



Second Period Technical Training

- Steamfitter-Pipefitter -

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

Second Period Technical Training – Steamfitter-Pipefitter

Instructor(s):

Darren Stacey

Chair, Metal Trades

780-792-2675

Darren.Stacey@keyano.ca

Brent Hydomako

Instructor, Steamfitter-Pipefitter

780-791-4891

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Shawn McCurdy

Instructor, Steamfitter-Pipefitter

780-791-4857

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)

Second Period Steamfitter-Pipefitter Apprenticeship ILMs and 2nd Year Keyano College hand-out package
Alberta Learning
Edmonton: Author, 1998–, SKU 2000308

IPT Pipe trades manual: Keyano college bookstore

Ordinates For 1000 Pipe Intersections: 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 Second Period Technical Training, you will learn about:

1. Heating Systems
2. Hydronic Heating
3. Rigging Equipment and hoisting Communications
4. Specialty Piping
5. Drawings, Layout and Elevations
6. Gasfitting Fundamentals

Learning Outcomes

Upon successful completion of Section One – *Heating Systems* – you will be able to:

1. Apply scientific fundamentals relating to temperature and heat transfer processes.
2. Apply expansion and contraction control measures on piping systems.
3. Install heat transfer equipment and piping.
4. Perform latent and sensible heat calculations.
5. Perform heat loss calculations to determine equipment selection.
6. Install heat emission units.
7. Apply the principles of buoyancy to equipment submersed in fluids.

Upon successful completion of Section Two – *Hydronic Heating* – you will be able to:

1. Install and maintain hydronic heating systems.
2. Install and maintain hydronic heating boilers.
3. Install and maintain boiler trim.
4. Install and maintain circulators and pumps.
5. Install hydronic heating/cooling systems.
6. Install liquid heating tracing.

Upon successful completion of Section Three – *Rigging Equipment and Hoisting Communication* – you will be able to:

1. Develop a lift plan for hand rigging.
2. Use fibre and wire rope for rigging.
3. Use pulleys and levers for hoisting and lifting materials and equipment.
4. Use slings and hoisting equipment.
5. Use forms of communication for hoisting operations.
6. Use scaffolds and aerial access equipment.

Upon successful completion of Section Four – *Specialty Piping* – you will be able to:

1. Install and maintain plastic and lined piping.
2. Install and maintain fiberglass reinforced plastic (FRP) piping.
3. Install cast iron, ductile iron and glass piping.
4. Install and maintain alloy piping.
5. Install specialty pipe connectors.
6. Apply techniques for pipe bending.

Upon successful completion of Section Five – *Drawings, Layout and Elevation* – you will be able to:

1. Perform trigonometry calculations.
2. Calculate offsets for piping systems.
3. Construct flange and gasket templates.
4. Draw orthographic projections of an object.
5. Fabricate a piping system.
6. Interpret drawing specifications.
7. Locate piping and equipment from a set of drawings. n

Upon successful completion of Section Six – *Gasfitting Fundamentals* – you will be able to:

1. Apply knowledge related to the properties of gas.
2. Install and service gas line components.
3. Use test equipment to service appliances.
4. Service pilots, thermocouples and thermopiles.

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.

Heating Systems	13%
Hydronic Heating	16%
Rigging Equipment and Hoisting Communication	23%
Specialty Piping	10%
Drawings, Layout and Elevations	22%
Gasfitting Fundamentals	16%
Total Theory Component	100%
Lab/Shop	100%
Total Practical Component	100%

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.

System requirements:

Microsoft Windows	Apple
<p>Minimum Requirements:</p> <p>A Windows 10 computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software 	<p>Minimum Requirements:</p> <p>A Macintosh (V10.14 and above) computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · 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. 	<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · 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.
<p>Chromebooks are not 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 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

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

