



COURSE OUTLINE

TCT716

Prepared: Sylvain Belanger Approved: Corey Meunier

Course Code: Title	TCT716: DRIVE TRAIN
Program Number: Name	6081: T/C TECHN LEVEL II
Department:	MOTIVE POWER APPRENTICESHIP
Semester/Term:	18S
Course Description:	<p>I. COURSE DESCRIPTION: The Level Two Drive Trains course deals with the power-train systems and components starting from the Engine Flywheel to the Drive wheels of the vehicles. Students will be taught about Heavy Duty pull type clutch assemblies, Drive line arrangements, Multiple Countershaft Standard Transmissions, Electronically Automated Standard Transmissions, Double Reduction and Inter-Axle Differential Assemblies. Students will be taught the power-flow associated with the Transfer of power from the engine through each of these individual system components and the relationship to gearing and gear ratios to produce the multiple speeds and torque output required for Commercial Vehicle Industry applications. The students will also be taught the proper service and maintenance procedures as well as the repair and over-haul procedures. Proper diagnosis and testing procedures will be demonstrated and taught to the students to enable them to learn these skills.</p>
Total Credits:	5
Hours/Week:	0
Total Hours:	40
Essential Employability Skills (EES):	<p>#4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #6. Locate, select, organize, and document information using appropriate technology and information systems. #7. Analyze, evaluate, and apply relevant information from a variety of sources. #10. Manage the use of time and other resources to complete projects.</p>
General Education Themes:	Science and Technology
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	<p>Assignments related to theory and appropriate application skills. Proctored final exam.</p>

Periodic quizzes.

Grade

Definition Grade Point Equivalent

A+ 90 - 100% 4.00

A 80 - 89%

B 70 - 79% 3.00

C 60 - 69% 2.00

D 50 - 59% 1.00

F (Fail)49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.

S Satisfactory achievement in field /clinical placement or non-graded subject area.

U Unsatisfactory achievement in field/clinical placement or non-graded subject area.

X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.

NR Grade not reported to Registrar's office.

W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
practical application testing	30%
Theory testing 70	70%

Books and Required Resources:

Heavy Duty truck systems by Sean Bennett

Publisher: cengage Edition: 6

Course Outcomes and Learning Objectives:

Course Outcome 1.

Upon successful completion, the apprentice is able to understand the principles of operation diagnose and repair pull-type clutches and flywheel assemblies.

Upon successful completion, the apprentice is able to understand the principles of operation, diagnose and repair countershaft manual transmission and auxiliary sections.

Upon successful completion, the apprentice is able to understand the principles of operation, diagnose and repair multiple speed and double reduction drive axle assemblies

Upon successful completion, the apprentice is able to understand the principles of operation, diagnose, and repair power divided tandem drive assemblies

Upon successful completion, the apprentice is able to understand the principles of operation, diagnose and repair electronically automated standard transmissions.

Learning Objectives 1.

Date:

Tuesday, April 24, 2018

Please refer to the course outline addendum on the Learning Management System for further information.