

PROGRAM APPROVAL APPLICATION
NEW or SUBSTANTIAL CHANGE or LOCALLY APPROVED
(This application may not exceed 3 pages)

Fill In Form

Industrial Drafting Associate in Science Degree

Fall-2018

Proposed Program Title

Projected Program Start Date

Fullerton College
College

North Orange County Community College District
District

Contact Information

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Voting Member
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Phone Number

Dean Business & CIS Office
Title
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Email

Goal(s) of Program (Check all that apply):

Career Technical Education (CTE) Transfer Other

Type of Program (Check all that apply):

Certificate of Achievement 12-17 (or 17-27 quarter) units Certificate of Achievement 18+ semester (or 27+ quarter) units
 Associate of Science Degree Associate of Arts Degree

Reason for Approval Request (Check One):

New Program Substantial Change Locally Approved

Program Information

0956.00 Recommended [Taxonomy of Program \(TOP\) Code](#)

25 Units for Major-Degree

_____ Total Units for Degree

_____ Required Units-Certificate

Written Form

1. Insert the description of the program as it will appear in the catalog. (See PCAH pp. 142 and 170)

The Industrial Drafting Associate in Science Degree provides the skills and knowledge for those who wish to pursue a career as a Mechanical Engineer or CAD operator/designer in fields related to engineering, tool design, and 3D Parametric Modeling in a manufacturing environment as well as other fields. This degree requires a total of 25 units listed below with a grade of "C" or better in each course. At least one half of the units toward the certificate must be completed at Fullerton College.

2. Provide a brief rationale for the program.

- An AS Degree in Industrial Drafting provides technical skills and multidisciplinary knowledge required by diverse design careers.
- Graduates from Fullerton College’s Industrial Drafting program have projects within their electronic portfolio which incorporate design principles, use of appropriate materials, applied tool design principles/sustainable practices and integrate 3D Parametric Modeling. Fullerton College’s learning outcomes prepare graduates for proposing, manufacturing and marketing real and/or virtual products.
- Projects completed by graduates demonstrate competencies in creative problem solving, sketching, drafting, 3D graphics – skills expected of entry level design technicians and/or engineering, architecture, environmental planning, animation, industrial, product and other design transfer students.

3. Summarize the Labor Market Information (LMI) and employment outlook (including citation for the source of the data) for students exiting the program. (See PCAH pp. 85-88, 136, 147, 148, 165, 168, and 176)

The three-year average supply from regional colleges is 51 per year.

Regional annual openings for the SOC codes listed within 17-3000 group are at a minimum of 197 indicating a gap of 146 hires per year.

Source: <http://coeccc.net/supply-demand/> For Orange County

Orange County

| | | | | | | |
|---------|--|-------|-------|------|-------|-------|
| 17-3000 | Drafters, Engineering Technicians, and Mapping Technicians | 9,390 | 9,220 | -170 | -1.8% | -0.2% |
| 17-3011 | Architectural and Civil Drafters | 2,040 | 1,970 | -70 | -3.4% | -0.3% |
| 17-3012 | Electrical and Electronics Drafters | 320 | 340 | 20 | 6.3% | 0.6% |
| 17-3013 | Mechanical Drafters | 580 | 530 | -50 | -8.6% | -0.9% |
| 17-3019 | Drafters, All Other | 220 | 240 | 20 | 9.1% | 0.9% |

California

| | | | | | | |
|---------|--|--------|--------|-------|-------|-------|
| 17-3000 | Drafters, Engineering Technicians, and Mapping Technicians | 77,400 | 80,400 | 3,000 | 3.9% | 0.4% |
| 17-3011 | Architectural and Civil Drafters | 12,200 | 12,100 | -100 | -0.8% | -0.1% |
| 17-3012 | Electrical and Electronics Drafters | 4,500 | 5,000 | 500 | 11.1% | 1.1% |
| 17-3013 | Mechanical Drafters | 4,100 | 3,800 | -300 | -7.3% | -0.7% |
| 17-3019 | Drafters, All Other | 1,800 | 2,100 | 300 | 16.7% | 1.7% |

4. List similar programs at other colleges in the Los Angeles and Orange County Region which may be adversely impacted. (There is space for 10 listings, if you need more, please contact laocrc@rscdd.edu)

| College | Program | Who You Contacted | Outcome of Contact |
|--------------------|--------------------------|-------------------|--------------------|
| Cerritos College | Engineering Design | Miodrag Micic | Left voice mail |
| Mt. SAC | Manufacturing Technology | Jenny Wang | Left email |
| Saddleback College | Drafting Technology | Susan Sherod | Left email |
| Santa Ana College | Engineering CAD | Steve James | Left email |

5. List all courses required for program completion, including core requirements, restricted electives and prerequisites. (There is space for 20 listings, if you need more, please contact laocrc@rscdd.edu). (See PCAH pp. 143 and 171)

| Courses | Course Number | Course Title | Units |
|--------------------------|-------------------------|--|-------|
| Required Core (25 Units) | DRAF 070 F | Blueprint Reading for the Metal Trades | 2 |
| | DRAF 140 F | AutoCAD for Industry | 2 |
| | DRAF 141 F | Advanced CAD for Industry | 2 |
| | DRAF 143 F | 3D Applications Using Auto CAD | 2 |
| | DRAF 171 F | Fundamentals of Drafting | 2 |
| | DRAF 173 F | Geometric Dimensioning and Tolerancing | 2 |
| | DRAF 944 F | Solidworks | 3 |
| | MACH 150 F | CNC Programming Using Mastercam | 3 |
| | Or MACH 154 F | CNC Programming Using Surfcam | 3 |
| | MACH 116 F | Machine Tools | 2 |
| | TECH 108 F | Manufacturing Processes | 3 |
| WELD 121AF | Introduction to Welding | 2 | |
| Total Units | | | 25 |

6. Include any other information you would like to share.