



**I. COURSE DESCRIPTION:**

The suspension, steering and brake systems portion of the TCT course is designed to provide the Truck Coach Technician with the necessary theoretical training and hands on testing and repair procedures required to service the many different applications and types of equipment used in the on road commercial vehicle market. Students taking this course will learn the theory involved in the construction and operation of the types of suspension systems, steering systems and braking systems that are currently used and have been used on all types of highway trucks, tractors, buses, trailers, and hauling equipment in the Truck and Coach Commercial on road Vehicle Industry. Students will be taught in depth theory and diagnostic procedures associated with respect to maintenance service and repair and how to safely perform them.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Define the purpose, construction and operation of suspension, steering and braking systems
2. Describe the different types and functions of the braking systems
3. Perform diagnostic procedures for trouble shooting hydraulic brake systems and air brake systems
4. Perform the proper service procedures to repair and or overhaul both hydraulic and air braking systems safely according to Manufacturer procedures and government regulations
5. Define the different types of suspension systems used for truck and coach and trailers used in the on highway application
6. Perform routine maintenance and service according to Manufacturer specifications
7. Perform adjustment required for proper suspension ride heights according to service manual procedures

8. Describe the functions, constructions, compositions, types and styles and application of tire and wheel end assemblies
9. Perform proper wheel bearing installation and adjustment according to manufacturer specifications
10. Perform diagnosis and repair for tire wear patterns and steering problems according to service manual procedures

### III. TOPICS:

1. Truck and Coach Suspension Systems
2. Truck and Coach Air Braking Systems
3. Truck and Coach Hydraulic Braking Systems
4. Truck and Coach Tire and Wheel Assemblies
5. Truck and Coach Steering Systems

### IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

**Hand outs provided by instructor as well as text books requested by department as per booklist.**

### V. EVALUATION PROCESS/GRADING SYSTEM:

***Students will be tested on the material covered per apprenticeship curriculum by multiple choice questions, assignments, and practical tests. The weigh factor for each area of testing will be as follows:***

Theory Tests	50 %
Practical Tests	30 %
Assignments	20 %

This evaluation can change depending on the emphasis placed on each of the above testing procedures.

The following semester grades will be assigned to students:

<b>Grade</b>	<b>Definition</b>	<i>Grade Point Equivalent</i>
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.	

## VI. SPECIAL NOTES:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

### Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. ADVANCE CREDIT TRANSFER:**

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.