Technology and should consult with an academic advisor.

GENERAL EDUCATION REQUIREMENTS CREDITS: 12-13

ENG 111 or ENG 120	ENGLISH COMPOSITION I (3/3) or APPLIED COMMUNICATION (3/3)
ENG 112 or ENG 123	ENGLISH COMPOSITION II (3/3) or TECHNICAL COMMUNICATION (3/3)
PLS 221	AMERICAN GOVERNMENT & POLITICS (3/3)
PHY 111 or PHY 121	APPLIED PHYSICS (3/4) or GENERAL COLLEGE PHYSICS (4/6)

CORE PROGRAM REQUIREMENTS CREDITS: 42-43

APP 100E	ELECTRICAL STUDIES FOR TRADES (3/4) ^A
CAD 150	3D MODELING (3/4) ^A
CAD 220	MACHINE DESIGN (3.5/5) ^A
CAD 250	ADVANCED 3D MODELING (3.5/5) ^A
CIS 171,172,173	SPREADSHEETS I, II, III (3/3.75)
EGR 122	INTRODUCTION TO ENGINEERING (1/1) ^A
EGR 130	TEAM DESIGN PROJECT (2/3) ^A
IND 225	STRENGTH OF MATERIALS (4/5) ^A
IND 229	HYDRAULIC & PNEUMATIC POWER (3/4) ^A
MET 200	MATERIAL SCIENCE (3/4) ^A
MFG 101	MACHINING PROCESSES I (4/6) ^A
MFG122	MANUFACTURING PROCESSES (3/4) ^A
MTH 110 or MTH 113	TECHNICAL MATH I (3/4) or INTERMEDIATE ALGEBRA (4/4)
MTH 112 or MTH 122	TECHNICAL MATH II (3/4) or PLANE TRIGONOMETRY (3/3)

SUGGESTED ELECTIVES CREDITS: 6

APP 104E, APP 111E, APP 114E OR APP 123E	APPRENTICE – ELECTRICAL COURSE (3/3) ^A
APP 106M	INDUSTRIAL SAFETY (.5/.5) ^A
CEM 100	INTRODUCTION TO CHEMISTRY (5/7)
ELE 220	PC BASE DATA ACQUISITION & CONTROL (3/4) ^A
MFG 102, MFG 120, MFG 201, MFG 204 OR MFG 220	MANUFACTURING TECHNOLOGY COURSE (3-6/3-7) ^A
SPE 123	PUBLIC COMMUNICATION (3/3)
WLD 123	SMAW WELDING PROCESSES (4/6) ^A

MINIMUM 60 CREDIT HOURS/74.75 CONTACT HOURS

NOTES: ^A Included in occupational specialty.
GPA of 2.0 or higher must be maintained in occupational specialty courses

COMPUTER AIDED DESIGN (CAD) TECHNOLOGY

ASSOCIATE IN APPLIED SCIENCE (AAS) DEGREE
SUGGESTED SEQUENCE OF COURSES

YEAR 1 (FALL SEMESTER) CREDITS: 14-15

MTH 110 or MTH 113	TECHNICAL MATH I (3/4) or INTERMEDIATE ALGEBRA (4/4)
MFG 101	MACHINING PROCESSES I (4/6)
MFG122	MANUFACTURING PROCESSES (3/4)
APP 100E	ELECTRICAL STUDIES FOR TRADES (3/4)
EGR 122	INTRODUCTION TO ENGINEERING (1/1)

YEAR 1 (SPRING SEMESTER) CREDITS: 15-18

MTH 112 or MTH 122	TECHNICAL MATH II (3/4) or PLANE TRIGONOMETRY (3/3)
PHY 111 or PHY 121	APPLIED PHYSICS (3/4) or GENERAL COLLEGE PHYSICS (4/6)
CAD 150	3D MODELING (3/4)
CIS 171,172,173	SPREADSHEETS I, II, III (3/3.75)
PLS 221	AMERICAN GOVERNMENT & POLITICS (3/3)

YEAR 2 (FALL SEMESTER) CREDITS: 15.5

ENG 111 or ENG 120	ENGLISH COMPOSITION I (3/3) or APPLIED COMMUNICATION (3/3)
MET 200	MATERIAL SCIENCE (3/4)
CAD 220	MACHINE DESIGN (3.5/5)
IND 229	HYDRAULIC & PNEUMATIC POWER (3/4)
	TECHNICAL ELECTIVE (3/4)

YEAR 2 (SPRING SEMESTER) CREDITS: 15.5

ENG 112 or ENG 123	ENGLISH COMPOSITION II (3/3) or TECHNICAL COMMUNICATION (3/3)
IND 225	STRENGTH OF MATERIALS (4/5)
CAD 250	ADVANCED 3D MODELING (3.5/5)
EGR 130	TEAM DESIGN PROJECT (2/3)
	TECHNICAL ELECTIVE (3/4)