

DRAFTING/COMPUTER-AIDED DESIGN

The 21st century is witnessing a rapid growth in science, engineering and technology. This will require society to read, write and draw the language of technology—*drafting*.

Drafting is used in a wide variety of business, industrial, professional and governmental activities, including the following:

- Anthropology
- Archeology
- Architecture
- Art—Design
- Automotive Services
- Computer Drafting
- Computer Science
- Electronics
- Engineering
- Environmental Studies
- Geology/Geography
- Graphics—Design
- Industrial Technology
- Interior Design
- Landscape Architecture
- Landscape Horticulture
- Machine Shop/Welding
- Mapping
- Marine Diving Technology
- Mathematics—Applied
- Mechanical/Elect. Systems
- Physics—Applied
- Surveying
- Technical Illustration

Santa Barbara City College's Drafting/CAD Department offers comprehensive training for entry-level positions. California certificated and professionally experienced instructors teach all departmental courses, with heavy emphasis on the laboratory use of modern drafting equipment.

Full college credit is granted for each course successfully completed. Students who complete the 31.0 units of required Drafting/CAD courses and the controlled electives earn a Certificate of Achievement in Drafting/CAD. Those who also complete institutional and General Education course requirements earn the Associate in Science Degree in Drafting/CAD. The department offers all courses with an open-door policy—both for majors and non-majors.

Programs of Study

Associate Degree

- Drafting/CAD, Associate of Science (AS) (<https://catalog.sbccc.edu/academic-departments/drafting-cad/drafting-cad-as/>)

Certificate of Achievement

- Drafting/CAD, Certificate of Achievement (C) (<https://catalog.sbccc.edu/academic-departments/drafting-cad/drafting-cad-certificate-achievement/>)

Credit Courses

Drafting/CAD (DRFT)

DRFT 101 Basic Drafting (3 Units)

Hours: 72 (45 lecture, 27 lab)

Fundamental concepts of technical drafting. Topics include: drafting standards and conventions; multi-view orthographic projections; non-perspective Pictorial views; planning, elevation and section views; manual and computer aided drafting tools and annotations. Emphasis placed on architectural and engineering technical drafting.

Transfer Information: CSU Transferable, UC Transferable

DRFT 120 Architectural Drafting I (3 Units)

Hours: 72 (45 lecture, 27 lab)

Fundamental concepts in architectural drafting. Topics include architectural drafting standards and conventions, multi-view orthographic projections, floor plan, elevation and section views, manual and computer aided drafting tools, output and delivery methods.

Transfer Information: CSU Transferable, UC Transferable

DRFT 121 Architectural Drafting II (3 Units)

Corequisites: DRFT 120.

Hours: 72 (45 lecture, 27 lab)

Prerequisite or Topics include drafting standards, conventions, CAD standards, MasterFormat and construction documents. Emphasis in project deliverables including cover sheet, site plan, floor plans, roof plan, elevations, sections, wall sections, schedules, interior elevations, details, manual and computer-aided drafting tools, and output/delivery methods.

Transfer Information: CSU Transferable, UC Transferable

DRFT 124 Architectural Rendering I (3 Units)

Hours: 72 (45 lecture, 27 lab)

Fundamentals of architectural rendering using manual and computer-aided drafting tools, including interior and exterior one/two-point perspectives, oblique and isometric drawings. Rendering techniques include surfaces, textures, shades, shadows, figures and foliage.

Emphasis on compiling a portfolio of architectural presentation drawings.

Transfer Information: CSU Transferable, UC Transferable

DRFT 125 Architectural Rendering II (3 Units)

Prerequisites: DRFT 124.

Hours: 72 (45 lecture, 27 lab)

Advanced architectural rendering using manual and computer-aided drafting tools, including presentation drawings, two-point perspectives, oblique and isometric drawings. Rendering techniques include surfaces and textures, shades and shadow, figures and foliage. Emphasis on compiling a portfolio of architectural presentation drawings.

Transfer Information: CSU Transferable, UC Transferable

DRFT 126 Landscape Drafting I (3 Units)

Same as: EH 126

Hours: 72 (45 lecture, 27 lab)

Principles of drafting and plan reading for landscape architecture and ornamental horticulture. Style research, drafting of plans, elevations and details.

