



Third Period Technical Training

- Heavy Equipment Technician-

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

Third Period Technical Training - Heavy Equipment Technician

Instructor(s):

Chester Parisian – Chair

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Darrell Pintkowski – HET Instructor

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Kevin Wills – HET Instructor

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Office Hours:

Monday through Friday: 8:00 am – 4:00 pm

Suncor Energy Industrial Campus (SEIC)

Course Description:

In the Third Period Technical Training you will learn about:

1. Hydraulic Systems, Valves, Controls and servicing
2. Steering and Suspension Systems and Accessories (Specific to Off-Road) and Apprenticeship.
3. Power Train (Specific to Off-Road)

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

Third Period ILM Package and 3rd Year Keyano College handout package

Heavy Equipment Technician Program Supplies

(Required for all periods):

- 2 inch 3-ring binders and lined paper
- 6 or 12 inch ruler
- Pens, writing pencils, coloured pencils, highlighters, erasers
- Calculator (with no programmable memory)
- Coveralls
- CSA approved safety boots and safety glasses

Learning Outcomes

Upon successful completion of Section One – *Hydraulics II* - you will be able to

1. Explain principles of hydraulics.
2. Identify common hydraulic pumps.
3. Diagnose and repair common hydraulic pumps.
4. Identify hydraulic motors and cylinders.
5. Service hydraulic cylinders and motors.
6. Service hydraulic pressure, flow and directional control valves.
7. Analyze common mobile equipment hydraulic systems.
8. Diagnose common mobile equipment hydraulic systems.
9. Analyse basic electrical and electronically controlled hydraulic systems.

Upon successful completion of Section Two – *Steering and Suspension Systems (Specific to Off Road)* - you will be able to

1. Diagnose and service off-road equipment steering systems.
2. Explain off-road suspension system diagnostic and service procedures
3. Service and maintain accessories and attachments used with off-road equipment.
4. Explain the operation of typical off-road equipment electrical and warning circuits.
5. Diagnose and repair off-road equipment electrical circuits.
6. Display coaching skills.
7. Describe the role of the Alberta Apprenticeship and Industry Training Board and the network of industry committees that represent the trades and occupations in Alberta.
8. Use Red Seal Product to challenge an Interprovincial examination.

Upon successful completion of Section Three – *Power Train (Specific to Off Road)* - you will be able to

1. Explain basic gearing principles.
2. Diagnose and repair common off road equipment torque converters.
3. Explain the operation of powershift and automatic transmissions mechanical components.
4. Explain the operation of powershift and automatic transmission shift control mechanisms.
5. Explain the operating principles for off-road equipment hydraulic retarders.
6. Diagnose and service powershift and automatic transmissions.
7. Explain tracked equipment steering system diagnostic and service procedures.
8. Explain diagnostic and service procedures for tracked equipment undercarriage and related components.
9. Explain diagnostic and service procedures for off-road equipment final drive systems.
10. Repair drive axle and differential assemblies.
11. Service and diagnose common clutch types.

Grades

Schedule

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

Your grade in this period will be based on:

Quizzes	10%
Exams	65%
Labs / Shop Activities	25%
TOTAL	100%

Important Phone Numbers

- **Candace Trites, Administrative Assistant** **780-799-8601**
Call Candace if you will be late or absent from class.

- **Chester Parisian, HET Program Chair** **780-799-8610**
Call Chester if you have any problems with class work, your instructor, or if you need any type of academic accommodation.

Call your instructor if you need information about class work, schedules or if you need extra help to learn the material.

- **Suzanne Beveridge, Alberta AIT** **1-800-248-4823**
Call Suzanne if you have questions about attendance, apprenticeship, or your employer.

- **Keyano Security** **780-791-4911**
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.

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 Cashier's Office when you go to pay your program fees.

Parking Fees: (2019 - 2020)

2 Weeks	\$12.87
1 Month	\$24.76
2 Months	\$39.62

Please ensure that when you are paying your program fees that you indicate to the Cashier whether or not you would like to purchase a parking pass. 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>

Campus Map

Suncor Energy Industrial Campus

