

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

Fill In Form

Metrology Certificate

Fall-2018

Proposed Program Title
 Fullerton College

Projected Program Start Date
 North Orange County Community College District

College

District

Contact Information

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Dean Business & CIS Office

Voting Member
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Title
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Phone Number

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](#)

_____ Units for Major-Degree

_____ Total Units for Degree

29 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 Metrology Certificate Program covers various aspects of the manufacturing processes which has an emphasis on dimensional metrology, inspection reporting, mechanical part geometry and computer-assisted inspection. The goal of the Metrology Certificate Program is to prepare students for entry to intermediate level employment in the inspection, Quality Assurance and/or manufacturing field. Students entering this field typically find work in the manufacturing industry or with governmental agencies. The Metrology Certificate is also designed to enhance the skills of individuals already in the inspection, Quality Assurance and/or the manufacturing field that have a desire to learn more about measurement tools in the manufacturing trade. The Metrology Certificate Program requires the completion of 29 units with a minimum grade of "C" in each course taken. At least one half of the units toward the certificate must be completed at Fullerton College.

2. Provide a brief rationale for the program.

Metrology is the scientific study of measurement. This certificate program is an introduction to metrology emphasizing the theory and proper use of dimensional equipment, collection/statistical treatment of data, blueprint reading and computer aided equipment. The intent of the certificate program is to give a hands on understanding of metrology along with thorough knowledge of laboratory techniques in using the equipment.

Metrology is a unique and nationally recognized field. Our Metrology Certificate program is designed to give the student a solid foundation in various types of measurement techniques and processes. It is a one to two-year career program developed to prepare metrology and manufacturing personnel for an entry to intermediate level position in the industry where medical, optical, electrical, chemical, dimensional, biomedical, and mechanical measurements/calibrations are performed. This certificate program emphasizes the traceability of measurements, instrument calibration, precise laboratory procedures, dimensional metrology, inspection reporting, mechanical part geometry and computer-assisted inspection.

Several colleges and universities in the USA have metrology curricula, and some offer two-year degrees. Metrology concentrations may also be available as part of a four-year program. The best known programs in the USA can be found at Butler County Community College in Pennsylvania, California State University at Dominguez Hills, Cerritos College in California and the Community College of Aurora in Colorado.

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)

For this TOP code, the three-year average supply from regional colleges is 51 per year.

Regional annual openings for the SOC codes listed within the 51 group is 5 indicating a gap of 592 hires per year.

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

EDD enrollment projection stated below.

SOC Code*	Occupational Title	Estimated Employment 2012**	Projected Employment 2022	Numeric Change 2012-2022 [1]	Percent Change 2012-2022	Addition openings due to Net Replacements
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Los Angeles County

51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	13,580	13,640	60	.4	2,980
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Orange County

51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	7,010	7,290	280	4.0	1,540
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California

51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	48,200	52,200	4,000	8.3	10,600
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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	Coordinate Metrology	C. Vo and website	Left voice mail
_____	_____	_____	_____

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	DRAF 070 F	Blueprint Reading	2
	MACH 180 F	Introduction to Metrology	3
	TECH 081 F	Technical Math I	3
	MACH 116	Introduction to Machine Tools	2
	DRAF 173 F	Geometric Dimensioning and Tolerancing	2
	MACH 182 F	Introduction to CMM and Romer Arm Inspection	3
	MACH 184 F	Advanced CMM and Romer Arm Inspection	3
	MACH 185 F	CMM and Romer Arm Applications	2
	TECH 108 F	Manufacturing Processes	3
	METL 192 F	Metallurgy	3
	DRAF 944 F	Solidworks	3
Total Units			29

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