De Anza College
21250 Stevens Creek Blvd.
Cupertino, CA 95014
408-864-5678
www.deanza.edu

Academic Year
2011 - 2012

Computer Aided Design (CAD)

CDI Coordinator
408-864-8627

Business & Computer Systems Division
Bldg. L1 Rm. L14
408-864-8797

Counseling Center
Student & Community Services Bldg. 2nd Fl.
408-864-5400

Career Center
Student & Community Services Bldg. 2nd Fl.
408-864-5711

Skills Certificate ***(visit Department for assistance/to apply)***
A passing grade ("C" or better/"P") in each required course.
Note: each course must be completed at De Anza College.

Certificate of Achievement Level Requirements
A minimum "C" grade in each major course.
Note: A maximum of six (6) quarter units may be transferred from other academic institutions.

Certificate of Achievement-Advanced Level Requirements
1. A minimum "C" grade in each major course.
2. Demonstrated proficiency in English and mathematics as evidenced by eligibility for EWRT 1A or ESL 5 and eligibility for MATH 114.
   Note: A maximum of 18 quarter units may be transferred from other academic institutions.

A.A./A.S. Degree ***(visit Counseling for assistance/to apply)***
1. Completion of all General Education (GE) requirements (31-42 quarter units) for the A.A./A.S. degree. GE units must be completed with a minimum 2.0 GPA ("C" average).
2. Completion of all major requirements. Each major course must be completed with a minimum "C" grade.
   Major courses can also be used to satisfy GE requirements (except for Liberal Arts degrees).
   Note: A maximum of 22 quarter units from other academic institutions may be applied toward the major.
3. Completion of a minimum of 90 degree-applicable quarter units (GE and major units included). All De Anza courses must be completed with a minimum 2.0 GPA ("C" average). All De Anza courses combined with courses transferred from other academic institutions must be completed with a minimum 2.0 GPA ("C" average).
   Note: A minimum of 24 quarter units must be earned at De Anza College.

Major courses for certificates and degrees must be completed with a letter grade unless a particular course is only offered on a pass/no-pass basis.

AutoDesk

Skills Certificate

Skills Certificates (programs requiring fewer than 18 units) are issued by the individual departments and are not notated on official college transcripts. Please contact the department directly for assistance and to apply for Skills Certificates.

De Anza College's Computer Aided Design Department developed the AutoDesk Certificate option to train drafter, designer, and engineering professionals at the entry and mid-levels skills using ACAD, Inventor, and Revit CAD Software. Students will learn substantive job skills in AutoDesk software packages that will make them employable in industrial and mechanical engineering and design.

Student Learning Outcomes
Upon completion, students will:
- Solve basic and complex drafting and design application problems using AutoDesk design software packages.
- Apply the fundamentals of computer-aided drafting and design principles and practices to architectural, mechanical, industrial, and engineering design.
- Utilize industry standard microcomputer CAD software and the hardware, operating systems and peripherals used to facilitate them.
- Create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications using ACAD, Inventor, and Revit.
- Satisfy a prospective employer with quality technical expertise in the use of AutoDesk software products at a level commensurate with entry to mid-level usage in industry design and engineering.

Complete each required course at De Anza College with a passing grade ("C" or better/"P").

Complete a minimum of 12 units from the following:		12
CDI 80D	AutoCAD (Beginning) (4) *or other CDI 80 series course*	
CDI 81D	AutoCAD (Intermediate) (4) *or other CDI 81 series course*	
CDI 82D	AutoCAD Civil 3D (4) *or other CDI 82 series course*	
CDI 83D	AutoDesk Revit Architecture (4) *or other CDI 83 series course*	
CDI 85D	AutoDesk Inventor (4) *or other CDI 85 series course*	
	Total Units Required	12

SolidWorks

Skills Certificate

Skills Certificates (programs requiring fewer than 18 units) are issued by the individual departments and are not notated on official college transcripts. Please contact the department directly for assistance and to apply for Skills Certificates.

De Anza College's Computer Aided Design Department developed the SolidWorks Certificate option to train drafter, designer, and engineering professionals at the entry and mid-levels skills using SolidWorks Software. Students will learn substantive job skills in SolidWorks software that will make them employable in industrial and mechanical engineering and design.

Student Learning Outcomes - upon completion, students will:
- Solve basic and complex drafting and design application problems using SolidWorks design software.
- Apply the fundamentals of computer-aided drafting and design principles and practices to mechanical, industrial, and engineering design.
- Utilize industry standard microcomputer CAD software and the hardware, operating systems and peripherals used to facilitate them.
- Create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications using SolidWorks.
- Satisfy a prospective employer with quality technical expertise in the use of SolidWorks software at a level commensurate with entry to mid-level usage in industry design and engineering.

Complete each required course at De Anza College with a passing grade ("C" or better/"P").

Complete a minimum of 12 units from the following:		12
CDI 60E	SolidWorks (Beginning) (4) *or other CDI 60 series course*	

† Pending State approval - please check with the department.

