

# Computer-Aided Design Emphasis# - Computer-Aided Technology

## Associate in Applied Science

Minimum of 64 Credits

The focus of the Computer-Aided Design Emphasis is to prepare students to be the best in their profession. The courses within this program will prepare students to use, manage, and structure a CAD system. The scope of study will extend from single stations using basic 2D graphics to large multiple stations, networked systems using the latest in project management, 3-D parametric solid modeling, animated presentations, system customization and special effects. This program is on the cutting edge of this technology and students will be challenged by a technology that is expanding and changing as it is being taught. Courses cover subjects such as Computer-Aided Design, Engineering Principles, 3D Modeling, Management and Standards, Programming and Automation, Materials and Processes and Design Mechanics. These will prepare students to face every aspect of all manufacturing and architectural related disciplines. Students with degrees in Computer-Aided Design have the background needed to pursue career opportunities with architectural firms, engineering firms, graphic designers, interior designers, civil engineers, manufacturers, construction companies, government agencies and many more.

Areas of emphasis are also available in Game Design, Multimedia and Geographic Information Systems (GIS). Students should seek a faculty advisor early in the program.

Course #	Course Name	Credits	Type	Prerequisites
<b>Suggested Freshman 1st Semester</b>				
SCL 1001	SUCCESS IN COLLEGE AND LIFE	1	Life Skills	None
CAT 1043	ENGINEERING PRINCIPLES	3	Major	(R) (W)
CAT 1214	COMPUTER-AIDED DESIGN (CAD)	4	Major	(R) (M)
MATH 1513	COLLEGE ALGEBRA	3	Gen Ed	(R), MATH 0123 or adequate Math Placement Test Score, either within the last year.
ENGL 1113	ENGLISH COMPOSITION I	3	Gen Ed	(R) (W), Adequate reading and writing assessment scores or LS 0033 College Writing II, either taken within the last year, with strong encouragement for immediate continuation.
FA ELEC	* FACULTY APPROVED ELECTIVE	3	Support	
<b>Suggested Freshman 2nd Semester</b>				
CAT 1053	MANUFACTURING MATERIALS AND PROCESSES	3	Major	(R) (W) (M), CAT 1043 or Evaluation by Instructor
CAT 1253	CAD 3D MODELING	3	Major	(R) (W) (M), CAT 1043 and CAT 1214 or Evaluation by Instructor
CAT 2540	APPLICATIONS IN CAD	3	Major	(R) (W) (M), CAT 1043 and CAT 1214 or Evaluation by Instructor
MATH 1613	TRIGONOMETRY	3	Gen Ed	Pre or Corequisite: (R), MATH 1513 or MATH 1533 or adequate Math Placement Test Score
POLSC 1113	AMERICAN FEDERAL GOVERNMENT	3	Gen Ed	(R) (W)
OSRHE	** OSRHE APPROVED GENERAL EDUCATION COMMUNICATIONS COURSE	3	Gen Ed	
<b>Suggested Sophomore 1st Semester</b>				
CAT 2113	CAD MANAGEMENT AND STANDARDS	3	Major	(R) (W) (M), CAT 1253 or Evaluation by Instructor
CAT 2540	APPLICATIONS IN CAD --OR--		Major	(R) (W) (M), CAT 1043 and CAT 1214 or Evaluation by Instructor
CAT 2703	PRACTICUM	3	Major	(R) (W) (M), 12 hours of CAT courses and Evaluation by Instructor
HIST 1483	U.S. HISTORY TO THE CIVIL WAR --OR--		Gen Ed	(R) (W)
HIST 1493	U.S. HISTORY SINCE THE CIVIL WAR	3	Gen Ed	(R) (W)
PHYS 1114	COLLEGE PHYSICS I	4	Gen Ed	(R) (W), MATH 1513 or higher or APPM 1223, within the last two years or Evaluation by Instructor.
MATH 2023	FOUNDATIONS OF GEOMETRY AND MEASUREMENTS	3	Gen Ed	(R), MATH 0123 or adequate Math Placement Test Score, either within the last year.
<b>Suggested Sophomore 2nd Semester</b>				
CAT 2023	DESIGN MECHANICS	3	Major	(R) (W) (M), 15 credit hours of CAT, PHYS 1114 or PHYS 1314, MATH 1613
CAT 2163	CAD PROGRAMMING AND AUTOMATION	3	Major	(R) (W) (M), CAT 1253 or Evaluation by Instructor
CAT 2924	DESIGN PROJECT	4	Major	(R) (W) (M), 15 Hours in a CAT Emphasis
FA ELEC	* FACULTY APPROVED ELECTIVE	3	Support	

Major Courses: (32 credit hours) Computer-Aided Technology: CAT 1043, CAT 1053, CAT 1214, CAT 1253, CAT 2023, CAT 2113, CAT 2163, CAT 2540 (6 hrs: Take twice with different emphasis) or CAT 2540 (3 hrs) & CAT 2703, CAT 2924

General Education Courses: (25 credit hours) English: ENGL 1113, \*\*Any course that meets Oklahoma State Regents for Higher Education requirements for a general education Communications: (ENGL 1213, ENGL 1233, COM 1123, COM 2213); History: HIST 1483 or HIST 1493; Mathematics: MATH 1513, MATH 1613; Political Science: POLSC 1113; Physics: PHYS 1114

Life Skills Courses: (1 credit hour) Life Skills: SCL 1001

Support Courses: (6 credit hours) \*Electives: Faculty Approved Support Electives

Notes: This technical/occupational program is designed to prepare students to enter the job force following completion. #Cooperative agreements have been established with Francis Tuttle, Moore Norman, Metro Tech and Mid-America Technology Centers.

\* Approved Support Electives must have an ART, CAT, CS, ENGR, JB, FVP or GCOM prefix and must be approved by a Program Faculty Advisor.