

**PORTLAND STATIONARY ENGINEERS JOINT APPRENTICESHIP COMMITTEE**  
**THINGS YOU SHOULD KNOW**  
**“COMPLETING YOUR MONTHLY WORK PROGRESS REPORT”**

This committee is responsible under Oregon State Law for your apprenticeship program. A part of that responsibility is shared by you, the apprentice, to cooperate with the Committee during the development of your career. As a part of this responsibility, you are hereby advised of the expectations and procedures concerning Monthly Work Progress Reports. Your JATC committee uses your MWPR's to see if you qualify for re-rate to each progressive level. If you omit information, the committee cannot readily decide if you qualify and must “HOLD” you in period. This may cost you money and also extend the length of your apprenticeship.

**On each and every report you must include:**

- ★ The Month and Year
- ★ Employer (supervisor) signature; related training title, and instructor signature
- ★ A ‘running’ or ‘cumulative’ total of all OJT hours in the lower right block of the grid
- ★ If you have taken an **approved** elective, indicate the course, and hours in the lower right-hand block on your MPR. Get elective instructors signature.
- ★ You are to complete MWPR's once each month whether you are working or not
- ★ **Keep a copy of each month's MPR for your records and next month's reference**

Properly Completed MWPR's are **due by the 10<sup>th</sup>** of each month!! **FAX: 503-978-5656**

Questions?? Call Katrina Cloud @ 503-978-5651 or Tom Duncan @ 503-978-5652

**Please come prepared with your copies already made.** Please use black ink. **PLEASE PRINT LEGIBLY**

**WELCOME TO THE PROGRAM!!!!**

Below is a class schedule, which may need adjusting depending on your entrance date. All apprentices are required to take the PCC placement exam **PRIOR** to indenture.

<b><u>FIRST YR 1<sup>ST</sup> TERM</u></b> APR 101 LME: Electrical Theory Fundamentals	<b><u>FIRST YR 2<sup>ND</sup> TERM</u></b> APR 102 LME: DC Motors	<b><u>FIRST YR 3<sup>RD</sup> TERM</u></b> APR 103 LME: AC Motors & Transformers	<b><u>FIRST YR 4<sup>TH</sup> TERM</u></b> APR 104 LME: Luminaries & Equipment
<b><u>SECOND YR 1<sup>ST</sup> TERM</u></b> APR 131 Refrigeration I	<b><u>SECOND YR 2<sup>ND</sup> TERM</u></b> APR 132 Refrigeration II	<b><u>SECOND YR 3<sup>RD</sup> TERM</u></b> APR 133 Refrigeration III	<b><u>SECOND YR 4<sup>TH</sup> TERM</u></b> Elective- See list below
<b><u>THIRD YR 1<sup>ST</sup> TERM</u></b> Elective See List Below	<b><u>THIRD YR 2<sup>ND</sup> TERM</u></b> Elective See List Below	<b><u>THIRD YR 3<sup>RD</sup> TERM</u></b> Elective See List Below	<b><u>THIRD YR 4<sup>TH</sup> TERM</u></b> Elective See List Below
<b><u>FOURTH YR 1<sup>ST</sup> TERM</u></b> APR 201 Electric Motor Controls	<b><u>FOURTH YR 2<sup>ND</sup> TERM</u></b> APR 202 LME: Electrical Code – Level I	<b><u>FOURTH YR 3<sup>RD</sup> TERM</u></b> APR 203 LME: Electrical Code – Level II	<b><u>FOURTH YR 4<sup>TH</sup> TERM</u></b> APR 204 LME: Electrical Code – Level III

**ELECTIVES:** Welding, Pneumatics, PLC's, Heat Pumps, Boilers, Lock Service & Repair, Intro to FMT (See last page for more approved electives)

Class schedules are available on the PCC website @ <http://www.pcc.edu/schedule/>. Select the term, then Apprenticeship. Course descriptions are available @ <http://www.pcc.edu/pcc/pro/catalog.htm>