CDI 61E SolidWorks (Intermediate) (4)
or other CDI 61 series course
CDI 62E SolidWorks (Advanced) (4)
or other CDI 62 series course
CDI 63E SolidWorks (SURFACES) (4)
or other CDI 63 series course
CDI 64E SolidWorks (PDMWorks) (2)
or other CDI 64 series course
CDI 67E SolidWorks (Simulation) (4)
or other CDI 67 series course
Total Units Required 12

Creo Parametric
Certificate of Achievement †

De Anza College's Computer Aided Design Department developed the Creo Certificate option to train drafter, designer, and engineering professionals at the entry and mid-levels skills using Creo CAD Software. Students pursuing De Anza College's Creo Certificate of Achievement will receive education in the fundamentals of the Creo CAD system. Students will learn substantive job skills in Creo that will make them employable in industrial and mechanical engineering and design.

Upon completion, students will:
- Solve basic and complex drafting and design application problems using Creo's feature-based 3-D parametric design software.
- Apply the fundamentals of computer-aided drafting and design principles and practices to mechanical, industrial, and engineering design.
- Utilize industry standard microcomputer CAD software and the hardware, operating systems and peripherals used to facilitate them.
- Create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications using Creo.
- Satisfy a prospective employer with quality technical expertise in the use of Creo software at a level commensurate with entry to mid-level usage in industry design and engineering.

1. Meet the requirements for this certificate level.
2. Do the following.

Complete a minimum of 20 units from the following: 20
CDI 70D Pro/ENGINEER Wildfire (Beginning) (4)
CDI 70E Creo Parametric (Beginning) (4)
or other CDI 70 series course
CDI 71D Pro/ENGINEER Wildfire (Intermediate) (4)
CDI 71E Creo Parametric (Intermediate) (4)
or other CDI 71 series course
CDI 72D Pro/ENGINEER Wildfire (Advanced) (4)
CDI 72E Creo Parametric (Advanced) (4)
or other CDI 72 series course
CDI 73D Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4)
CDI 73E Creo Parametric (Sheetmetal) (4)
or other CDI 73 series course
CDI 74D Pro/ENGINEER Wildfire (Pro/SURFACE) (4)
CDI 74E Creo Parametric (Surfaces) (4)
or other CDI 74 series course
CDI 75D Pro/ENGINEER Wildfire (Pro/MOLD) (4)
or other CDI 75 series course
CDI 76D Pro/ENGINEER Wildfire (Pro/CABLE) (4)
or other CDI 76 series course
CDI 77D Pro/ENGINEER Wildfire (Pro/MECHANICA) (4)
CDI 77E Creo Parametric (Mechanica) (4)
or other CDI 77 series course
CDI 78D Pro/ENGINEER (Windchill ProductPoint) (2)
or other CDI 78 series course
CDI 79D Pro/ENGINEER Wildfire (Update) (4)
or other CDI 79 series course
Total Units Required 20

† Pending State approval - please check with the department.

Computer Aided Design - Mechanical
Certificate of Achievement-Advanced

Students pursuing De Anza College's Computer Aided Design Certificate of Achievement Advanced will receive education in the fundamentals of CAD that combines the use of three types of design graphic software packages. Students will learn substantive job skills in AutoDesk, Creo, and SolidWorks CAD systems that will make them employable in industrial and mechanical engineering and design.

Student Learning Outcomes
- Solve basic and complex drafting and design application problems using industry standard 2-dimensional and 3-dimensional software and feature-based parametric design software.
- Apply the fundamentals of computer-aided drafting and design disciplines such as architectural, mechanical, and industrial design and engineering.
- Utilize industry standard microcomputer CAD software and the hardware, operating systems and peripherals used to facilitate them.
- Create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications.
- The student will be able to satisfy a prospective employer with quality technical expertise in the use of three CAD tools (AutoDESK, SolidWorks, and Creo) at a level commensurate with entry to midlevel usage in industry design and engineering.

1. Meet the requirements for this certificate level.
2. Do the following.

Complete a minimum of eight (8) units from the following: 8
CDI 60E SolidWorks (Beginning) (4)
or other CDI 60 series course
CDI 61E SolidWorks (Intermediate) (4)
or other CDI 61 series course
CDI 62E SolidWorks (Advanced) (4)
or other CDI 62 series course
CDI 63E SolidWorks (SURFACES) (4)
or other CDI 63 series course
CDI 64E SolidWorks (PDMWorks) (2)
or other CDI 64 series course
CDI 67E SolidWorks (Simulation) (4)
or other CDI 67 series course

