DEPARTMENT OF ELECTRICAL/MILLWRIGHT

COURSE OUTLINE – FALL 2013 – SEPTEMBER 3 – DECEMBER 20, 2013

MW105 MILLWRIGHT/MACHINIST ALIGNMENT RIGGING & FASTENERS – 2.5 CREDITS 64 HOURS

INSTRUCTOR: Ken Rueckert **PHONE:** 780-539-2729

OFFICE: TT126 **E-MAIL:** krueckert@gprc.ab.ca

OFFICE HOURS: 8:00 – 4:15

PREREQUISITE(S)/COREQUISITE: None

REQUIRED TEXT/RESOURCE MATERIALS: Alberta Apprenticeship and Industry Training Millwright/Machinist Individual Learning Modules First Year

CALENDAR DESCRIPTION: This course is designed to introduce the student to fasteners, rigging methods and alignment precision. Topics to be included are leveling tools, locking devices, tensioning and procedural lock out. The student will be expected to apply this knowledge when participating in shop activities. Safety will be emphasized. First Aid & Forklift training will be provided.

CREDIT/CONTACT HOURS: 2.5 credits, 4 hours per week for 16 weeks

DELIVERY MODE(S): Instructor led Theory/Shop.

OUTCOME:

- **Describe machine leveling and grouting procedures**
- **Align two machine shafts using the rim and face method**
- **Describe rigging and hoisting equipment and procedures**
- **Use cranes and hoists for lifting and moving objects**
- **Safe operation of forklift and certification**
- **Certified First Aid Training**

TRANSFERABILITY: N/A

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	**4-point Equivalent**	**Percentage Guidelines**	**Designation**
A^+	**4.0**	**90 – 100**	**EXCELLENT**
A	**4.0**	**85 – 89**	
A^-	**3.7**	**80 – 84**	**FIRST CLASS STANDING**
B^+	**3.3**	**77 – 79**	
B	**3.0**	**73 – 76**	**GOOD**
B^-	**2.7**	**70 – 72**	
C^+	**2.3**	**67 – 69**	**SATISFACTORY**
C	**2.0**	**63 – 66**	
C^-	**1.7**	**60 – 62**	
D^+	**1.3**	**55 – 59**	**MINIMAL PASS**
D	**1.0**	**50 – 54**	
F	**0.0**	**0 – 49**	**FAIL**
WF	**0.0**	**0**	**FAIL, withdrawal after the deadline**

EVALUATIONS:

Mid Term 40%

Final Exam 50%

Practical 10%

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.

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 Failure to maintain the necessary level of attendance may result in the offending student being withdrawn from the course.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:

Refer to the Student Conduct section of the College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

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

COURSE SCHEDULE/TENTATIVE TIMELINE: 4 hours per week for 16 weeks

TOPIC	ALLOTTED TIME
First Aid (Standard First Aid Course)	16 Hrs.
Forklift (Forklift Operator Course)	4 Hrs.
Employability Skills (Resume writing, time management, interview skills, work habits)	4 Hrs.
Bearings (Overview on bearing theory, types, features, proper handling & safety)	10 Hrs.
Lubrication (Lubrication overview, safety & the do's and don'ts with oil and grease)	2 Hrs.
Power Transmission Chains (Overview and basic procedures to safely install and adjust)	4 Hrs.
Power Transmission Belts (Overview and basic procedures to safely install and adjust)	4 Hrs.
Gears (Gear overview, identifying wear and their causes and maintenance)	2 Hrs.
Gaskets (Design, procedures to make and install, first break safety)	2 Hrs.
Couplings (Design, maintenance, safe removal and installation)	2 Hrs.`
Laser shaft alignment (Operating principles and safety considerations with use)	4 Hrs.
Air Tools (Design, safe operation and maintenance)	2 Hrs.
Explosive Actuated Tools (Quick overview and safety)	2 Hrs.
Mechanical Seals (Overview including basic design and proper handling)	2 Hrs.
Compression Packing (Operating principles, proper adjustment procedures, removal and installation procedures.	2 Hrs.
Vibration (What vibration is, it's causes and how it is measured)	2 Hrs.