

NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE

COURSE SYLLABUS

Course Title: Manufacturing Processes / Precision Machining **Course #:** MFG 102

Course Description:

This course explains common methods of machining used to shape parts to specifications with the emphasis on traditional tool room machinery (Lathes, milling machines, drilling machines and grinders). Related topics also include shop safety, hand tools, measurement, layout work and cutting fluids. Students will apply classroom lessons to the fabrication of parts in the lab course.

Pre-requisite/Co-requisite: Reading exempt or permission of the instructor.

Goals: To further develop theoretical knowledge and skills for careers in planning, managing and performing the process of materials into intermediate or final products, and related professional and technical support activities.

Outcomes: Upon successful completion of this course each student must have demonstrated understanding and competency in each of the following topics and techniques (thru in-class testing of each individual student independently):

- Discuss the principals of the basic types of machining processes.
- Identify and discuss careers in the machining industry.
- Identify and understand technical and personal skills needed for success in the machining field.
- Explain work safety practices used in the manufacturing environment.
- Describe proper housekeeping and lubrication for a machining environment.
- Explain and demonstrate Semi- Precision and Precision measurement procedures.
- Describe common types and purpose of cutting fluids.
- Define layout and explain its purpose.
- Identify common hand tools and describe their uses.
- Identify the various sawing machines and identify saw tooth geometry.
- Explain drilling, countersinking, reaming and treading processes.
- Demonstrate understanding of standardized thread systems and their designations.
- Calculate speeds and feeds for manufacturing processes.
- Explain and identify the principal operation of a lathe.
- Explain and identify the principal operation of a vertical milling machine.
- Identify various types of grinders and their capabilities.
- Explain the grinding wheel identification system.

College Policies

Plagiarism: Plagiarism and Academic Dishonesty are not tolerated at Northwestern Connecticut Community College. Violators of this policy will be subject to sanctions ranging from failure of the assignment (receiving a zero), failing the course, being removed/expelled from the program and/or the College. Please refer to your “Student Handbook” under “Policy on Student Rights,” the Section entitled “Student Discipline,” or the College catalog for additional information.

Americans with Disabilities Act (ADA): The College will make reasonable accommodations for persons with documented learning, physical, or psychiatric disabilities. Students should notify Dr. Christine Woodcock, the Counselor for Students with Disabilities. She is located at Green Woods Hall, in the Center for Student Development. Her phone number is 860-738-6318 and her email is cwoodcock@nwcc.edu.

School Cancellations: If snowy or icy driving conditions cause the postponement or cancellation of classes, announcements will be made on local radio and television stations and posted on the College’s website at www.nwcc.edu. Students may also call the College directly at **(860) 738-6464** to hear a recorded message concerning any inclement weather closings. Students are urged to exercise their own judgment if road conditions in their localities are hazardous. *** Classes at Oliver Wolcott Technical School (OWTS) are cancelled if OWTS has Early Dismissal, No afternoon activities, or No classes during the day. All information can be obtained via WFSB, WTNH text message system.**

Use of Electronic Devices: Some course content as presented in Blackboard Learn is not fully supported on mobile devices at this time. While mobile devices provide convenient access to check in and read information about your courses, they should not be used to perform work such as taking tests, quizzes, completing assignments, or submitting substantive discussion posts.

Sexual Assault and Intimate Partner Violence Resource Team: NCCC is committed to creating a community that is safe and supportive of people of all gender and sexual identities. This pertains to the entire campus community, whether on ground or virtual, students, faculty, or staff.

Sexual assault and intimate partner violence is an affront to our national conscience, and one we cannot ignore. It is our hope that no one within our campus community will become a victim of these crimes. However, if it occurs, NCCC has created the SART Team - Sexual Assault and Intimate Partner Violence Resource Team - to meet the victim’s needs.

SART is a campus and community based team that is fully trained to provide trauma-informed compassionate service and referrals for comprehensive care. The team works in partnership with The Susan B. Anthony Project to extend services 24 hours a day, 7 days a week throughout the year.

The NCCC team members are:

Ruth Gonzalez, PHD	860-738-6315	Greenwoods Hall Room 207
Susan Berg	860-738-6342	Greenwoods Hall Room 223
Kathleen Chapman	860-738-6344	Greenwoods Hall Room 110
Michael Emanuel	860-738-6389	Founders Hall Annex Room 308
Seth Kershner	860-738-6481	Library
Jane O'Grady	860-738-6393	Founders Hall Annex Room 212
Robin Orlomoski	860-738-6416	Business Office Room 201
Patricia Bouffard, Ex-Officio	860-738-6319	Founders Hall Room 103
Savannah Schmitt		Student Representative

At NCCC we care about our students, staff and faculty and their well-being. It is our intention to facilitate the resources needed to help achieve both physical and emotional health.