



Computer Aided Design (CAD)

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CDI Coordinator
408-864-8627

Business & Computer
Systems Division
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Counseling Center
Student & Community
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408-864-5400

Career Services Info.
Student & Community
Services Bldg. 2nd Fl.
408-864-5400

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

De Anza College's Computer Aided Design Department developed the AutoDesk Certificate option to teach drafter, designer, and engineering professionals entry- and mid-levels skills using ACAD, Inventor, and Revit CAD Software. Students learn substantive job skills in AutoDesk software packages that make them employable in industrial and mechanical engineering and design. (Note: skills certificates are not notated on official college transcripts.)

Student Learning Outcomes - upon completion, students will be able to:

- solve basic and complex drafting and design application problems using AutoDesk design software packages.
- apply fundamental 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 it.
- create engineering notes and scaled drawings in ACAD, Inventor, and Revit using ASME and/or International Standards Organization (ISO) specifications.

- satisfy a prospective employer with quality technical expertise using AutoDesk software products 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").

<i>Complete a minimum of 12 units from the following:</i>		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

De Anza College's Computer Aided Design Department developed the SolidWorks Certificate option to teach drafter, designer, and engineering professionals entry- and mid-levels skills using SolidWorks software. Students learn substantive job skills in SolidWorks software that make them employable in industrial and mechanical engineering and design. (Note: skills certificates are not notated on official college transcripts.)

Student Learning Outcomes - upon completion, students will be able to:

- solve basic and complex drafting and design application problems using SolidWorks design software.
- apply fundamental 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 it.
- create engineering notes and scaled drawings in SolidWorks using ASME and/or International Standards Organization (ISO) specifications.
- satisfy a prospective employer with quality technical expertise using SolidWorks software 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").

<i>Complete a minimum of 12 units from the following:</i>		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	
Total Units Required		12

Creo Parametric Certificate of Achievement †

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

Student Learning Outcomes - upon completion, students will be able to:

- solve basic and complex drafting and design application problems using Creo's feature-based 3-D parametric design software.
- apply fundamental 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 it.
- create engineering notes and scaled drawings in Creo using ASME and/or International Standards Organization (ISO) specifications.
- satisfy a prospective employer with quality technical expertise in using 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. Complete 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 ---Note: either CDI 70D or 70E may apply toward the 20 units but not both---	
CDI 71D	Pro/ENGINEER Wildfire (Intermediate) (4)	
CDI 71E	Creo Parametric (Intermediate) (4) or other CDI 71 series course ---Note: either CDI 71D or 71E may apply toward the 20 units but not both---	
CDI 72D	Pro/ENGINEER Wildfire (Advanced) (4)	
CDI 72E	Creo Parametric (Advanced) (4) or other CDI 72 series course ---Note: either CDI 72D or 72E may apply toward the 20 units but not both---	
CDI 73D	Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4)	
CDI 73E	Creo Parametric (Sheetmetal) (4) or other CDI 73 series course ---Note: either CDI 73D or 73E may apply toward the 20 units but not both---	
CDI 74D	Pro/ENGINEER Wildfire (Pro/SURFACE) (4)	
CDI 74E	Creo Parametric (Surfaces) (4) or other CDI 74 series course ---Note: either CDI 74D or 74E may apply toward the 20 units but not both---	
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 ---Note: either CDI 77D or 77E may apply toward the 20 units but not both---	
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

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 - upon completion, students will be able to:

- 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 to 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 it.
- create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications.
- 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 mid-level usage in industry design and engineering.

1. Meet the requirements for this certificate level.
2. Complete 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 ---Note: either CDI 70D or 70E may apply toward the 12 units but not both---	
CDI 71D	Pro/ENGINEER Wildfire (Intermediate) (4)	
CDI 71E	Creo Parametric (Intermediate) (4) or other CDI 71 series course ---Note: either CDI 71D or 71E may apply toward the 12 units but not both---	
CDI 72D	Pro/ENGINEER Wildfire (Advanced) (4)	
CDI 72E	Creo Parametric (Advanced) (4) or other CDI 72 series course ---Note: either CDI 72D or 72E may apply toward the 12 units but not both---	
CDI 73D	Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4)	
CDI 73E	Creo Parametric (Sheetmetal) (4) or other CDI 73 series course ---Note: either CDI 73D or 73E may apply toward the 12 units but not both---	
CDI 74D	Pro/ENGINEER Wildfire (Pro/SURFACE) (4)	
CDI 74E	Creo Parametric (Surfaces) (4) or other CDI 74 series course ---Note: either CDI 74D or 74E may apply toward the 12 units but not both---	
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	

† Pending state approval - please check with the department.