APPRENTICES WILL BE REQUIRED TO ATTEND CLASS FALL, WINTER, SPRING & SUMMER TERMS UNTIL COMPLETION OF THE APPRENTICESHIP PROGRAM (8000 OJT HOURS, 576 RELATED TRAINING CLASSROOM HOURS). You may take 2 electives during Fall, Winter or Spring terms of your 3<sup>rd</sup> and 4<sup>th</sup> years to avoid unavailability of approved electives. **Please note section IXd of the Metro Limited Maintenance Electrician Stationary Engineer JATC Apprenticeship Standards states “A minimum of 144 hours of related training shall be required during each year the apprentice is registered in the program (See ORS 660.126 (e)). A minimum of 288 hours in the appropriate electrical related training subjects is required to meet the electrical license requirements with a minimum of 144 hours in the first year.” The same article further states “Related training courses must be completed with a grade “C” or better.”** It is the responsibility of the apprentice to submit a transcript of all course work at the completion of the program in order to generate a Journey card and a Certificate of Completion.

**First Year Textbooks:**        Delmar’s Standard Textbook of Electricity (approx \$137)  
   2008 National Electric Code (approx \$85)  
   Oregon Administrative Rules (printed from the internet)  
   Oregon Revised Statutes (printed from the internet)  
   Tom Henry Key Word Index (optional) (approx \$22)  
   American Electricians Handbook (optional) (approx \$74)  
   Fast Tabs (approx \$17)

**Second Year Textbooks:**    Refrigeration and Air Conditioning Technology (approx \$120)

**Third Year Textbooks:**      Pneumatics: HVAC Control Systems Text & Workbook (approx \$133)  
   PLC’s Basic, Int, & Adv. : Cascading Logic (approx \$57)  
   Introduction to PLC’s (approx \$80)  
   Heat Pumps: Heat Pumps (approx \$72)  
   Boilers: Practical heating Technology (approx \$122)  
   Lock Service & Repair: Life Safety Codes (custom book) (approx \$14)  
   Intro to FMT: Industrial Maintenance (approx \$60)

**Fourth Year Textbooks:**    Electric Motor Control (approx \$111)  
   Oregon Specialty Code Amendment (printed from the internet)  
   Same books as identified for the first year.

\*\* Prices are approximate and texts could be subject to change

## **APPROVED ELECTIVE COURSES FOR STATIONARY ENGINEERS & LME APPRENTICES**

LME Apprentices can take any class listed except those specifically identified for Stationary Engineers.

PCC schedule website <http://www.pcc.edu/schedule/>

### **\*Electrical Trades**

OSHA 30 Hr. Safety Training, 3 Cr. ELT 120 - (33 Hrs)

National Electrical Code, 3 Cr. ELT 230 - (33 Hrs)

Basic Prog Controllers - PC Based, 2 Cr. ELT 125 - (33 Hrs)

Intermediate Prog Controllers - PC Based, 2 Cr. ELT 126 - (33 Hrs)

Advanced Prog Controllers - PC Based, 2 Cr. ELT 225 - (33 Hrs)

Fiber Optics I, 4 Cr, ELT 150 - (66 Hrs)

Fiber Optics: Inside/Outside Plant, 4 Cr. ELT 152 - (66 Hrs)

Electricity for Non/Electrician, 2 Cr. ELT 110 - (33 Hrs)

Adjustable Speed Drive, 2 Cr. ELT 204 - (33 Hrs)

National Electrical Code II, 3 Cr. ELT 231 - (33 Hrs)

Fiber Optics II, 4 Cr. ET 151 - (66 Hrs)

AMP ACT I, 1 Cr ELT 250 - (16 Hrs)

Electricity for Non/Elect II, 2 Cr. ELT 210 - (33 Hrs)

### **\*Facilities Maintenance Technology**

Refrigeration Electrical I, 2 Cr. FMT 111 - (33 Hrs)

Refrigeration Electrical III, 2 Cr. FMT 113 - (33 Hrs)

