

# COMPUTER-AIDED DESIGN (CADD)

## CADD 111, INTRODUCTION TO COMPUTER AIDED DRAFTING 2 (4)

This course introduces the student to the fundamental concepts used in creating computer-generated drawings using AutoCAD software. Topics include construction, text insertion, editing techniques, display control, inquiry techniques, dimensioning and use of part libraries in the creation of two-dimensional drawings. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO2, GEO3

**Course Entry Requirement(s):** Concurrent: TECN 111 or MEMS 124 for MEMS students

**Typically Offered:** Summer, Fall and Spring Semesters

## CADD 212, INTRODUCTION TO CREO PARAMETRIC (PRO/ENGINEER) 3 (5)

This course is an introduction to 3D parametric modeling techniques and concepts using Creo Parametric (formerly Pro/Engineer). The student will create 3D solid models and assemblies using 2D sketches and constraints to construct and edit parametric features. Part models and assemblies will be used to create 2D detail and assembly drawings. (A special fee will be assessed.)

**General Education:** GEO2, GEO3

**Course Entry Requirement(s):** Prerequisite: CADD 111 or TECN 115

**Typically Offered:** Offer as required

## CADD 213, INTRODUCTION TO SOLIDWORKS 3 (5)

This course is an introduction to 3D parametric modeling techniques and concepts using SolidWorks. The student will create 3D solid models and assemblies from basic 2D sketches using parametric dimensioning and constraints. Part models and assemblies will be used to create 2D detail and assembly drawings. (A special fee will be assessed.) (TAG, ITAG)

**General Education:** GEO2, GEO3

**Course Entry Requirement(s):** Prerequisite: CADD 111 or TECN 115

**Typically Offered:** Fall and Spring Semesters

## CADD 214, INTRODUCTION TO INVENTOR 3 (5)

This course is an introduction to 3D parametric modeling techniques and concepts using Inventor. The student will create 3D solid models and assemblies from basic 2D sketches using parametric dimensioning and constraints. Part models and assemblies will be used to create 2D detail and assembly drawings. (A special fee will be assessed.)

**General Education:** GEO2, GEO3

**Course Entry Requirement(s):** Prerequisite: CADD 111 or TECN 115

**Typically Offered:** Offer as required

## CADD 215, ARCHITECTURAL DRAFTING USING CAD 3 (5)

Building on the concepts learned in Introduction to Computer Aided Drafting, this course introduces the principles of architectural design and the graphical presentation of single-family residential buildings. Lab assignments will emphasize document organization, conventional materials, details, mechanical, plumbing and electrical systems and the understanding of building code requirements through the development of site plans, floor plans, elevations, sections, and details for a single family building. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO2, GEO8

**Course Entry Requirement(s):** Prerequisite: CADD 111 and CNST 121

**Typically Offered:** Fall Semester

## CADD 216, INTRODUCTION TO 3D MODELING AND PRINTING 1 (1.67)

This course is an introduction to 3D modeling and printing techniques using 3D parametric CAD software and a 3D Printer. The student will print 3D plastic models from 3D parametric solid parts created from sketches and applied features. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO2, GEO3

**Typically Offered:** Fall and Spring Semesters

## CADD 220, RENDERING AND ANIMATION 3 (5)

This is an advanced course for students interested in computer rendering and animation. Students learn the techniques used in rendering and animation of CAD models for use in mechanical design, architectural presentation, game development and other types of presentation. Students develop 3D virtual scenes and create renderings and dynamic animations for virtual walk-throughs, fly-bys, game development, or presentation graphics. (A special fee will be assessed.)

**General Education:** GEO2, GEO3

**Course Entry Requirement(s):** Prerequisite: CADD 111

**Typically Offered:** Offer as required

## CADD 235, DETAILING AND DIMENSIONING 3 (5)

Building on the concepts learned in Introduction to Computer Aided Drafting, this course covers an introduction to 3D modeling, orthographic projection, isometric and oblique projections, sectional views, auxiliary views, dimensioning and tolerancing, and threads and fasteners as they relate to two dimensional detail and assembly drawings. Laboratory required. (A special fee will be assessed.) (TAG, CTAG, ITAG)

**General Education:** GEO2, GEO3, GEO8

**Course Entry Requirement(s):** Prerequisite: CADD 111 and TECN 115

**Typically Offered:** Spring Semester

## CADD 287, WORK-BASED LEARNING I - CADD 1-3 (1)

This course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

**General Education:** GEO1, GEO2, GEO6, GEO8

**Course Entry Requirement(s):** A student must be pursuing a degree seeking program at LCCC; have completed 12 semester hours with a minimum of 6 semester hours in the discipline of placement; have a min GPA of 2.5 in the discipline and a 2.0 overall GPA; and have division approval.

**Typically Offered:** Offer as required

## CADD 288, WORK-BASED LEARNING II - CADD 1-3 (1)

Building on experiences from Work Based Learning I, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

**General Education:** GEO1, GEO2, GEO6, GEO8

**Course Entry Requirement(s):** Prerequisite: CADD 287

**Typically Offered:** Offer as required

**CADD 289, WORK-BASED LEARNING III - CADD 1-3 (1)**

Building on experiences from Work Based Learning II, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

**General Education:** GE01, GE02, GE06, GE08

**Course Entry Requirement(s):** Prerequisite: CADD 288

**Typically Offered:** Offer as required

**CADD 299, INDIVIDUALIZED STUDIES IN CADD 1-3 (1)**

An in-depth study of areas in computer aided design presented by discussion and/or individual research and reading. Topics will vary. Repeatable up to six (6) times for a total of six (6) credit hours.

**Course Entry Requirement(s):** Prerequisite: Second-year standing and division approval

**Typically Offered:** Offer as required

**CADD 313, INTRODUCTION TO SOLIDWORKS WITH ADVANCED PROJECTS 3 (5)**

This course is an introduction to 3D parametric modeling techniques and concepts using SolidWorks. The student will create 3D solid models and assemblies from basic 2D sketches using parametric dimensioning and constraints. Part models and assemblies will be used to create 2D detail and assembly drawings. (A special fee will be assessed.)

**General Education:** GE02, GE03

**Course Entry Requirement(s):** Prerequisite: CADD 111 or TECN 115 and admission into a bachelor degree program or division approval

**Typically Offered:** Fall and Spring Semesters