



## **-Pre-Employment Electrical -**

(12 Weeks @ 30 Hours per Week = 360 hours)

**Instructor(s):**

**Craig Cail – Chair**

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**Tim Weldon - Instructor**

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Office Phone 780-792-5123

[timothy.weldon@keyano.ca](mailto:timothy.weldon@keyano.ca)

**Office Hours:**

Monday through Thursday: 8:00am - 4:00pm

## Required Textbooks:

***First Period Electrician Apprenticeship ILMs*** w/supplemental texts  
Alberta Learning  
Edmonton: Author, 1998–, SKU 2000308

***Canadian Electrical Code, Part I, 24th edition***  
Canadian Standards Association  
Rexdale: Canadian Standards Association, 2018, ISBN 9781488313431

## Program Supplies:

- 3-ring binders, dividers, and lined paper
- 6 or 12 inch ruler
- Pens, pencils, highlighters, erasers
- Calculator (with no programmable memory; Sharp 520 is recommended)
- CSA approved safety boots
- Safety Glasses
- Gloves – Mechanix are recommended
- Electrical stencil is recommended
- Although classes are scheduled in person, we ask that all students are prepared with the technology required for virtual classes (online) should it become necessary; Computer/laptop, microphone, camera and internet access.

## Course Description:

PELEC 140 – Canadian Electrical Code Part 1 and Drawings

## Learning Outcomes

**Upon successful completion of PELEC 140 – *Canadian Electrical Code Part I and Drawings* – you will be able to:**

1. Recognize the purpose and organization of the Canadian Electrical Code Part I and the Alberta Electrical STANDATA.
2. Interpret the general rules in Section 2 of the CEC.
3. Determine the conductors required for installations in Section 4 of the CEC.
4. Determine the components, installation methods, grounding and bonding for a single dwelling.
5. Determine the loading on services, feeders and branch circuits for single dwellings.
6. Determine installation wiring methods.
7. Determine electrical requirements for a residential occupancy.
8. Determine code requirements for lighting equipment.
9. Determine the code requirements for Class 1 and Class 2 circuits.
10. Interpret orthographic projections, block, wiring and schematic diagrams.
11. Interpret construction drawings.
12. Interpret residential electrical construction drawings.

## Schedule

A detailed daily class / shop schedule will be handed out on the first day of each intake.

## Grading

Students must successfully meet three criteria to pass technical training.

1. Minimum 65% Theory Component (*for each PEMP course & cumulative weighted average for PELEC courses*)
2. Minimum 65% on each Practical Component
3. Minimum 50% on every section of study (*for PELEC courses only*)

Your grades will be based on:

### PELEC – Pre-Employment Electrician

PELEC 150 Std Wkpl Safety & PELEC 120 EMF Sources	16%
PELEC 110 Circuit Fundamentals	32%
PELEC 130 Lab Fundamentals	26%
PELEC 140 Code Part 1 & Drawings	26%
<b>Total Theory Component</b>	<b>100%</b>
Lab/Shop	100%
<b>Total Practical Component</b>	<b>100%</b>

## E-Learning

Technology and internet will impact your online learning experience. It's important that you are able to watch an online video and other course materials, take online quizzes, and participant in a live class with your instructor and other students.

Keyano College operates in a Windows based environment and having the correct tools for online learning is important. Here's a list of recommended system requirements for Fall 2020.

### Internet Speed

Minimum Internet speeds of 5 Mbps.

Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home). Check your internet speed with [Fast.com](http://Fast.com).

**System requirements:**

Microsoft Windows	Apple
<p><b>Minimum Requirements:</b></p> <p>A Windows 10 <b>computer/laptop</b></p> <ul style="list-style-type: none"> <li>· Minimum 4GB of RAM.</li> <li>· 10GB+ available hard drive storage.</li> <li>· Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <a href="#">Microsoft Office</a> software is free to all Keyano students and employees.</li> <li>· Microphone, webcam and speakers. A headset with a microphone is recommended.</li> <li>· System updates must be regularly installed.</li> <li>· Anti-Virus / Anti-Malware software</li> </ul>	<p><b>Minimum Requirements:</b></p> <p>A Macintosh (V10.14 and above) <b>computer/laptop</b></p> <ul style="list-style-type: none"> <li>· Minimum 4GB of RAM.</li> <li>· 10GB+ available hard drive storage.</li> <li>· Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <a href="#">Microsoft Office</a> software is free to all Keyano students and employees.</li> <li>· Microphone, webcam and speakers. A headset with a microphone is recommended.</li> <li>· System updates must be regularly installed.</li> <li>· Anti-Virus / Anti-Malware software.</li> </ul>
<p><b>Recommended Requirements</b></p> <ul style="list-style-type: none"> <li>· 8GB of RAM</li> <li>· A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.</li> </ul>	<p><b>Recommended Requirements</b></p> <ul style="list-style-type: none"> <li>· 8GB of RAM</li> <li>· A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.</li> </ul>
<p>Chromebooks are <b>not</b> recommended as they are not compatible with testing lockdown browsers.</p> <p>A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.</p>	

**Specific department requirements:**

Business and OA programs require Windows 10.

Other programs may utilize Windows based tools as well.

### **Computer Software**

Students will be able to get access to Microsoft Office 365 for Free using Keyano Credentials by [clicking here](#).

### **Recording of lectures and Intellectual Property**

Students may only record a lecture if explicit permission is provided by the instructor or by Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not publish any of the lectures or lecture materials, this includes any recordings, slides, instructor notes, etc. on any platform. Thus no student is allowed to publish or sell instructor notes without formal written permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property.

### **ITS Helpdesk**

If you are having issues with your student account, you can contact the ITS Helpdesk by emailing [its.helpdesk@keyano.ca](mailto:its.helpdesk@keyano.ca) or calling 780-791-4965.

## **Important Phone Numbers**

- **Candace Trites, Administrative Assistant** **780-791-4881**  
*Call Candace if you are going to be absent from class or have any general questions or concerns.*
  
- **Craig Cail, Construction Trades & Heavy Industrial Chair** **780-715-3902**  
*Call Craig if you have any concerns with class work, instructors, or if you require any type of academic accommodations.*  
  
*Call your instructor if you need information about class work, schedules or if you need extra help to learn the material.*
  
- **Mark Power, Alberta AIT** **780-743-7181**  
*Call Mark if you have questions about attendance, apprenticeship, or your employer.*
  
- **Security** **780-791-7911**  
*Call security if you feel threatened while on campus, to report a fire, if you need a door unlocked, or for parking issues.*
  
- **Office of the Registrar**
  - **Registration Assistants** **780-791-4801**  
*Call this office if you have questions about fees/tuition or class availability.*
  
- **Student Life Calendar** <https://calendar.keyano.ca/student/>  
*Refer to the Student Life calendar for events and important dates for students.*

# CLEARWATER CAMPUS MAP

For classroom MAPS please refer to  
SAKC STUDENT HANDBOOK

