PFEIFFER TECHNOLOGY & INNOVATION LAB

The Pfeiffer Technology and Innovation Lab was designed to foster and support collaborations between education and the advanced technology and manufacturing industry. It is located on the College’s main campus in Stone Ridge in Hardenbergh Hall. The Pfeiffer Technology and Innovation Lab houses training and testing equipment used by SUNY Ulster students in STEM disciplines including engineering, advanced manufacturing, AutoCAD, 3D printing, and web development.

In addition to providing hands-on learning for STEM students, the lab is designed to serve as a resource to the manufacturing industry, providing valuable real-world interaction for students while supporting the competitive advantage of local manufacturing and technology companies.

In keeping with this mission, courses that advance students in these technologies are offered for both the credit and the non-credit student.

This past fall, SUNY Ulster was able to add two 3D scanners and a laser cutter to the lab. This new equipment will allow students from the Fashion Design, Engineering, Advanced Manufacturing, Visual Arts and Entrepreneurship programs to work collaboratively on projects.

ADVANCED MANUFACTURING & ENGINEERING SCIENCE

ELECTRICAL THEORY I BASICS
Topics covered will include components of the atom, how electrons flow through conductors, conductivity, series and parallel circuits, voltage and current resistance, AC and DC voltage, and Ohm’s Law. Course includes a lab component.
DCB 1947 M 10/21-11/18 4:30-7:30pm KSU $199

MATERIALS & MANUFACTURING PROCESSES
This course offers an exploration into a variety of industrial materials coupled with various methods of manufacturing. The class discusses such topics as material selection, parts assemblies, case studies, and product fabrication. Utilizing field trips, a material testing laboratory, and a review of related professional sources, the class explores methods of material selection. Prerequisite: ENG 101. Required textbooks: Cradle to Cradle, 9780865475878 and Machinery’s Handbook, 9780831130916.
MEC 201-01 M 1-3:30pm 8/26-12/17 SRC $626
No class 10/14 • class held on T 10/15

INTRODUCTION TO ENGINEERING DESIGN: 3D PROTOTYPING
Students are introduced to engineering design through a series of projects involving 3D modeling and 3D printing. While students will learn some CAD specific skills, the emphasis of the course is on the design process. Clear communication of specifications and solutions will be emphasized.
ENR 103-01 M 8/26-12/17 1:15-2:10pm SRC
No class 9/2 & 10/14 • class held on T 10/15

Looking for technical training for your technicians or engineers? Let us know what you are looking for and we can put together a course for you.
For more information, contact Barbara Reer at reerb@sunyulster.edu or 845-802-7171

ADVANCED MANUFACTURING & ENGINEERING SCIENCE

MICRO-CREDENTIALS:
THE BITE-SIZED COURSE OF STUDY THAT BULKS-UP YOUR RESUME WITH SKILLS TO ENHANCE YOUR CAREER
Earn Your Micro-credential Badge in 6-12 months in
- Accounting Computer Skills
- Computer Game Design
- Customer Service
- Mobile Application Development
- Small Business Management
- Web Application Developer

Learn more: www.sunyulster.edu/microcredentials
ADVANCED MANUFACTURING
PRE-APPRENTICESHIP

Pre-apprenticeship programs can play a valuable role in preparing qualified entry-level workers for Registered Apprenticeship careers while contributing to the development of a diverse and skilled workforce. Students completing this series of courses may qualify for credit towards an apprenticeship program. Ask how you can start this 52-hour program to prepare for an apprenticeship position in one of the many local manufacturing companies here in Ulster County. Funding may be available for these courses. For more information contact Barbara Reer at reerb@sunyulster.edu or 845-802-7171.

PROGRAM BEGINS AUGUST 2019

INTRODUCTION TO MANUFACTURING
Learn about the different manufacturing companies in Ulster County and the types of jobs that are available.
DCB 2252 W 8/21 7-8pm KSU FREE

INTRODUCTION TO MATHEMATICS FOR MANUFACTURING
Strengthen mathematical skills needed for the set-up and operation of machine tools and computer numerical control (CNC) programming. Mathematical operations including fractions, exponents, basic algebra and trigonometry will be reviewed. Prerequisite: Basic Mathematics.
Instructor: R. Eckmann
DCB 2064 W 9/18-10/30 6-8pm KSU $199
No class 10/9