CDI 77D	Pro/ENGINEER Wildfire (Pro/MECHANICA) (4)		Complete a minimum of 20 units from the following:	20
CDI 77E	Creo Parametric (Mechanica) (4) or other CDI 77 series course ---Note: either CDI 77D or 77E may apply toward the 12 units but not both---		CDI 70D Pro/ENGINEER Wildfire (Beginning) (4) CDI 70E Creo Parametric (Beginning) (4) or other CDI 70 series course ---Note: either CDI 70D or 70E may apply toward the 20 units but not both---	
CDI 78D	Pro/ENGINEER (Windchill ProductPoint) (2) or other CDI 78 series course		CDI 71D Pro/ENGINEER Wildfire (Intermediate) (4) CDI 71E Creo Parametric (Intermediate) (4) or other CDI 71 series course ---Note: either CDI 71D or 71E may apply toward the 20 units but not both---	
CDI 79D	Pro/ENGINEER Wildfire (Update) (4) or other CDI 79 series course		CDI 72D Pro/ENGINEER Wildfire (Advanced) (4) CDI 72E Creo Parametric (Advanced) (4) or other CDI 72 series course ---Note: either CDI 72D or 72E may apply toward the 20 units but not both---	
Complete a minimum of eight (8) units from the following:		8	CDI 73D Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4) CDI 73E Creo Parametric (Sheetmetal) (4) or other CDI 73 series course ---Note: either CDI 73D or 73E may apply toward the 20 units but not both---	
CDI 80D	AutoCAD (Beginning) (4) or other CDI 80 series course		CDI 74D Pro/ENGINEER Wildfire (Pro/SURFACE) (4) CDI 74E Creo Parametric (Surfaces) (4) or other CDI 74 series course ---Note: either CDI 74D or 74E may apply toward the 20 units but not both---	
CDI 81D	AutoCAD (Intermediate) (4) or other CDI 81 series course		CDI 75D Pro/ENGINEER Wildfire (Pro/MOLD) (4) or other CDI 75 series course	
CDI 82D	AutoCAD Civil 3D (4) or other CDI 82 series course		CDI 76D Pro/ENGINEER Wildfire (Pro/CABLE) (4) or other CDI 76 series course	
CDI 83D	AutoDesk Revit Architecture (4) or other CDI 83 series course		CDI 77D Pro/ENGINEER Wildfire (Pro/MECHANICA) (4) CDI 77E Creo Parametric (Mechanica) (4) or other CDI 77 series course ---Note: either CDI 77D or 77E may apply toward the 20 units but not both---	
CDI 85D	AutoDesk Inventor (4) or other CDI 85 series course		CDI 78D Pro/ENGINEER (Windchill ProductPoint) (2) or other CDI 78 series course	
Total Units Required		28	CDI 79D Pro/ENGINEER Wildfire (Update) (4) or other CDI 79 series course	

Computer Aided Design - Mechanical

A.S. Degree

Students pursuing De Anza College's Computer Aided Design A.S. Degree will learn the fundamentals of CAD using three different design graphic software packages. The program teaches students substantive job skills in AutoDesk products (Inventor, ACAD, and Revit), Creo, and SolidWorks CAD systems. Completion of the program will enable students to be employable in industrial and mechanical engineering and design at an entry level.

Student Learning Outcomes - upon completion, students will be able to:

- 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 to 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 it.
- create engineering notes and scaled drawings using ASME and/or International Standards Organization (ISO) specifications.
- 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 mid-level usage in industry design and engineering.

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

Complete a minimum of 12 units from the following:		12	Complete a minimum of 12 units from the following:	12	
CDI 60E	SolidWorks (Beginning) (4) or other CDI 60 series course		CDI 80D AutoCAD (Beginning) (4) or other CDI 80 series course		
CDI 61E	SolidWorks (Intermediate) (4) or other CDI 61 series course		CDI 81D AutoCAD (Intermediate) (4) or other CDI 81 series course		
CDI 62E	SolidWorks (Advanced) (4) or other CDI 62 series course		CDI 82D AutoCAD Civil 3D (4) or other CDI 82 series course		
CDI 63E	SolidWorks (SURFACES) (4) or other CDI 63 series course		CDI 83D AutoDesk Revit Architecture (4) or other CDI 83 series course		
CDI 64E	SolidWorks (PDMWorks) (2) or other CDI 64 series course		CDI 85D AutoDesk Inventor (4) or other CDI 85 series course		
CDI 67E	SolidWorks (Simulation) (4) or other CDI 67 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