

- Schuylkill Technology Center -

(Est. 1968)

MACHINE TRADES TECHNOLOGY COURSE SYLLABUS

CIP CODE # 48.0501



**LEVEL 2 Students
repairing equipment for
STC program**

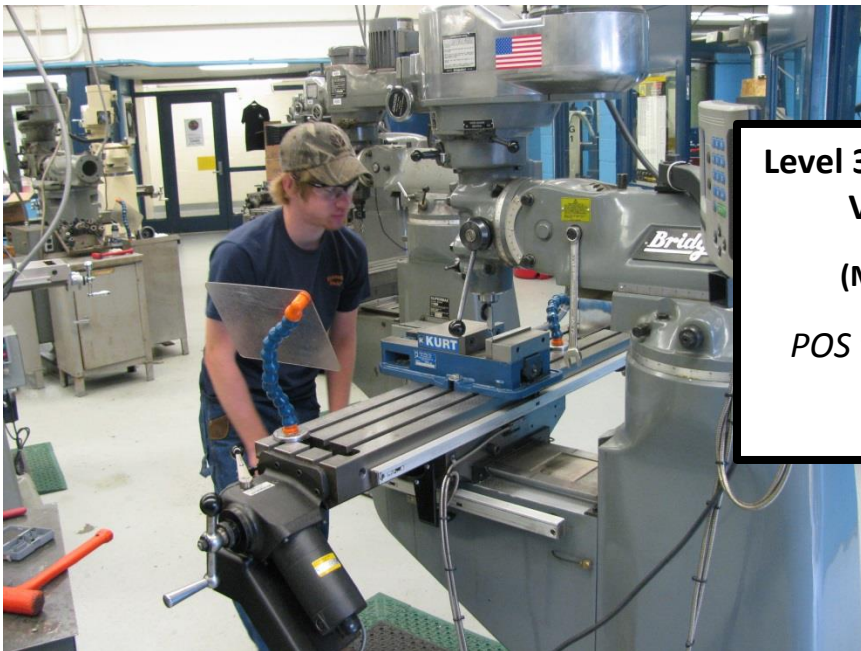


STC Machine trades Program:

- ✓ Course Length: 1080 hours
- ✓ 101 Program of Study Tasks
- ✓ 4 Industry Certifications
- ✓ 5 Post-Secondary Articulations

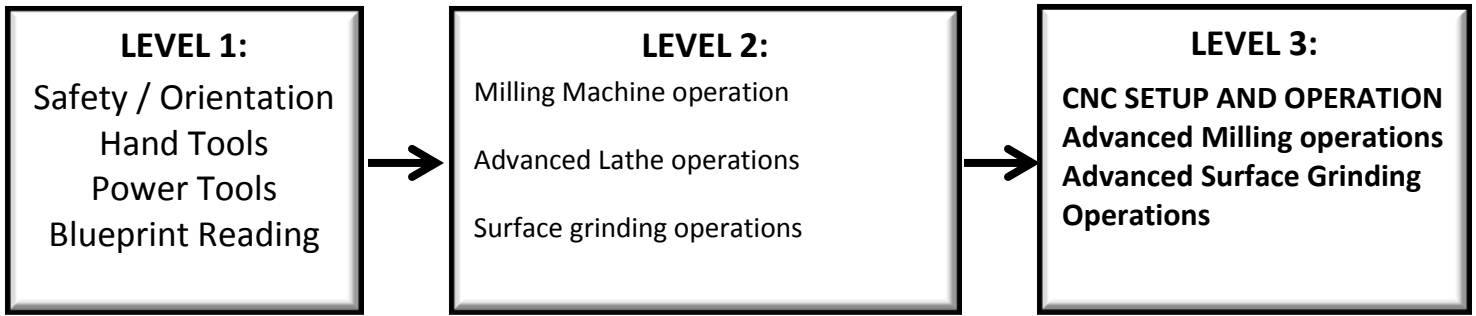
Technology is our middle name !

~ STC MACHINE TRADES PROGRAM DESCRIPTION ~



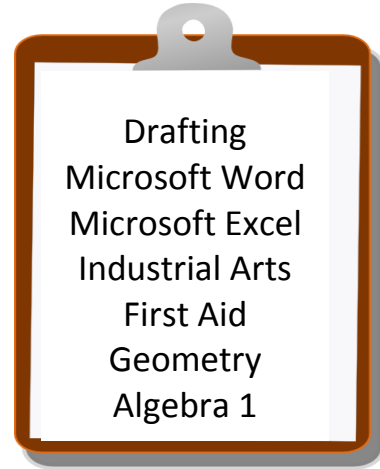
**Level 3 Student indicating a vise on
Vertical milling machine**
(Milling Machine – POS #803)
*POS task 803- Select, mount and
indicate vise*

~ STC MACHINE TRADES PROGRAM of STUDY (101 Tasks) ~



~ SUGGESTED PREREQUISITES ~

The following is a list of “suggested” prerequisite courses for a student to consider before entering the STC Machine Trades program. →



~ CERTIFICATIONS ~

- STC Machine Trades Certificate of Completion
- NIMS Measurement, Material and Safety
- NIMS Benchwork and Layout
- NIMS Milling
- NIMS Surface Grinding

