

## DEPARTMENT OF TRANSPORTATION TRADES

### THINKBIG SERVICE TECHNICIAN COURSE OUTLINE – WINTER 2023

FEBRUARY 27 – APRIL 21, 2023

#### HES221 VB23 – TRUCK AND TRAILER SUSPENSION AND STEERING

- 1.5 CREDITD (48 HOURS)

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

**INSTRUCTOR:** Darcy Moss

**PHONE:** Office 780.835.6765

**OFFICE:** FPS 119

**E-MAIL:** dmoss@nwpolytech.ca

**OFFICE HOURS:** 8 AM to 4:30 PM

**CALENDAR DESCRIPTION:** Topics covered in this course include: the fundamentals and servicing of truck and trailer frames and suspension; wheels, tires and hubs; trailer landing gear; coupling units; trailer types and an introduction to trailer inspection as directed by the Commercial Vehicle Inspection Program; oxy-fuel heating and cutting; and preventive maintenance.

Delivery Option: Fairview Campus Only

**PREREQUISITE(S)/COREQUISITE:** Successful completion of Block 1 and HES190 work placement.

#### REQUIRED TEXT/RESOURCE MATERIALS:

##### Caterpillar Material

##### Caterpillar Service Industry

*Unit 4: Connective Devices*

Lesson 2 – Hoses and Seals

Lesson 3 – Bearings

**Alberta Apprenticeship and Industry Training Individual Learning Modules  
Heavy Equipment Technician (HET)**

- 190102a – Frame and Suspension Fundamentals
- 190102b – Frame and Suspension Service
- 190102c – Bearings and Seals
- 190102d – Wheels, Tires and Hubs
- 190102e – Trailer Systems and Components
- 190102f – Coupling Units Fundamentals and Service
- 190102g – Landing Gear Fundamentals and Service
- 190102h – Orientation to Trailer Inspection
- 190102i – Preventive Maintenance
- 190205f – Non-Electric Cranking Systems

**DELIVERY MODE(S):** In person delivery.

Note: NWP reserves the right to change the course delivery.

**COURSE OBJECTIVES:**

**LEARNING OUTCOMES:**

**TRANSFERABILITY:** None.

**EVALUATIONS:**

**GRADING CRITERIA:**

Students must complete all required courses with a grade point average of no less than 2.7 and no failing (F) grades. A passing grade in this course is a **minimum of 70%**.

**Truck and Trailer Suspension and Steering ..... 48 / 240 hours = 20 %  
of Semester 2 mark**

**Exams Average = \_\_\_\_\_ x 45%**

**Class Assignments/Quizzes/Labs = \_\_\_\_\_ x 55%**

**Shop = \_\_\_\_\_ x 25%**

**HES221 VB23 FINAL MARK = \_\_\_\_\_ %**

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

**COURSE SCHEDULE/TENTATIVE TIMELINE:**

**STUDENT RESPONSIBILITIES:** This is an adult education environment. Enrolment at Northwestern Polytechnic assumes that the student will become a responsible citizen of the College. As such, each student will display a positive work ethic, take pride in and assist in the maintenance and preservation of Institute property, and assume responsibility for his/her education by researching academic requirements and policies, demonstrating courtesy and respect toward others; and respecting instructor expectations concerning attendance, classroom and shop rules, safety, assignments, deadlines and appointments. Students are learning skills to prepare them for the work environment.

Following the guidelines in “Student Rights and Responsibilities” in the NWP College calendar assist us all in maintaining an adult learning environment. Please refer to the Student Rights and Responsibilities policy in the Northwestern Polytechnic Calendar or at [www.nwpolytech.ca/downloads/documents/StudentRightsandResponsibilities.pdf](http://www.nwpolytech.ca/downloads/documents/StudentRightsandResponsibilities.pdf).

**STATEMENT ON PLAGIARISM AND CHEATING:**

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

\*\*Note: all Academic and Administrative policies are available on the same page.

**Additional Information (Optional):**