



## **Fourth Period Technical Training**

### **- Steamfitter-Pipefitter -**

(8 Weeks @ 30 Hours per Week = 240 hours)

**Instructor(s):**

**Darren Stacey**

Chair, Metal Trades

780-792-2675

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**Brent Hydomako**

Instructor, Steamfitter/Pipefitter

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**Shawn McCurdy**

Instructor, Steamfitter/Pipefitter

780-791-4857

[shawn.mccurdy@keyano.ca](mailto:shawn.mccurdy@keyano.ca)

Office Hours;

Monday through Friday: 8:00 a.m. – 4:00 p.m.

780-791-4881

**Required Textbooks:** (available at Keyano College Bookstore approximately 2 weeks prior to start date)

***Fourth Period Steamfitter/Pipefitter Apprenticeship ILMs*** and 4rd Year Keyano College hand-out package

**IPT Pipe trades manual:** Keyano college bookstore

**Ordinates for 1000 Pipe intersections; (2<sup>nd</sup> yr)** Keyano College Bookstore

**IPT's Crane and Rigging Training Manuel:** Keyano College Bookstore

### **Steamfitter-Pipefitter Program Supplies (Required for all periods):**

- Binders for ILMs
- Lined paper or notebook
- High quality compass set
- Pens, pencils, erasers
- Calculator (with no programmable memory; Casio FX 260 is recommended)
- Tape measure
- Fire resistant coveralls and/or cotton denim jeans/jacket and welding cap or beanie
- Gauntlet type welding gloves
- Welding shield
- Welding helmet with #10 lens and cutting goggles or face shield with #5 lens
- Chipping hammer, tip cleaners, wire brush, striker
- Vise grips (C Clamp Style)
- Ankle high CSA Approved Safety boots and non-tinted safety glasses with side shields
- 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:**

In the Fourth Period Technical Training you will learn about:

1. High Pressure Steam & Condensate Systems
2. Process Piping Systems
3. Job Planning and Critical Lifts
4. Revised Drawings and Projects

## Learning Outcomes

**Upon successful completion of Section One – *High Pressure Steam and Condensate Systems* – you will be able to:**

1. Install and maintain high pressure steam boilers.
2. Install and maintain high pressure steam systems.
3. Install and maintain condensing and non-condensing steam systems.
4. Install and maintain exhaust and cascading steam systems.
5. Install and maintain high pressure boiler trim.
6. Install and maintain auxiliary equipment on high pressure systems.
7. Install and maintain pressure vessels.
8. Install and maintain HTHW systems.
9. Install and maintain cooling towers and heat exchangers.

**Upon successful completion of Section Two – *Process Piping Systems* – you will be able to:**

1. Install and maintain fire protection systems.
2. Identify the operation of HVACR systems.
3. Install and maintain hydraulic systems.
4. Install and maintain fuel systems.
5. Install and maintain waste water systems.
6. Install and maintain medical gas systems.
7. Install and maintain heat recovery systems.
8. Install and maintain solar and geothermal exchange systems.

**Upon successful completion of Section Three – *Job Planning and Critical Lifts* – you will be able to:**

1. Describe the role of the Alberta Apprenticeship and Industry Training Board and the network of industry committees that represent the trades and occupation in Alberta.
2. Use coaching skills when training an apprentice.
3. Use Red Seal products to challenge an Interprovincial examination.
4. Perform critical lifts.
5. Plan for a new construction project.
6. Facilitate commissioning, turnover and start-up procedures.
7. Plan for a maintenance project.
8. Apply quality control (Q.C) measures.

**Upon successful completion of Section Four – *Revised Drawings and Projects* – you will be able to:**

1. Fabricate a rolling offset.
2. Interpret a revised drawing package.
3. Fabricate an eccentric reducing tee.
4. Fabricate a concentric lateral wye branch.
5. Fabricate a true wye.

## Schedule

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

## Grading

Apprentices must successfully meet three criteria to pass technical training.

1. Minimum 65% Theory Component (cumulative weighted average)
2. Minimum 65% on each Practical Component
3. Minimum 50% on every section of study.

High Pressure Steam Boilers	19%
Process Piping Systems	15%
Job Planning and Critical Lifts	28%
Revised Drawings and Projects	38%
<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:

### 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.*

## IMPORTANT NOTICE

### Information Regarding Fees and Procedures

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If the address listed on your fee assessment sheets is different from your current address, or if your address changes anytime during the duration of your program, please go to the Student Services Centre and fill out the “Change of Address” form as Keyano College requires a current address for you at all times.

Your Student ID cards are available for pick up in the Office of the Registrar. Please have your Student ID # and photo identification available. Apprentices are required to pick up a new Student ID card every Academic Year.

For information on Awards/Bursaries, please contact the Student Services Center either in person or by phone at (780) 791-4894.

Keyano College is a paid parking facility. Parking passes can be purchased at the Bookstore. Current rates can be found at: <https://www.keyano.ca/en/about-us/parking.aspx>

When parking, please be mindful of designated areas (“Reserved”, “Metered”, etc.) Unreserved, General Parking is available in lots A, B, E and F. Lots C and D are reserved staff parking. If you park in a reserved spot, you can be ticketed even if you have a hang tag or daily pass. Please see the campus map for locations of the parking lots.

#### **Please Note:**

- It is now your responsibility to submit your E.I. forms on your own time. (HRDC no longer comes to the college)
- You can submit your registration on-line <http://www100.hrdcdrhc.gc.ca/ae-ei/dem-app/english/home2.html>
- Or link from <http://www.servicecanada.gov.ca>



# CLEARWATER CAMPUS MAP

For classroom MAPS please refer to  
SAKC STUDENT HANDBOOK