~ ARTICULATION AGREEMENTS ~

(Post-Secondary schools participating with PDE Machining POS Articulation Agreements)

- Lehigh Carbon Community College
- Westmoreland Community College
- Johnson College
- Clarion University
- Pennsylvania College of Technology
- Thaddeus Stevens of Technology
- Delaware County Community College
- Clarion University of PA



~ STC MACHINE TRADES PROJECTS ~

Level 1	Level 2	Level 3
Identify and use personal protective equipment (PPE).	Read and interpret shop blueprints.	Learn advanced procedures
Measure, layout and cut materials to 1/16".	Measure, layout and cut materials to .010".	Measure, layout and cut to .003".
Safely make various metal projects and tools for use in shop. Learn safe operation of Band Saw, Grinder, Drill Press, and Lathe. NIMS MM&S	Safely operate all shop equipment. Learn advanced use of Lathe and Heat Treating procedures. NIMS Benchwork	Safely operate all shop equipment. Learn setup and operation of CNC. NIMS Milling NIMS Surface Grinding

Level 1 Student uses a File to create a radius. (Bench work – POS #403)



Level 2 Student Polishing work on a lathe (Operating Lathes – POS #713)

Level 3 Student Making part square using a vise on a surface grinder (Grinding Machines – POS #612)



→ It is the Machine Trades Student's responsibility to...

- 1 Read, understand and follow the contents of the STC Student Handbook.
- 2 Follow attendance guidelines and absence procedures.
- 3 Be prepared with (clear) safety glasses, safety shoes, work shirt and pencil each day.
- 4 Follow shop dress codes (work shoes & safety glasses) and school dress codes.
- 5 Follow all shop and OSHA safety rules (keeping clear safety glasses on in the shop area).
- 6 Use personal protective equipment (PPE), such as ear protection.
- 7 Cooperate with others and work as a team member in the shop.
- 8 Work with diligence and display initiative in the shop.
- 9 Work with a positive attitude which will promote success concerning your career pathway.
- 10 Complete all tasks and theory assignments to the best of your ability.
- 11 Continually update and enrich your personal portfolio for three semesters.
- 12 Strive towards achieving Industry related certifications (such as NIMS and NOCTI).
- 13 Monitor the workforce both in and outside of the STC program.
- 14 Stand on your own two feet and make responsible decisions that affect your career.
- 15 **Respect all fellow students and STC staff members each day.**

STUDENT SIGNATURE: _____ **Date:** _____

PARENT SIGNATURE: _____ **Date:** _____

~ STC EQUIPMENT SUGGESTIONS ~

Tools are provided for all students



LEVEL 1:
Safety glasses are provided for 1st year only.

- Work shoes (LEATHER STEEL TOE)
- Work clothes (dress code)
- Pencils
- Sharpie markers
- Calculator (with trig functions)
- Padlock (locker)
- 3" 3 ring binder

LEVEL 2:

- **Continue with Level 1 items:**
 - 3" 3 ring binder (one for each year)
 - Measuring tools (micrometer, caliper, steel rule)

LEVEL 3:

- **Continue with Levels 1 & 2 items:**
 - 3"3 ring binder
 - Tool box
 - Basic hand tools (wrenches etc..)





~ MACHINE TRADES TECHNOLOGY PROGRAM STUDENT ASSESSMENT ~

Technology is our middle name !

STC students will be evaluated in three specific areas: **KNOWLEDGE (30%)**, **WORK ETHIC (30%)**, and **SKILL (40%)**.

- STC Machine Trades Program South Campus Assessment Rubric -		
KNOWLEDGE – 30%		
LEARNING GUIDES	Work diligently on modules to completion. Work is neat and correct.	1-100
JOURNAL	Completed each day with accurate description of work, complete sentences and neat hand writing	1-100
RELATED JOBS	Examples: Layout /Hand Projects/ power tools	1-100
KWL READINGS	Eight related readings with written reports - (neat & complete).	1-100
PORTFOLIO	As per GUIDELINES – DUE on 60th day of 90 day cycle.	1-100
TESTS	Each POS unit has a test. Use “Test Study Guide” to prepare for tests.	1-100
WORK ETHIC – 30%		
ATTENDANCE	Good attendance and effort; completes make-up work.	10 POINTS PER DAY Non - excused absences = 0
ATTITUDE	Respectful towards other students, staff, and school property.	
INITIATIVE	Moves on to the next job without being told; does not complain.	
DILLIGENCE	Stays on task until completion / focused on the job.	
COOPERATION	Works effectively with others on a daily basis. Helps others.	
RESPONSIBILITY	Acts mature and is accountable in all areas throughout the day.	
(POS TASK LISTING): SKILL – 40%		
SAFETY	Safety glasses on? Shop safety rules followed? Practices shop safety?	1-100
USE of MATERIALS	Properly select, layout, and store materials.	1-100
USE of TOOLS	Select appropriate tools for job. Uses tools safely. Maintain and store tools.	1-100
CLEAN-UP	Work area in order? Floors swept? Tools and materials properly stored?	1-100
TASK/JOB QUALITY	Skill: Measurement & layout correct? (Appearance)	1-100