

**RIVERSIDE COMMUNITY COLLEGE DISTRICT
PROGRAM OUTLINE of RECORD
Narrative**

College: R___ M___ N_X

TOPs Code: 0953.00, 0953.40

CIP Code: NAS539/NAS539B/NAS539C/NCE539

DRAFTING TECHNOLOGY CERTIFICATE

Program Narrative

Item 1. Program Goals and Objectives

Drafting Technology certificate program prepares individuals the basic skills and knowledge in the field of drafting to perform as a general drafter. Students can advance their skills later on in Mechanical or Architectural drafting. This program gives individuals knowledge and skills to develop working drawings and electronic simulations in support of engineering drafting and related professionals. The content includes the application of Manual Drafting, Computer Assisted Drafting and technical communication to the creation of graphic representations and simulations in support of engineering projects.

Upon successful completion of this program, students should be able to:

1. An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry level employment, as a drafter in the drafting industry.
2. Knowledge of engineering drawing skills and practice in the solution of industry related design projects.

Employment for the drafting technology occupational group is expected to decrease by 2% between 2017 and 2022 in the Inland Empire/Desert Region and Los Angeles County combined. Despite this projected decrease, nearly 3,600 job openings will be available over the five-year timeframe. The entry-level wage for each occupation in the drafting technology occupational group is above the MIT Living Wage estimate of \$12.30 per hour for a single adult living in the Inland Empire/Desert Region. There appears to be an opportunity for program growth based on the average annual number of program completions for the selected community college programs (52 average annual community college credentials), and the annual openings for drafting technology occupations in the local region (712 annual job openings). Attached find LMI report.

Item 2. Catalog Description

PROGRAM PREREQUISITE:

None

SHORT DESCRIPTION of PROGRAM

This program prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulation in support of drafting and engineering design problems typical of industry. This includes instruction in engineering graphics, computer-aided drafting (CAD), two-dimensional and engineering graphics. Students completing this certificate will be qualified for an entry level drafting or design position.

Item 3. Program Requirements

Required Courses: 14-15 units

Course	Title	Units	Sequencing
DFT/ENE21	Drafting	3	Semester 1, Fall
DFT/ENE27	Technical Communications	3	Semester 1, Fall
DFT/ENE30	Computer Aided Drafting	3	Semester 1, Fall
DFT/ENE51 OR CON 62	Print Reading	2-3	Semester 1, Fall
ENE41	Engineering Graphics	3	Semester 2 Spring

Plus, an additional 6-8 units from the following elective courses:

Course	Title	Units	Sequencing
DFT/MAT 60 OR MAT 36	Math for Engineering Technology OR Trigonometry	3 OR 4	Semester 1, Fall
CON60	Introduction to Construction	3	Semester 2 Spring
ARE37	Architectural Design	3	Semester 2 Spring
DFT/ENE42	SolidWorks I	3	Semester 2 Spring
MAN 56	CNC Machine Set-up and Operation	4	Semester 2 Spring

Total Program Units: 20 -23 units

Associate of Science Degree

The Associate of Science Degree in Drafting Technology will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Item 4. Master Planning

Riverside Community College District is dedicated to the success of its students and to the development of the communities it serves. By facilitating its Colleges and learning centers to provide educational and student services, it meets the needs and expectations of its unique communities of learners. The District provides the Colleges with leadership in the areas of advocacy, resource stewardship, and planning.

Norco College inspires a diverse student body by an inclusive innovative approach to learning through its pathways to transfer, professional, career and technical education, certificates, and degrees. We are proud to be a pivotal hub for scholarship, arts and culture, dynamic technologies, and partnerships. Norco College encourages self-empowerment and is dedicated to transforming the lives of our students, employees, and community.

The goal of this program is to provide a diverse population of adult learners with the opportunity to build their understanding of general Drafting techniques needed for drafting job performance, which is essential for setting up and operating a quality drafting service business/shop.

Item 5. Enrollment and Completer Projections

The college expect to offer all courses in the certificate twice per year, and each class will be offered to 34 students. Students can complete the program within a year.

Item 6. Place of Program in Curriculum/Similar Programs

Current Norco College Drafting Technology program includes:

<u>Required Courses (25-27 units)</u>	<u>Units</u>
DFT/ENE-21 Drafting	3
DFT/ENE-22 Engineering Drawing	3
DFT/ENE-28 Technical Design	3
DFT/ENE-30 Computer Aided Drafting (CAD)	3
DFT/ENE-42 SolidWorks I	3
DFT/ENE-51 Blueprint Reading	2
ENE-52 Geometric Dimensioning and Tolerancing	2
DFT/ENE-60 Math for Engineering Technology	3
or	
MAT-36 Trigonometry	4
Electives(Choose from list below)	3-4
<u>Electives (3-4 units)</u>	
DFT/ARE-24 Architectural Drafting	3
DFT/ENE-23 Descriptive Geometry	3
DFT/ELE/ Technical Communications	3
ENE-27 DFT/ENE-42B SolidWorks II	3
MAN-56CNC Machine Set-Up and Operation	4

The current Drafting Technology certificate at Norco College doesn't give option to students who want to continue their education/career in the current drafting industry. New proposal focuses on essential related skills to perform the drafting job as well as a base courses allowing students to continue their education/career in variety of industries. This changes needed to be made as proposed in Item 3 to prepare students with sufficient skills for the job market.

Item 7. Similar Programs at Other Colleges in Service Area

Norco College is the only community college in the region that kept long certificate in Drafting. Most of Colleges transferred Drafting Technology Certificate toward Mechanical, Civil or Architectural Drafting. In separate proposals Advancing Mechanical and Architectural Certificates are proposed, however the current Drafting Technology certificate needs to focus on common courses to serve all industries which allows students more options along the road.

Item 8. Transfer Preparation Information (if applicable)

The courses in this proposal are transferable as listed below.

Course	Title	Units	Transferable to
DFT/ENE21	Drafting	3	UC, CSU
DFT/ENE27	Technical Communications	3	CSU
DFT/ENE30	Computer Aided Drafting	3	UC, CSU
DFT/ENE51	Print Reading	3	CSU
CON62	Print Reading for Construction	3	CSU
ARE37	Technical Communications	3	UC, CSU
DFT/ENE42	SolidWorks I	3	CSU
MAT36	Trigonometry	3	CSU
ENE 41	Engineering Graphics	3	CSU

Reference to [Norco College course catalog](#)