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 in Science (AS) (https://catalog.sbcc.edu/academic-departments/drafting-cad/drafting-cad-as/)

### 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)
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, output/delivery methods.
Transfer Information: CSU Transferable, UC Transferable

**DRFT 124 Architectural Rendering I (3 Units)**
Skills Advisories: MATH 001 and eligibility for ENG 103.
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.
Skills Advisories: MATH 001 and eligibility for ENG 103.
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, shade 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.
Skills Advisories: MATH 001 and eligibility for ENG 103.
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)
Skills Advisories: MATH 001 and eligibility for ENG 103.
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.
Skills Advisories: MATH 001 and eligibility for ENG 103.
Hours: 126 (72 lecture, 54 lab)
Intermediate AutoCAD. Set Up, drafting, editing, output, and delivery. Coverage of latest AutoCAD features.
Transfer Information: CSU Transferable, UC Transferable
UC Transfer Limit: DRFT 130, 131, and 132 combined: maximum credit, one course.

DRFT 131 Computer-Assisted Drafting And Design II (5 Units)
Prerequisites: DRFT 130.
Skills Advisories: MATH 001 and eligibility for ENG 103.
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, 131, and 132 combined: maximum credit, one course.

DRFT 132 CAD Drafting/Design III (5 Units)
Course Advisories: DRFT 129.
Skills Advisories: Eligibility for English 103 and Math 001.
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, 131, and 132 combined: maximum credit, one course.

DRFT 134 Product Design Fundamentals (3 Units)
Skills Advisories: Eligibility for ENG 103 and MATH 001.
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 135 Product Design and Rapid Prototyping Workshop (3 Units)
Prerequisites: DRFT 142.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 001.
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 138 3D Modeling with Solid Works (3 Units)
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 001.
Hours: 72 (45 lecture, 27 lab)
3D modeling with Solid Works and ProE.
Transfer Information: CSU Transferable

DRFT 139 3D Printing Fundamentals (3 Units)
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 001.
Hours: 72 (45 lecture, 27 lab)
Basic techniques covered in Intro to Landscape Architecture. Operation, servicing and maintenance of 3D printers. Legal aspects and ramifications of rapid prototyping.
Transfer Information: CSU Transferable

DRFT 140 Intro to Landscape Architecture (3 Units)
Hours: 72 (45 lecture, 27 lab)
Introduces students to the nature and practice of Landscape Architecture. Core elements of the course examine the history, theories, design principles, ecology, and the latest professional and educational developments in the field of Landscape Architecture.
Transfer Information: CSU Transferable, UC Transferable

DRFT 141 Landscape Architecture Design Studio I (5 Units)
Corequisites: DRFT 150.
Hours: 126 (72 lecture, 54 lab)
Prerequisites or This course explores design principles, materials, and issues relevant to landscape architecture. Emphasizing the design process, topics include: site analysis, design synthesis, and methods to communicate intended concepts and ideas. Builds on the principles and techniques covered in Intro to Landscape Architecture.
Transfer Information: CSU Transferable, UC Transferable
UC Transfer Limit: DRFT 151 and DRFT 152 combined: maximum credit, one course.

DRFT 142 Landscape Architecture Design Studio II (5 Units)
Corequisites: DRFT 151.
Hours: 126 (72 lecture, 54 lab)
Prerequisite or Development of design principles and processes of landscape architecture through complex design projects. The course examines large-scale landscape planning & urban design projects and approaches towards balancing ecological health and public needs.
Emphasis on program development, site suitability, and design for human behavior & comfort. Explores sustainable practices across environmental, sociocultural, and economic realms.
Transfer Information: CSU Transferable, UC Transferable
UC Transfer Limit: DRFT 151 and DRFT 152 combined: maximum credit, one course.
DRFT 290 Work Experience In Drafting (1-4 Units)
Limitations on Enrollment: (1) Employed or available for employment in an occupation directly related to the Drafting major; and, (2) Must be enrolled in no less than seven (7) units, including Work Experience.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
Hours: 300 (300 lab)
(1) Available for employment in an occupation related to Drafting; (2) Must be 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.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
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