INTRODUCTION TO BLUEPRINT READING FOR MANUFACTURING
Participants will learn to identify the essential details and interpret the dimensions and tolerances found on engineering drawings. Course is geared for machine operators, quality control inspectors, shop supervisors, metalworking manufacturing personnel, engineering managers, and other manufacturing persons interested in learning to read manufacturing prints or updating their knowledge in this area. Corequisite: Basic Mathematics.
Instructor: J. Novak
DCB 1259 T/R 11/12-11/21 6-9pm KSU $199

HANDS-ON MANUFACTURING LAB
Apply the skills you learned in this series of courses to the manufacturing process.
DCB 2268 W 10/23-11/13 6-8pm KSU $49

WORKPLACE SUCCESS SKILLS
Workplace skills, often called employability skills, are the basic skills a person must have to succeed in any workplace. They are the core knowledge, skills and attitudes that allow workers to understand instructions, solve problems and get along with co-workers and customers.
DCB 2253 online FREE

WE ARE YOUR DOL
Support provided by the 2016/17 SUNY Performance Improvement Fund.

M - MONDAY • T - TUESDAY • W - WEDNESDAY • R - THURSDAY • F - FRIDAY • S - SATURDAY • U - SUNDAY
ADVANCED MANUFACTURING APPRENTICESHIP

SUNY Ulster is registered as a Related Instructor provider with the New York State Education Department. Under the Council of Industry, SUNY Ulster supports apprenticeship programs in CNC Machinist, Toolmaker, Maintenance Mechanic, Electro-Mechanical Technician, Quality Assurance Auditor, and Industrial Manufacturing Technician. Funding may be available for these courses for registered apprentices.

To inquire, contact Barbara Reer at reerb@sunyulster.edu or 845-802-7171

APPROVED ADVANCED MANUFACTURING RELATED INSTRUCTION COURSES

MATHEMATICS FOR MANUFACTURING
Strengthen mathematical skills needed for the set-up and operation of machine tools and computer numerical control (CNC) programming. Mathematical operations including fractions, exponents, basic algebra and trigonometry will be reviewed. Prerequisite: Basic Mathematics. Required textbook: Mathematics for Machine Technology, 9781133281450.

DCB 2254 T/R 9/17-11/7 6-9pm KSU $450
No class 10/31

BLUEPRINT READING FOR MANUFACTURING
Course is geared for machine operators, quality control inspectors, shop supervisors, metalworking manufacturing personnel, engineering managers, and other manufacturing persons interested in learning to read manufacturing prints or updating their knowledge in this area. Prerequisite: Basic Mathematics. Required textbook: Basic Blueprint Reading & Sketching, 9781435483781.

DCB 2255 T/R 11/12-1/21 6-9pm KSU $450
No class 11/26 & 11/28

CERTIFIED PRODUCTION TECHNICIAN
This program consists of four individual certificate modules: Safety Certificate, Manufacturing Processes and Production Certificate, Quality Practices and Measurement Certificate, and Maintenance Awareness Certificate. Approved by New York State Bureau of Veterans Education for payment of VA Education Benefits. Prerequisite: MAT 100 or permission of instructor. Course price includes four assessments. Any additional assessments that students need will be $65 each.

MFG 101-51 W 8/28-12/17 6-9pm SRC $871
(credit-bearing course)

DCB 1786 W 8/28-12/17 6-9pm SRC $871
No class 11/27 • (non-credit bearing course)

AUTOCAD
Students are introduced to the AutoCAD drawing platform. AutoCAD commands are taught using the following drafting methods: Geometric Construction, Orthographic Projection, Sectioning and Isometric Views. Special emphasis is placed on dimensioning, white space layout, GUI customization, scaling, and line weight. After successful completion of this course, students will be proficient with the AutoCAD software and have an understanding of the fundamentals of drafting.

CAD 101-51 T 8/27-12/17 5-9:30pm SRC $626
No class 10/15 • (credit-bearing course)

DCB 1600 T 8/27-12/17 5-9:30pm SRC $626
No class 10/15 • (non-credit bearing course)

ADDITIONAL RELATED INSTRUCTION COURSES AVAILABLE:

- Personal Protective Equipment
- First Aid
- OSHA 30 - see page 9
- Lockout/Tagout - see page 9
- Right to Know - see page 9
- Materials Data Sheets - see page 9
- Sexual Harassment Prevention - see page 9

Refer to our website for start dates for these credit bearing courses:
Algebra • Trigonometry • Physics

WE ARE YOUR DOL
Transforming New York’s World of Work
Support provided by the 2016/17 SUNY Performance Improvement Fund.
SUNY Ulster is registered as a Related Instructor provider with the New York State Education Department. Under the Council of Industry, SUNY Ulster supports apprenticeship programs in CNC Machinist, Toolmaker, Maintenance Mechanic, Electro-Mechanical Technician, Quality Assurance Auditor, and Industrial Manufacturing Technician.

