Pennsylvania College of Technology
One College Ave.
Williamsport, PA. 17701-5799

Name:_____ Student ID Number:_____

School:_____ Date:_____

COMPETENCY ASSESSMENT
for
WELDING (WE)
WELDING TECHNOLOGY (WA)
WELDING & FABRICATION ENGINEERING TECHNOLOGY (BWE)

The following validated competencies represent some of those included in the first semester of the program. Please assess each applicable competency by circling the appropriate code letter, then sign, date and return the form to the College's Admissions Office.

H – Highly skilled – able to work independently
M – Moderately skilled – requires minimum supervision
L – Limited skills – requires full supervision
N – Not covered in instruction or work experience

PART I COMPETENCY ASSESSMENT

1. Oxy-Acetylene Welding & Cutting (WEL 113/115)

H M L N a. Understand safety issues as they pertain to shop, occupational and personal safety.
H M L N b. Perform welding and cutting procedures safely
H M L N c. Properly set up and operate oxy-fuel welding and cutting equipment
H M L N d. Identify the types and uses of the oxy-fuel flame settings
H M L N e. Understand basic geometric methods of joint design
H M L N f. Identify major types of metals (ferrous and non-ferrous)
H M L N g. Identify types and uses of gases used
H M L N h. Identify and correctly use various filler metals and fluxes
H M L N i. Understand the basic principles of heat, expansion and contraction as it relates to metals

2. Oxy-Acetylene Welding Applications (WEL 113/115)

H M L N a. Puddle bead without filler rod
H M L N b. Fusion weld various joints in the flat position
H M L N c. Fusion weld various joints in the vertical position
H M L N d. Fusion weld various joints in the horizontal position
H M L N e. Fusion weld various joints in the overhead position
H M L N f. Fusion weld cast iron
H M L N g. Fusion weld small diameter tube and pipe.

3. Brazing and Hardfacing (WEL 113/115)

H M L N a. Identify various filler metals and fluxes associated with brazing and hardfacing applications
H M L N b. Braze weld various joints in the flat position
H M L N c. Braze weld various joints out of position
H M L N d. Braze cast iron
H M L N e. Silver brazing
H M L N f. Hardfacing

4. Oxy-Acetylene Cutting Applications (WEL 113/115)

H M L N a. Cutting straight lines
H M L N b. Cutting bevels
H M L N c. Cutting shapes
H M L N d. Portable machine cutting

5. Shielded Metal Arc Welding (WEL 114/116)

H M L N a. Identify and describe the health hazards associated with arc welding.
H M L N b. Perform arc welding procedures safely
H M L N c. Set up and operate equipment used in shielded metal arc welding
H M L N d. Select the proper current and polarity for a given electrode
H M L N e. Identify the correct type and size of electrode to meet specific purposes
H M L N f. Knowledge of mild steel electrode classifications
H M L N g. Knowledge of welding codes, standards and procedures.
H M L N h. Understand basic geometric methods of joint design

6. Shielded Metal Arc Welding Applications E-6013 1/8" or 5/32" (WEL 114/116)

H M L N a. Weld single bead butt, lap, tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

7. E-6010 1/8" or 5/32"Flat (WEL 114/116)

H M L N a. Weld single bead butt, lap tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap, tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

8. E-6010 1/8" or 5/32" Vertical (WEL 114/116)

H M L N a. Weld single bead butt, lap, tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap, tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

9. E-6010 1/8" or 5/32" Horizontal (WEL 114/116)

H M L N a. Weld single bead butt, lap and corner joints
H M L N b. Weld multi-bead butt, lap and corner joints
H M L N c. Weld weaves over single bead butt, lap and corner joints
H M L N d. Weld weaves over multi-bead butt, lap and corner joints

10. E-6010 1/8" or 5/32" Overhead (WEL 114/116)

H M L N a. Weld single bead butt, lap, tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap, tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

11. E-7018 1/8" or 5/32" Flat (WEL 114/116)

H M L N a. Weld single bead butt, lap, tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap, tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

12. E-7018 1/8" or 5/32" Vertical (WEL 114/116)

H M L N a. Weld single bead butt, lap, tee and corner joints
H M L N b. Weld multi-bead butt, lap, tee and corner joints
H M L N c. Weld weaves over single bead butt, lap, tee and corner joints
H M L N d. Weld weaves over multi-bead butt, lap, tee and corner joints

PART II HIGH SCHOOL PROGRAM INFORMATION

Name of program: _____
Length of program: ____OAW_____SMAW_____(hours)
This student completed _____ hours of welding instruction

PART III RELATED WORK EXPERIENCE **(if applicable)**

This student has participated in a planned and approved program of:
(Community Exploration, Cooperative Education, Work Experience)

_____

The student was evaluated by the employer as being:
(Above Average, Average, Below Average)

_____

Employer:_____
Name of Company

_____
Job Supervisor

_____
Title

PART IV COMMENTS and/or CLARIFICATIONS

(include any pertinent information or qualifications regarding skills, attitudes, etc.)

_____
_____
_____
_____
_____

PART V CERTIFICATION and RECOMMENDATION

I have reviewed the above competencies and believe to the best of my knowledge my assessment is fair and accurate.
I recommend _____ , recommend with qualifications _____ ,
do not recommend _____ this student for advanced placement.

_____
(Name)

_____
(Title)