Transfer Information: CSU Transferable, UC Transferable

DRFT 127 Landscape Drafting II (3 Units)

Same as: EH 127

Prerequisites: EH 126 or DRFT 126.

Hours: 72 (45 lecture, 27 lab)

Advanced drafting and plan reading using manual and computer drafting tools, for landscape architecture and ornamental horticulture fields.

Includes site plans, elevations and details..

Transfer Information: CSU Transferable, UC Transferable

DRFT 129 Principles Of Residential Construction (3 Units)

Hours: 54 (54 lecture)

Overview of residential construction for homeowners, remodelers, drafters and designers. Topics include building codes, materials, grading, foundations, framing, mechanical systems, doors and windows, roofing and drywalling.

Transfer Information: CSU Transferable

DRFT 130 Computer-Assisted Drafting And Design I (5 Units)

Prerequisites: DRFT 101 or DRFT 120 or DRFT 126.

Hours: 126 (72 lecture, 54 lab)

Intermediate AutoCAD: Drawing Set-up, drafting, editing, output and delivery. Coverage of latest AutoCAD features.

Transfer Information: CSU Transferable, UC Transferable

UC Transfer Limit: DRFT 130, DRFT 131, DRFT 132 and DRFT 148 combined: maximum credit, 8 units.

DRFT 131 Computer-Assisted Drafting And Design II (5 Units)

Prerequisites: DRFT 130.

Hours: 126 (72 lecture, 54 lab)

Advanced AutoCAD. File Management and CAD Standards for Project Driven Productivity, 3D Modeling.

Transfer Information: CSU Transferable, UC Transferable

UC Transfer Limit: DRFT 130, DRFT 131, DRFT 132 and DRFT 148 combined: maximum credit, 8 units.

DRFT 132 Building Information Modeling with Revit ® - I (5 Units)

Hours: 126 (72 lecture, 54 lab)

Introduction to Autodesk Revit®. Designed to meet the needs of students who want to learn the basics of industry-standard building information modeling software.

Transfer Information: CSU Transferable, UC Transferable

UC Transfer Limit: DRFT 130, DRFT 131, DRFT 132 and DRFT 148 combined: maximum credit, 8 units.

DRFT 142 Product Design Fundamentals (3 Units)

Hours: 72 (45 lecture, 27 lab)

In this product design studio, students are introduced to the process of product design and develop the skills necessary for bringing design ideas to fruition. We will explore product design practice as the intersection of creativity, critical thinking, and practical application in commerce, and learn to approach designed objects as challenges to meet human needs.

Transfer Information: CSU Transferable

DRFT 143 Product Design and Rapid Prototyping Workshop (3 Units)

Prerequisites: DRFT 142.

Hours: 72 (45 lecture, 27 lab)

Students turn their design concepts into physical objects through hands-on experience in the complete cycles of product design applied to small scale additive manufacturing. Tailored to expose students to selected software used for product design and visualization, with emphasis on 3D modeling applications with capabilities, features, and support for rapid prototyping with 3D printers.

Transfer Information: CSU Transferable

DRFT 290 Work Experience In Drafting (1-4 Units)

Limitations on Enrollment: 1.

Hours: 216 (216 lab)

Employed or available for employment in an occupation directly related to the drafting major. 2. Must be enrolled in no less than seven (7) units, including Work Experience. Work experience on work related to drafting, enabling the student to acquire skills, attitudes necessary in a drafting occupation. Students must be: (1) Employed or Available for employment in an occupation related to Drafting and (2) enrolled in no less than seven (7) units. May be taken for 1, 2, 3 or 4 units of credit. Maximum (4) units per semester for a maximum of (16) units. Course restricted to 3 repetitions

Transfer Information: CSU Transferable

DRFT 299 Independent Study In Drafting (1-4 Units)

Limitations on Enrollment: Completion of a minimum of 12 units at SBCC, with a 2.5 G.P.A., and a minimum of 6 (six) units completed in Drafting.

Hours: 192 (192 lab)

Provides students with an opportunity to engage in Independent study in drafting. Students work under direction of sponsoring faculty member on a project directly related to drafting. Course restricted to 3 repetitions

Transfer Information: CSU Transferable