

**DEPARTMENT OF INDUSTRY PARTNER TRAINING**  
**THINKBIG SERVICE TECHNICIAN COURSE OUTLINE – FALL 2025**  
**HES 110 VA11 INTRODUCTION TO CATERPILLAR SERVICE INDUSTRY**  
**1.5 CREDITS (3.5-0-3.5) 56 HOURS FOR 8 WEEKS**

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:** Richard McGrail      **PHONE:** 780 835 6778  
**OFFICE:** FPS 112      **E-MAIL:** rmcgrail@nwpolytech.ca  
**OFFICE HOURS:** 8:30am-4:00pm weekdays

**CALENDAR DESCRIPTION:** This course will introduce the student to Caterpillar's history as well as familiarizing the student with the CAT product line. Included with this will be information on safety, materials and tools as well as shop facilities and equipment. Another segment of this will familiarize the student with the Caterpillar Service Information System as well as computer operation. The course will include an introductory section on welding in the welding lab on campus.

**PREREQUISITE(S):**

**COREQUISITE:**

## **REQUIRED TEXT/RESOURCE MATERIALS:**

### **Caterpillar Material**

#### **Caterpillar Service Industry**

##### Unit 2: Shop Safety and Equipment

Lesson 1 – Shop Safety and Equipment

Lesson 2 – Shop and Cleaning Equipment

##### Unit 3: Hand and Power Tools

Lesson 1 – Hand Tools

Lesson 2 – Power Tools

Lesson 3 – Precision Measuring Devices

Lesson 4 – Pulling Tools

Lesson 5 – Lifting Tools

##### Unit 4: Connective Devices

Lesson 1 – Fasteners

Lesson 2 – Hoses and Seals

Lesson 3 – Bearings

##### Unit 5: Hazardous Materials

Lesson 1 – Hazardous Materials

Lesson 2 – OSHA and EPA

## **Alberta Apprenticeship and Industry Training Individual Learning Modules**

### **Heavy Equipment Technician (HET)**

190101a – Safety Legislation, Regulations and Industry Policy in the Trades

190101b – Climbing, Lifting, Rigging and Hoisting

190101c – Hazardous Materials and Fire Protection

190101d – Communications and Trade Specific Safety

190101e – Materials and Fastening Devices

190101f – Hand, Shop and Power Tools

190101g – Measuring Tools

190101h – Oxyacetylene Equipment, Heating and Cutting

## **DELIVERY MODE:**

In person delivery. Fairview Campus Only

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

**LEARNING OUTCOMES:**

**TRANSFERABILITY:** None

**GRADING CRITERIA:**

Students must complete all required courses with no failing (F) grades. A passing grade in this course is a **minimum of 70%**. Grades for this course will be assigned as a percentage. Failure to achieve a minimum grade of 70% will result in removal from the Think BIG program.

**EVALUATION:**

**Introduction to Caterpillar Service Industry**

**56 hours**

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

*Class Assignments / Quizzes* = \_\_\_\_\_ *x 30%*

*Shop Total* \_\_\_\_\_ *x 25%*

**FINAL MARK = \_\_\_\_\_ %**

**COURSE SCHEDULE/TENTATIVE TIMELINE:**

Will be posted in the classroom.

## Introduction to Caterpillar Service Industry

- Safety,
- Materials,
- Hand Tools,
- Shop Facilities,
- Shop Equipment
- Maintenance and Connective Devices

### **STUDENT RESPONSIBILITIES:**

This is an adult education environment. Enrolment at Northwestern Polytechnic assumes that the student will become a responsible citizen of NWP. 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. Non-academic misconduct, including the possession, use, or distribution of intoxicants, will be addressed through the Student Rights and Responsibilities policy.

Students are expected to attend all class and shop hours. Students who miss more than 21 hours or 3 days of classes may be removed from the course.

Absences will be monitored and recorded by the instructors.

- Upon reaching 7 hours missed time in a single semester the student will be required to meet with the program instructor.
- Upon reaching 14 hours missed time in a single semester the student will be required to meet with the instructor and program Chair.
- Upon reaching 21 hours missed time in a single semester the student will be required to meet with the instructor, program chair and the Dean to evaluate the students' ability successfully continue in the Think BIG program.

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 ACADEMIC MISCONDUCT:**

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at

<https://www.nwpolytech.ca/about/administration/policies/index.html>

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