Pneumatic Controls, 2 Cr. FMT 207 - (33 Hrs)

Refrigeration Electrical II, 2 Cr. FMT 112 - (33 Hrs)

Direct Digital Controls, 3 Cr. FMT 202 - (33 Hrs)

### **\*Skill Center Courses**

Trades Math, 2 Cr - SC 15 - (Hrs varies - open ended)

### **\*Electronic Engineering Technology Courses**

Digital Systems I, 3 Cr. - EET 121 - (24 Hrs lecture + 33 Hrs Lab) Industrial Safety, 1 Cr. - EET 188 - (12 Hrs)

### **\*Building Construction Technology Courses**

Hand Tool/Power Tool Use and Safety, 3 Cr. - BCT 106 - (60 Hrs & daytime course)

Commercial Print Reading, 2 Cr. - BCT 213 - (33 Hrs)

Construction Math, 3 Cr. - BCT 104 - (33 Hrs)

### **\*Architectural Design and Drafting Courses**

Blueprint Reading Part 1, 2 Cr - ARCH 161 - (33 Hrs)

Blueprint Reading Part 2, 2 Cr. - ARCH 162 - (33 Hrs)

### **\*Electrical License Renewal CEU Courses (awards CEU's not college credit)**

Grounding and Bonding - CEU 922C - (8 Hrs)

NEC Ratings - CEU 9217 - (8 Hrs)

NEC Code Calculations for Motor and Transformers - CEU 922A - (8 Hrs)

Oregon Electrical Safety Laws - CEU 924D - (8 Hrs)

National Electrical Code Changes - CEU 921Z - (8 Hrs)

### **\*IBEW Courses** (<http://www.nietc.org>) for more information

Fire Alarm Theory - (16 Hrs)

Code Calculations - (8 Hrs)

Overcurrent Protection: Article 240 - (8 Hrs)

Grounding & Bonding - (8 Hrs)

Drives - (24 Hrs)

Calculating Fault Currents & the NFPA 70E - (4 Hrs)

Lighting Maintenance - (20 Hrs)

OSHA 10-Hour Safety - (10 Hrs)

Service Article 230 - (8 Hrs)

Electrical Safety "Hot Work" - (8 Hrs)

NEC Ratings - (8 Hrs)

First Aid/CPR - (8 Hrs)

Hazardous Locations: Article 500 - (8 Hrs)

Health Care Facilities - Article 517 - (8 Hrs)

### **PCC Degree Related**

Basic Math, 4 Cr - MTH 20 - (44 Hrs)

Introductory Algebra 2<sup>nd</sup> Term, 4 Cr, MTH 65 (55 Hrs)

Fundamentals of Physics, 4 Cr, PHY 101 - (44 Hrs)

Beginning Keyboarding, 3 Cr. CAS 121 - (33 Hrs)

Introductory Algebra 1<sup>st</sup> Term, 4 Cr, MTH 60 - (55 Hrs)

Col. Alg. For Math. Science, Engin, 5 Cr., MTH 111C - (55 Hrs)

Computers in business, 4 Cr. BA 131 - (44 Hrs)

Beginning Keyboarding, 1 Cr. CAS 121A - (10 - 12 Hrs)

### **\*Identifies departments in the schedule of classes where courses are listed and/or websites**

### **BELOW COURSES APPROVED FOR STATIONARY ENGINEERS ONLY**

#### **\*Facilities Maintenance Technology**

Pneumatic Controls, 2 Cr - FMT 207 - (33 Hrs)

Intro to Chiller Systems, 3 Cr - FMT 201 - (33 Hrs)

Oil Furnace Service, 2 Cr. - FMT 128 - (33 Hrs)

Water Treatment & Dist, 2 Cr. - FMT 119 - (33 Hrs)

Lock Service & repair, 4 Cr. - FMT 131 - (66 Hrs)

Natural Gas Equipment, 2 Cr. - FMT 125 - (33 Hrs)

Approved 11/25/08