

HEAVY-DUTY TRUCK TECHNICIAN - ADVANCED TECHNICAL CERTIFICATE (ATC)

Explore More About This Program: <https://cwi.edu/program/heavy-duty-truck-technician>

Certificate Quick Facts

- **Instructional School:** Industry, Engineering, and Trades
- **Department:** Powersports and Diesel Technology
- **Program Code:** TTEC.ATC
- **Program Type:** Career and Technical Education
- **Available Fully Online:** No
- **Eligible for Federal Financial Aid:** Yes

NOTE: Courses required for this program *may* have an additional fee; more information can be found on the [Special Course Fees](#) web page.

Certificate Requirements

Course	Course Title	Min Credits
General Education Requirements		
MATH 118 & 118L	Technical Math and Technical Math Lab (Recommended GEM 3) ¹	3
Select one of the following:		3
ENGL 101	Writing and Rhetoric I (Recommended GEM 1) ¹	
COMM 101	Fundamentals of Oral Communication (Recommended GEM 2) ¹	
Select one of the following:		3
CWI 101	Connecting With Ideas (Recommended GE Elective) ¹	
PSYC 140	Human Relations for Career and Personal Success (Recommended GEM 6) ¹	
Major Requirements		
TTEC 102	Foundation and Safety	4
TTEC 106	Electrical and Electronic Systems	4
TTEC 110	Engines/Engine Controls	4
TTEC 120	Suspension, Steering, and Brakes	4
TTEC 130	Drivetrains	4
TTEC 140	Preventive Maintenance/HVAC	4
TTEC 220	Advanced Electrical Systems	4
TTEC 230	Advanced Engine/Engine Controls	4
TTEC 240	Advanced Drivetrains	4
TTEC 250	Advanced Suspension, Steering, and Braking Systems	4
TTEC 260	Advanced Preventive Maintenance/HVAC	4
TTEC 290	Heavy-Duty Truck Technician Capstone	4
Minimum Credit Hours Required		57

¹ The courses listed under the General Education Requirements section are recommended by the department as the most beneficial general education (GE) options for students in this program. **Please note that students may fulfill their GE requirements by completing another course from within the designated general education category.**

Certificate Plan: Summer Start

The course sequence listed below is strongly recommended in order to complete your program requirements. Many Career and Technical Education (CTE) courses have prerequisites and/or corequisites that have been accounted for within this course sequence plan. Please register for each semester as shown using the Student Planning tool in myCWI. Consult your advisor for any questions regarding this course sequence plan.

****NOTE****

Heavy-Duty Truck Technician (TTEC) majors are required to complete three general education courses in order to receive an Advanced Technical Certificate. Prior to beginning their TTEC courses, students must successfully complete any two general education courses. While it is recommended that students complete all three of their required general education courses during the spring and/or summer semester(s) prior to beginning the program, students may elect to take the additional required GEM course(s) during the summer semester between their first and second year in the program, if

preferred. Students may also complete GEM courses during regular semesters while enrolled in TTEC courses if they feel capable of doing so. **Students should note that the completion of a GEM 1 (or GEM 2), GEM 3, and GEM 6 (or GE Elective) course are required prior to beginning their final semester of the program.**

First Year

Summer		Credit Hours
Full 8-Week Session		
MATH 118 & 118L	Technical Math and Technical Math Lab (Recommended GEM 3) ¹	3
Select one of the following:		3
CWI 101	Connecting With Ideas (Recommended GE Elective) ¹	
PSYC 140	Human Relations for Career and Personal Success (Recommended GEM 6) ¹	
Total Semester Credit Hours		6

Fall

First 5-Week Session		
TTEC 102	Foundation and Safety	4
Second 5-Week Session		
TTEC 106	Electrical and Electronic Systems	4
Third 5-Week Session		
TTEC 110	Engines/Engine Controls	4
Total Semester Credit Hours		12

Spring

First 5-Week Session		
TTEC 120	Suspension, Steering, and Brakes	4
Second 5-Week Session		
TTEC 130	Drivetrains	4
Third 5-Week Session		
TTEC 140	Preventive Maintenance/HVAC	4
Total Semester Credit Hours		12

Second Year

Summer		Credit Hours
Full 8-Week Session		
Select one of the following:		3
COMM 101	Fundamentals of Oral Communication (Recommended GEM 2) ¹	
ENGL 101	Writing and Rhetoric I (Recommended GEM 1) ¹	
Total Semester Credit Hours		3

Fall

First 5-Week Session		
TTEC 220	Advanced Electrical Systems	4
Second 5-Week Session		
TTEC 230	Advanced Engine/Engine Controls	4
Third 5-Week Session		
TTEC 240	Advanced Drivetrains	4
Total Semester Credit Hours		12

Spring

First 5-Week Session		
TTEC 250	Advanced Suspension, Steering, and Braking Systems	4
Second 5-Week Session		
TTEC 260	Advanced Preventive Maintenance/HVAC	4
Third 5-Week Session		

TTEC 290	Heavy-Duty Truck Technician Capstone	4
Total Semester Credit Hours		12
Minimum Credit Hours Required		57

¹ The courses listed under the General Education Requirements section are recommended by the department as the most beneficial general education (GE) options for students in this program. **Please note that students may fulfill their GE requirements by completing another course from within the designated general education category.**

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate critical thinking and problem-solving skills identified by ASE, National Institute for Automotive Service Excellence Medium/Heavy-Duty Truck Technician Task List for the purpose of becoming a successful entry-level heavy-duty truck technician. Areas of advanced knowledge and skill development include electrical systems, engines and engine controls, braking systems, drivetrains, steering and suspension, preventive maintenance, and HVAC.
- Demonstrate written and oral communication skills consistent with industry.
- Demonstrate desirable work habits and interpersonal skills essential to successful job performance.
- Demonstrate knowledge and application of safety practices specifically related to heavy-duty diesel repair and maintenance at CWI.
- Demonstrate critical thinking and problem-solving skills.
- Read, interpret, and communicate basic mathematical concepts.

(The CWI Heavy-Duty Truck Technician's program learning outcomes are adapted from the [National Institute for Automotive Service Excellence \(ASE\) Master Standards for Medium/Heavy-Duty Truck Certification.](#))