**ADVANCED MANUFACTURING APPRENTICESHIP**

INTRO TO CNC PROGRAMMING - MILL & LATHE
This hybrid course covers the fundamentals of machining metals advancing towards a three axis mill and lathe. Using CNC Programming and an online CNC Learning System students will be introduced to the fundamentals of programming mills and lathes. Required textbook: *CNC Programming Mill & Lathe Combo*, 9781897466889 Material needed: USB Memory Stick
Optional tools: 1" micrometer and dial caliper
MFG 103-51B hybrid M 10/21-12/6 CT $626 (credit-bearing class)
DCB 2213 hybrid M 10/21-12/6 CT $720 (non-credit bearing class & includes textbook)
Online self-paced with mandatory hands-on lab on Monday from 6-9pm at Ulster BOCES, Port Ewen

NEW! MASTERCAM 2019 ASSOCIATE LEVEL CERTIFICATION PREP COURSE
Participants will complete design courses on mill and lathe under the guidance of a Certified Mastercam instructor. Once completed with the training, the students will have the option of testing for the Mastercam Associate Level Certification. This certification is a rigorous set of practical tests that recognizes a programmer’s knowledge and ability to work effectively with Mastercam CAM software.

The Mastercam Associate Certification is a reliable validation of your skills and knowledge in the use of Mastercam Software. It is the first benchmark and an integral step toward a Mastercam Professional Certification. Required textbooks: *Mastercam 2019 Mill Essentials Training Tutorial*, 9781771467568 and *Mastercam 2019 Lathe Training Tutorial*, 9781771467582
IND 270 R 6-9pm 8/29-12/17 SRC $626
No class 11/28 • (credit-bearing course • price does not include books)
DCB 2271 R 6-9pm 8/29-12/17 SRC $781
No class 11/28 • (non-credit bearing course • price includes books)

MASTERCAM 2019 ASSOCIATE LEVEL CERTIFICATION EXAM
DCB 2306 by appointment SRC $50

**GD&T: INTRODUCTION TO BLUEPRINT BASICS, SYMBOLS & INSPECTION TECHNIQUES**
In this introductory course, use and interpretation of drawings, drawing features, first and third angle projections, concepts of using linear tolerancing vs. GD&T tolerance zones, introduction to concepts of implied constraints will be discussed. Prerequisite: Technical Math & Introduction to Blueprint Reading. Required textbook: *Fundamentals of Geometric Dimensioning and Tolerancing*, 9781111129828
DCB 2272 R 10/3-31 5:30-7:30pm KSU $299
DCB 2273 R 11/7-12/5 5:30-7:30pm KSU $299
No class 11/28

**GD&T: FEATURE CONTROL FRAME, TRUE POSITION & PROFILE CONCEPTS & INSPECTION TECHNIQUES**
Course will continue on where GD&T: Introduction to Blueprint Basics, Symbols and Inspection Techniques leaves off. Course will cover application and inspection techniques using control frames and true position. Prerequisite: DCB 2272 or permission of instructor. Required textbook: *Fundamentals of Geometric Dimensioning and Tolerancing*, 9781111129828
DCB 2273 R 11/7-12/5 5:30-7:30pm KSU $299

**EARNING CREDIT FOR WHAT YOU KNOW**
SUNY Ulster recognizes many nontraditional modes of learning, including credit for life experience and proficiency examinations. If you use these opportunities to earn credit, you must still meet the residency requirement (a minimum of 30 credit-bearing semester hours of academic course work at SUNY Ulster for the associate degree and 15 credit-bearing semester hours for the one-year diploma). Any course for which alternative credit is given may not be repeated at the College for credit. If you intend to transfer to four-year institutions you should be aware that any credit received from alternative modes will be subject to re-evaluation by the four-year institution. These credits will not be used in calculating your cumulative average.