

TRAINING



NCDMM

NATIONAL CENTER FOR DEFENSE
MANUFACTURING AND MACHINING

Modern Machining & Metrology (M³) Open House

Workshop Overview:

This 2-day workshop will provide training opportunities in machining dynamics, machine tool metrology, coordinate measuring machine metrology, and diamond turning, as well as open house tours of the manufacturing facilities in the UNC Charlotte Center for Precision Metrology (CPM). Additionally, the capabilities and facilities in the Energy Production and Infrastructure Center (EPIC), the Charlotte Research Institute (CRI), and the Optical Science and Engineering program will be highlighted. The workshop will enable practicing design and manufacturing engineers to broaden their technical expertise and interact with UNC Charlotte faculty committed to advanced manufacturing and metrology research and development.

Intended Audience:

Design Engineers, Manufacturing Engineers, Quality Control Engineers

Covered Topics Include (You Choose 2):

- Machining dynamics – modal testing, vibrations background, chatter description, process modeling, parameter selection, cutting trials
- Machine tool metrology – performance testing, national standards, environment, spindle errors, interferometry
- Coordinate measuring machine metrology – machine construction, performance testing, environmental control, probing systems, uncertainty, GD&T
- Diamond turning – process fundamentals, tools, machine configurations, materials, comparison with other aspheric fabrication, part specifications, acceptance test methods



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Contact:

Amy Good

724-539-4796

amy.good@ncdmm.org

Date/Time:

March 6-7, 2012

8:30 AM—5:00 PM

Location:

UNC Charlotte

Duke Centennial Hall

9201 University City Blvd

Charlotte, NC 28223

Cost:

\$ 745

[\(View Cancellation Policy\)](#)

Register by:

February 21, 2012*

Register Online:

NCDMM.org

**This course is subject to cancellation pending an appropriate number of advanced registrants.*



Modern Machining & Metrology (M³) Open House



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Agenda

Day 1

8:30 —9:15	Welcome (Dr. Scott Smith) CPM and Affiliates program overview (Dr. Robert Hocken) CRI overview (Dr. Robert Wilhelm)
9:15—9:30	Break
9:30—11:30	Parallel classroom sessions (You choose 1) 1) Diamond turning/aspheric optics, (Dr. Chris Evans) 2) Machine tool metrology (Dr. Robert Hocken)
11:30—12:00	Informal discussions
12:00—1:00	Lunch
1:00—1:30	Informal discussions
1:30—3:30	Parallel classroom sessions (You choose 1) 1) Coordinate measuring machine metrology (Dr. Ed Morse) 2) Machining dynamics (Dr. Scott Smith & Dr. Tony Schmitz)
3:30— 3:45	Break
3:45—4:45	CPM Tour
4:45—5:00	Summary/Questions/Wrap-up/Adjourn

Day 2

8:30—9:00	Welcome (Dr. Scott Smith) Overview of Optical Science and Engineering Program (Dr. Angela Davies)
9:00—9:15	Break
9:15—11:30	Parallel lab sessions 1) Diamond turning/aspheric optics, including Optical Science facilities tour (Dr. Chris Evans) 2) Machine tool metrology (Dr. Jimmie Miller)
11:30—12:00	Informal discussions
12:00—1:00	Lunch
1:00—1:30	Informal discussions
1:30—3:30	Parallel lab sessions 1) Coordinate measuring machine metrology (Dr. Ed Morse) 2) Machining dynamics (Dr. Scott Smith & Dr. Tony Schmitz)
3:30—3:45	Break
3:45—4:30	Summary/Questions/Wrap-up/Surveys/Adjourn

Contact:

Amy Good

724-539-4796

amy.good@ncdmm.org

Date/Time:

March 6-7, 2012

8:30 AM—5:00 PM

Location:

UNC Charlotte

Duke Centennial Hall

9201 University City Blvd

Charlotte, NC 28223

Cost:

\$ 745

[\(View Cancellation Policy\)](#)

Register by:

February 21, 2012*

Register Online:

NCDMM.org