College: R___ M___ N _X_

TOPs Code: _0953.10_____
CIP (Classification of Instructional Programs) Code: _NCE787_____

ARCHITECTURAL GRAPHICS CERTIFICATE

Program Narrative
Item 1. Program Goals and Objectives

Architectural Graphics certificate program prepares individuals to apply basic Architectural drafting knowledge and skills to development of working drawings and electronic simulations in support of Architectural and Civil engineers and related professionals. The content includes the application of advanced computer software and hardware, Computer Assisted Drafting, Computer Assisted Design (CAD) and Building Information Modeling (BIM) to the creation of graphic representations and simulations in support of Architectural projects.

Upon successful completion of this program, students should be able to:
1. Complete a set of residential working drawings, which may include first floor drawings, second floor drawings, foundation drawings, elevations, cross-sections, framing, electrical drawings, and structural detail.
2. Demonstrate an ability to apply and integrate computer technology into the design process to achieve a desired result.

Architectural and civil drafter jobs are expected to increase by 2% through 2022 in the Inland Empire/Desert Region. More than 500 total job openings, 102 annual job openings will be available over the five-year timeframe. ⬛ The entry-level hourly wage for architectural and civil drafters of $18.20 per hour 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 completers for the selected community college program (1 annual community college award), and the annual openings for architectural and civil drafters in the region (102 annual job openings). Attached find LMI (Labor Market Information) report.

Item 2. Catalog Description

PROGRAM PREREQUISITE:

None
SHORT DESCRIPTION of PROGRAM

The Architectural Graphics certificate prepares students with technical communication skills, and the knowledge and craft of two-dimensional drafting solutions for architecturally related industry applications. Students learn to present graphic solutions, provide design refinements, modifications, and delineations of working technical drawings using current Computer-Aided Drafting CAD methods and techniques with an understanding of industry standards. Certificate completers can secure drafting technician positions in areas related to architecture, environmental design, and to assist in the development of architectural construction documents for light frame structures, under the supervision of a professional.

Item 3. Program Requirements

Required Courses: 21 units

Course	Title	Units	Sequencing
DFT/ENE21	Drafting	3	Semester 1, Fall
DFT/ENE27	Technical Communications	3	Semester 1, Fall
CON62	Blueprint Reading for Construction	3	Semester 1, Fall
ARE24	Architectural Drafting	3	Semester 1, Fall
ARE25	Advanced Architectural Drafting	3	Semester 2, Spring
DFT/ENE30	Computer Aided Drafting	3	Semester 2, Spring
ARE37	Architectural Design	3	Semester 2, Spring

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

Course	Title	Units	Sequencing
ARE35	History of Architecture-Beginnings through Gothic	3	Semester 1, Fall
ARE36	History of Architecture: Renaissance to Modern	3	Semester 2, Spring
CON60	Introduction to Construction	3	Semester 1, Fall
CON74	Construction Estimating	3	Semester 2, Spring

Total Program Units: 27 units

Associate of Science Degree
The Associate of Science Degree in Architectural Graphics 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 Architectural Drafting skills needed for drafting job performance, which is essential for setting up and operating a quality Architectural drafting service business/office.

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 Architectural Graphics program includes only:

ENE/DFT21 Drafting	3
ARE24 Architectural Drafting	3
ENE/DFT30 Computer-Aided Drafting	3
	Total 9 units

The current Architectural Graphics certificate at Norco College is lacking the print reading and other essential related skills to perform the Architectural drafting job. It needs to be updated with the industry needs 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

Chaffey College in San Bernardino County has a similar program.

Drafting Certificate & Degree Requirements
Drafting Technician: Architectural AS Degree Requirements
To obtain an Associate's Degree, students must complete both the major requirements below and the graduation requirements listed on pages 35-36 in Chaffey Catalog.

COURSE NUMBER	NAME	UNITS
ART 12	Fundamentals of Design in Three Dimensions	4
DRAFT 20	Computer-Aided Drafting and Design	4
DRAFT 21	Mechanical Design I	3
DRAFT 50	Architectural Design I	3
DRAFT 51	Architectural Design II	3
DRAFT 53	Architectural Applications of CAD	4
EGTECH 10	Introduction to Engineering Design	4
ID 12	History of Western Architecture and Interiors II	3
PHYS 5*	The Ideas of Physics	3
PHYS 6*	The Ideas of Physics Laboratory	1

Total units for the major	32
* or any advanced course in Physics with a laboratory	

Drafting Technician: Architectural Certificate Requirements

Item 8. Transfer Preparation Information (if applicable)

All 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
CON62	Blueprint Reading for Construction	3	CSU
ARE24	Architectural Drafting	3	CSU
ARE25	Advanced Architectural Drafting	3	CSU
DFT/ENE30	Computer Aided Drafting	3	UC, CSU
ARE37	Architectural Design	3	UC, CSU
CON60	Introduction to Construction	3	CSU
CON74	Construction Estimating	3	CSU