



## **DEPARTMENT OF WELDING, CTO AND INSTRUMENTATION**

**COURSE OUTLINE – WINTER 2013 – JANUARY 7 – APRIL 26, 2013**

**ITW12 GMAW, FCAW, SAW THEORY – 1.5 CREDITS 24 HOURS**

**INSTRUCTOR:** Cindy Nychka **PHONE:** 780.539.2705

**OFFICE:** GPRC – M122 **E-MAIL:** CNychka@gprc.ab.ca

**OFFICE HOURS:** 8:00 a.m. – 4:30 p.m.

**PREREQUISITE(S)/COREQUISITE:** None.

### **REQUIRED TEXT/RESOURCE MATERIALS:**

Alberta Apprenticeship and Industry Training Individual Learning Modules

First Year Modules Welder (WEL)

### Optional Textbooks:

IPT's Metal Trades and Welding Handbook

Ronald G. Garby

ISBN -0920855199

Metals and How to Weld Them

Ted B. Jefferson

### Other Required Supplies:

- approved protective clothing (footwear, coveralls, etc.)
- approved safety glasses
- two 3" ring binders
- welder's hat or beanie
- ear plugs
- pencils
- welder's gloves
- lock
- calculator (non-programmable, with square root function)

**CALENDAR DESCRIPTION:** This course covers the gas metal arc welding (GMAW), flux core arc welding (FCAW), submerged arc welding (SAW) theory components of Alberta Apprenticeship Welder Training, 1<sup>st</sup> Period. Topics include: power source, wire drive systems, shielding gas, regulator flow meters, wire classification and maintenance.

**CREDIT/CONTACT HOURS:** 1.5 credits; 2 hours per week; 12 weeks; 24 hours.

**DELIVERY MODE(S):** Instructor led classroom theory.

**OBJECTIVES (OPTIONAL):** To ensure student is knowledgeable and competent in the following topics:

- power source
- shielding glass
- wire classification and maintenance
- wire drive systems
- regulator flow meters

**TRANSFERABILITY:** Not applicable.

**GRADING CRITERIA:**

Students must complete all required courses with a grade point average of no less than 2.00 and no failing (F) grades. A passing grade in this course is a minimum of 65%.

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A <sup>+</sup>	4.0	90 – 100	EXCELLENT
A	4.0	85 – 89	
A <sup>-</sup>	3.7	80 – 84	FIRST CLASS STANDING
B <sup>+</sup>	3.3	77 – 79	
B	3.0	73 – 76	GOOD
B <sup>-</sup>	2.7	70 – 72	
C <sup>+</sup>	2.3	67 – 69	SATISFACTORY
C	2.0	65 – 66	
F	0.0	60 – 64	FAIL
F	0.0	55 – 59	
F	0.0	50 – 54	
F	0.0	0 – 49	
WF	0.0	0	FAIL, withdrawal after the deadline

## EVALUATIONS:

Areas of Evaluation	Percentage of Total Course Mark
Attendance	20% (2% per absence or late.)
Weekly Tests	20%
Final Exam	60%

Projects Evaluated Include:	
Cutting (OAC)	2F Horizontal Lap Weld GMAW
1G Flat Butt Weld GMAW	3F Vertical Lap Weld FCAW
3G Vertical Butt Weld GMAW	1G Flat Butt Weld SMAW
3F Vertical Lap Braze OAW	2F Horizontal Lap Weld SMAW
3G Vertical Butt Weld GMAW	3F Vertical Lap Weld SMAW

## STUDENT RESPONSIBILITIES:

Please refer to the Student Rights and Responsibilities policy in the Grande Prairie Regional College Calendar or at [www.gprc.ab.ca/downloads/documents/StudentRightsandResponsibilities.pdf](http://www.gprc.ab.ca/downloads/documents/StudentRightsandResponsibilities.pdf).

## ATTENDANCE REQUIREMENTS:

Lack of regular attendance will have a bearing on student evaluation. Regular attendance and punctuality in all courses is mandatory. Failure to maintain the necessary level of attendance may result in the offending student being withdrawn from the course. Certain unavoidable absences may be excused by the instructor. In such cases the student shall make every effort to inform the instructor prior to being absent. Absence from class must fall into the following categories to be excusable:

- Severe family or personal illness.
- Bereavement.
- Road/weather conditions.
- Pre-arranged or pre-approved absence (to be approved PRIOR to absence).

Students who accumulate 30 hours of absence within the program will be placed on academic probation. If attendance continues to be a problem, program staff will consider action on a case by case basis. Late entry to class will be considered 1.5 hours late.

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

Please refer to

[www.gprc.ab.ca/downloads/documents/Student%20Misconduct%20Plagiarism%20and%20Cheating.pdf](http://www.gprc.ab.ca/downloads/documents/Student%20Misconduct%20Plagiarism%20and%20Cheating.pdf) regarding plagiarism, cheating and the resultant penalties. These are serious issues and will be dealt with severely.

## **COURSE SCHEDULE/TENTATIVE TIMELINE:**

2 hours per week for 12 weeks – January 7 to April 26, 2013