

## CONSTRUCTION TRADES DEPARTMENT

### COURSE OUTLINE – Fall 2022

#### ITW13: Welding Technology – 4 (6-0-0) 72 Hours for 12 Weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

**INSTRUCTOR:**

**MANDY**

**PEEVER**

**OFFICE:**

**OFFICE HOURS:**

**PHONE:**

**E-MAIL:**

**CALENDAR DESCRIPTION:** This course covers the welding technology and properties of metals components of the Alberta Apprenticeship Welder Training, 1<sup>st</sup> Period. Topics include: Electricity, Metal ID, Heat Treatment, Distortion, Hardfacing, Drawing Interpretation, Weld Symbols and Weld Types.

**PREREQUISITE(S)/COREQUISITE:** Program admission requirements

**REQUIRED TEXT/RESOURCE MATERIALS:**

- CWB Pre-Employment Manual
- I.P.T. Pipe Trades Training Manual (optional)
- I.P.T. Metal Trades Training Manual (optional)
- Metals and How to Weld Them (optional)
- Calculator – Suggested is the Casio FX-260 (same as the one supplied for AIT Exam)
- HB pencils, white eraser

**DELIVERY MODE(S):** Lecture

**COURSE OBJECTIVES:** Upon completion of this course, students should be able to demonstrate knowledge and competency in wirefeed theory and practical application.

**LEARNING OUTCOMES:**

- Read and interpret drawings
- Describe electrical concepts
- Identify types of metals and their characteristics
- Identify the effects of heat treatment on carbon steels
- Identify joints and weld types
- Interpret welding symbols
- Identify distortion and methods of control
- Identify weld faults
- Observe hardfacing of steel

**TRANSFERABILITY:**

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.ca>.

**\*\* Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

**EVALUATIONS:**

**GRADING CRITERIA:** A student must pass each course individually in order to receive a Certificate of Achievement in the Pre-Employment Welding Program. Absences for tests, or assignments missed, will result in a score of zero. No supplemental tests and/or examinations available.

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

**COURSE SCHEDULE/TENTATIVE TIMELINE:**

**STUDENT RESPONSIBILITIES:**

- Read and review welding program rules and regulations

- Students who do NOT comply with the rules and regulations will be asked to leave the program
- Purchase books, supplies and safety clothing as outlined by the instructor
- Read and complete assignments as outlined by the instructor
- Acquaint themselves with missed test announcements, worksheet assignments, theory concepts taught, and lab assignments presented
- Prearrange any missed time with instructor

### **STATEMENT ON PLAGIARISM AND CHEATING:**

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

\*\*Note: all Academic and Administrative policies are available on the same page.

### **Additional Information (Optional):**

Instructors may add whatever they want here.