Complete a minimum of 12 units from the following: 12
CDI 70D Pro/ENGINEER Wildfire (Beginning) (4)
CDI 70E Creo Parametric (Beginning) (4)
or other CDI 70 series course
CDI 71D Pro/ENGINEER Wildfire (Intermediate) (4)
CDI 71E Creo Parametric (Intermediate) (4)
or other CDI 71 series course
CDI 72D Pro/ENGINEER Wildfire (Advanced) (4)
CDI 72E Creo Parametric (Advanced) (4)
or other CDI 72 series course
CDI 73D Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4)
CDI 73E Creo Parametric (Sheetmetal) (4)
or other CDI 73 series course
CDI 74D Pro/ENGINEER Wildfire (Pro/SURFACE) (4)
CDI 74E Creo Parametric (Surfaces) (4)
or other CDI 74 series course
CDI 75D Pro/ENGINEER Wildfire (Pro/MOLD) (4)
or other CDI 75 series course
CDI 76D Pro/ENGINEER Wildfire (Pro/CABLE) (4)
or other CDI 76 series course
CDI 77D Pro/ENGINEER Wildfire (Pro/MECHANICA) (4)
CDI 77E Creo Parametric (Mechanica) (4)
or other CDI 77 series course
CDI 78D Pro/ENGINEER (Windchill ProductPoint) (2)
or other CDI 78 series course
CDI 79D Pro/ENGINEER Wildfire (Update) (4)
or other CDI 79 series course

Complete a minimum of eight (8) units from the following: 8

CDI 80D AutoCAD (Beginning) (4)
or other CDI 80 series course
CDI 81D AutoCAD (Intermediate) (4)
or other CDI 81 series course
CDI 82D AutoCAD Civil 3D (4)
or other CDI 82 series course
CDI 83D AutoDesk Revit Architecture (4)
or other CDI 83 series course
CDI 85D AutoDesk Inventor (4)
or other CDI 85 series course
Total Units Required 28

Computer Aided Design - Mechanical

A.S. Degree

Students pursuing De Anza College's Computer Aided Design A.S. Degree will receive education in the fundamentals of CAD that combines the use of three types of design graphic software packages. Students will learn substantive job skills in AutoDesk products (Inventor, ACAD, and Revit), Creo, and SolidWorks CAD systems. Completeion of the program will enable the student to be employable in industrial, and mechanical engineering and design at an entry level.

Student Learning Outcomes

- Solve basic and complex drafting and design application problems using industry standard two-dimensional and three-dimensional software and feature-based parametric design software.
- Apply the fundamentals of computer-aided drafting and design disciplines such as architectural, mechanical, and industrial design and engineering.
- Utilize industry standard microcomputer CAD software and the hardware, operating systems and peripherals used to facilitate them.
- Create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications.
- The student will be able to satisfy a prospective employer with quality technical expertise in the use of three CAD tools (AutoDESK, SolidWorks, and Creo) at a level commensurate with entry to midlevel usage in industry design and engineering.

1. Meet the AA/AS degree requirements.
2. Do the following.

Complete a minimum of 12 units from the following: 12

CDI 60E SolidWorks (Beginning) (4)
or other CDI 60 series course
CDI 61E SolidWorks (Intermediate) (4)
or other CDI 61 series course
CDI 62E SolidWorks (Advanced) (4)
or other CDI 62 series course
CDI 63E SolidWorks (SURFACES) (4)
or other CDI 63 series course
CDI 64E SolidWorks (PDMWorks) (2)
or other CDI 64 series course
CDI 67E SolidWorks (Simulation) (4)
or other CDI 67 series course

Complete a minimum of 20 units from the following: 20

CDI 70D Pro/ENGINEER Wildfire (Beginning) (4)
CDI 70E Creo Parametric (Beginning) (4)
or other CDI 70 series course
CDI 71D Pro/ENGINEER Wildfire (Intermediate) (4)
CDI 71E Creo Parametric (Intermediate) (4)
or other CDI 71 series course
CDI 72D Pro/ENGINEER Wildfire (Advanced) (4)
CDI 72E Creo Parametric (Advanced) (4)
or other CDI 72 series course
CDI 73D Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4)
CDI 73E Creo Parametric (Sheetmetal) (4)
or other CDI 73 series course
CDI 74D Pro/ENGINEER Wildfire (Pro/SURFACE) (4)
CDI 74E Creo Parametric (Surfaces) (4)
or other CDI 74 series course
CDI 75D Pro/ENGINEER Wildfire (Pro/MOLD) (4)
or other CDI 75 series course
CDI 76D Pro/ENGINEER Wildfire (Pro/CABLE) (4)
or other CDI 76 series course
CDI 77D Pro/ENGINEER Wildfire (Pro/MECHANICA) (4)
CDI 77E Creo Parametric (Mechanica) (4)
or other CDI 77 series course
CDI 78D Pro/ENGINEER (Windchill ProductPoint) (2)
or other CDI 78 series course
CDI 79D Pro/ENGINEER Wildfire (Update) (4)
or other CDI 79 series course

Complete a minimum of 12 units from the following: 12

CDI 80D AutoCAD (Beginning) (4)
or other CDI 80 series course
CDI 81D AutoCAD (Intermediate) (4)
or other CDI 81 series course
CDI 82D AutoCAD Civil 3D (4)
or other CDI 82 series course
CDI 83D AutoDesk Revit Architecture (4)
or other CDI 83 series course
CDI 85D AutoDesk Inventor (4)
or other CDI 85 series course

Complete:

CDI 51 Geometric Dimensioning and Tolerancing 2

Major *Computer Aided Design* *46 units*
GE *General Education (31-42 units)*
Electives *Elective courses req'd. when major units plus GE units total is less than 90*
Total Units Required . . . . . 90 units