



## Course Number and Title: CTS 101 Fundamentals of Motor Fleet Safety

**Campus Location:**

Georgetown

**Effective Date:**

2020-51

**Prerequisite:**

ENG 090 or ENG 091 or EAP 093 OR EAP 094 and MAT 005,  
SSC 100 or concurrent

**Co-Requisites:**

None

**Course Credits and Hours:**

3.00 credits

3.00 lecture hours/week

0.00 lab hours/week

**Course Description:**

This course presents safety fundamentals, essential regulatory requirements, and driver responsibilities not directly related to driving. Federal and state regulations governing commercial drivers and motor carriers are also explained.

**Required Text(s):**

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

**Additional Materials:**

CDL Manual, Division of Motor Vehicles, State of Delaware or State of Maryland

**Schedule Type:**

Classroom Course

**Disclaimer:**

None

**Core Course Performance Objectives (CCPOs):**

1. Explain the cargo documentation process, drivers' responsibilities in the preparation and handling of cargo documents, weight distribution guidelines for tractor-trailer vehicles, how to secure and cover cargo, and how to load/unload safely and efficiently. (CCC 1; PGC 5)
2. Identify potential environmental hazards that confront commercial drivers, and describe driver obligation and response. (CCC 1, 2; PGC 5, 6)
3. Describe the Hours of Service Regulations (49 Code of Federal Regulations [CFR] Part 395) as they apply to commercial drivers, and complete a driver's daily log and logbook recap. (CCC 1, 4, 6; PGC 8)
4. Follow safe and legal procedures at an accident scene, and complete accident report documents. (CCC 1, 2, 4; PGC 6)
5. Using a road map or atlas, plan a trip to include all relevant variables in the process. (CCC 1, 2, 6; PGC 7)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

## Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Explain the cargo documentation process, drivers' responsibilities in the preparation and handling of cargo documents, weight distribution guidelines for tractor-trailer vehicles, how to secure and cover cargo, and how to load/unload safely and efficiently.
  1. Identify items that must be completed on a bill of lading.
  2. Explain the difference among a freight bill, cargo manifest, and bill of lading.
  3. Explain the term driver count.
  4. Describe the difference between shipper load and count and driver count.
  5. Identify driver responsibilities for documenting cargo.
  6. Explain the possible consequences of improperly completed cargo documentation.
  7. Explain federal and state regulations on loading, weight limits, distribution of weight, and the bridge law.
  8. Identify state limitations on 48-foot and longer trailers concerning kingpin-to-rear-axle length limits.
  9. Explain how to install seals and record numbers on shipping documents.
  10. Describe the nature, function, and operation of common cargo handling equipment and its use in loading and unloading.
  11. Describe procedures for securing cargo.
  12. Identify proper lifting techniques.
2. Identify potential environmental hazards that confront commercial drivers, and describe driver obligation and response.
  1. Explain the purpose of the hazardous materials documentation rules.
  2. Explain the purpose of the hazardous materials containment rules.
  3. Explain emergency response procedures involving hazardous materials incidents.
  4. Identify environmental regulations that affect commercial drivers.
  5. Identify potential environmental problems that commercial drivers might encounter.
  6. Describe how to contain a spill of environmentally hazardous chemicals.
  7. Identify actions to take in the event of an environmental problem by using the Emergency Response Guide (ERG) published by the US Department of Transportation.
  8. Identify environmental impact of excessive engine idling.
3. Describe the Hours of Service Regulations (49 Code of Federal Regulations [CFR] Part 395) as they apply to commercial drivers, and complete a driver's daily log and logbook recap.
  1. Explain the 11-hour rule.
  2. Explain the 14-hour rule.
  3. Explain the 60 and 70-hour rules, and identify which type of motor carrier operation uses the 60-hour rule and which uses the 70-hour rule.
  4. Explain the consequences of failure to comply with 49 CFR Part 395.
  5. Identify en-route inspection requirements.
  6. Explain how to log short duration en-route inspections.
  7. Identify drivers who are exempt from using the daily log.
  8. Explain the importance of doing a logbook recap.
  9. Determine driving hours available at any time during a tour of duty.
  10. Identify the time standard to be used on the daily log.
4. Follow safe and legal procedures to be used at an accident scene, and complete accident report documents.
  1. Discuss state laws and possible company policy concerning stopping and rendering assistance at an accident scene.
  2. Explain procedures for protecting the scene of an accident and federal and state requirements for same.
  3. Identify requirements for reporting an accident, including legal, employer, and insurance concerns.
  4. Identify first aid procedures for the types of injuries most likely to be sustained in highway accidents.
  5. Identify types of fire extinguishers and use appropriate to the type of fire.
  6. Explain the procedures for extinguishing fires likely to be encountered by a commercial driver.
  7. Identify appropriate place to stop a commercial vehicle in the event of a fire.
  8. Describe procedures for gathering information at the accident scene.
  9. Describe advantages and disadvantages for use of a camera at the accident scene.
  10. Identify information that a driver is obligated to provide at an accident scene.
  11. Identify information that a driver should never provide at an accident scene.
  12. Complete a sample accident report.
5. Using a road map or atlas, plan a trip to include all relevant variables in the process.
  1. Plan a multi-day trip using a current *Rand McNally Motor Carrier's Road Atlas*.
  2. Ensure that the trip can be made while maintaining compliance with 49 CFR Part 395.
  3. Identify permits that could be required.
  4. Estimate time of departure/arrival.
  5. Estimate fuel needs.
  6. Estimate distances, and calculate time required to travel those distances.
  7. Describe monetary resources required.
  8. Complete daily logs in compliance with 49 CFR Part 395.
  9. Distinguish vehicles, cargoes, and routes requiring special permits from those that do not require them.
  10. Outline procedures for obtaining permits.
  11. Complete an expense report.
  12. Complete a trip mileage report.

**Evaluation Criteria/Policies:**

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

**Final Course Grade:**

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Formative: (3) Quizzes (equally weighted)	20%
Summative: Final Exam	40%
Summative: Trip Planning Project	40%
TOTAL	100%

**Core Curriculum Competencies (CCCs are the competencies every graduate will develop):**

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

**Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):****AUTCERCTC/AUTDIPCTS**

1. Operate a tractor-trailer equipped with a multi-range, non-synchronized transmission on the public roadways.
2. Identify mechanical defects in the performance of pre-trip, en-route, and post-trip vehicle inspections.
3. Operate a tractor-trailer in reverse through a series of maneuvering exercises accordance to State of Delaware licensing standards.
4. Perform safe coupling and uncoupling of typical tractor-trailer units.
5. Explain safe cargo handling and documentation.
6. Explain safe and legal procedures at an accident scene and proper reporting of accidents.
7. Plan an interstate trip including map reading/route selection, calculating driving time and fuel consumption, estimating distances, personal expenses, and personal needs.
8. Identify, explain and comply with the Federal Motor Carrier Safety Regulations Part 390 – 397, 380, 382 and 383.
9. Explain the driver's role in the trucking industry and the role of trucking in our nation's economy and security.
10. Create a professional job search and job retention plan.

**Disabilities Support Statement:**

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.