

# DIESEL MAINTENANCE TECHNICIAN

## MASTER PLAN OF INSTRUCTION

2026 – 2027

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### MISSION

The mission of Fort Myers Technical College is to provide high quality career and technical training, in order to prepare students for current and emerging industries, delivered by a professional and caring staff in a positive learning environment.

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The Diesel Maintenance Technician program is a 600-hour program. It is a comprehensive training program for individuals with an entry-level status in the diesel maintenance technician industry. The program covers a wide range of instruction that will be found in the outline of this plan. The program teaches practical automotive theory as well as direct hands-on learning.

The program uses live work and real-world diesel maintenance scenarios to help the students gain the knowledge and skills needed for today's preventative maintenance technician. The systems in today's medium and heavy-duty trucks and buses are rapidly changing; it is very important to know why a procedure is done as well as the proper way to do the maintenance. Understanding how every system functions has an important role to play.

Each student must successfully complete written tests on theory and related topics as well as successfully demonstrate the practical application in a laboratory environment, both individually and in a group setting.

Prerequisites for this program include a solid background in math and general science with emphasis on basic math, formulas, percentiles, fraction and decimal conversions, and the use of precision measuring equipment. These areas are taught as part of the program of study, but it would be beneficial to have these skills in advance.

Competencies in each area are earned after both written and performance testing are completed.

### **PROGRAM MISSION**

The mission of the Diesel Maintenance Technician program is to prepare students for employment as diesel technician helpers and preventative maintenance technicians.

### **PROGRAM STANDARDS**

- Proficiently explain and apply required shop and personal safety tasks.
- Identify the basic diesel components and functions.
- Explain and apply required tasks associated with the proper use and handling of tools and equipment.
- Identify principles, assemblies, and systems of engine operation.
- Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.
- Diagnose and repair air supply and service systems.
- Diagnose and repair mechanical/foundation air brake systems.
- Diagnose and repair parking brakes.
- Diagnose and repair air and hydraulic antilock brake systems (ABS) and automatic traction control (ATC).
- Diagnose and repair wheel bearings.
- Inspect and Service Engine systems.
- Inspect and Service Fuel system.
- Inspect and service Air induction and exhaust system.
- Inspect and Service Cooling system.
- Inspect and Service Lubrication system.
- Inspect and Service Instruments and controls.
- Inspect and Service Safety equipment.
- Inspect and Service Cab.
- Inspect and Service Heating, ventilation, and air conditioning (HVAC).
- Inspect and Service Battery and starting systems.
- Inspect and Service Electrical/Electronic charging systems.
- Inspect and Service Lighting systems.
- Inspect and Service Air brake systems.
- Inspect and Service Hydraulic brake systems.
- Inspect and Service Drive Train systems.
- Inspect and Service Suspension and steering systems.
- Inspect and Service Tires and wheels.
- Inspect and Service Frame and fifth wheel.
- Apply relevant technology to workplace scenarios to aid productivity.

- Interpret and express interpersonal communication.
- Interact with others to accomplish workplace goals.
- Manage personal behavior to maximize productivity and professional growth.
- Find, assess and apply to job opportunities.
- Communicate personal competence, character and fit for a job opportunity.
- Cultivate and leverage relationships to professionally advance.

## **ESSENTIAL TRAINING TASKS**

### **Physical Requirements**

Ability to:

- Maintain a high degree of manual dexterity
- Stoop
- Kneel
- Lift at least 50 pounds and walk with it
- Use voice, hearing, and sight effectively to perform jobs in the automotive field
- Crouch or bend
- High degree of finger dexterity
- Crawl
- Differentiate colors
- Handle and physically manipulate supplies
- Use depth perception
- Work in an atmosphere of loud noise
- Work in an atmosphere of changes in temperature
- Perform repetitive tasks
- Measure accurately
- Work without close, direct supervision
- Work on multiple tasks and priorities
- Perform and complete tasks of relative complexity

### **Cognitive Requirements**

Ability to:

- Handle confrontation and frustration and assist in problem resolution
- Interpret a variety of instructions furnished in written, oral, and diagrammatic form
- Collaborate with others
- Cope with high levels of stress
- Perform mathematical computations at a level of tenth grade or higher
- Make fast decisions under pressure
- Demonstrate a high degree of patience
- Read and understand computer and related equipment
- Work in close or crowded areas

## **ACCOMMODATIONS**

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's IEP or 504 plan or post-secondary student's accommodations plan to meet individual needs to ensure equal access. Post-secondary students with disabilities must self-identify, present documentation, required accommodations if needed, and develop a plan with their post-secondary service provider. Accommodations received in post-secondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and services provided are maintained in a confidential file.

## **TUITION**

Tuition is charged for adult students at a rate established by the Florida legislature; tuition is waived for eligible high school dual-enrolled students. Current tuition and fee information is available from Student Services and is due prior to the first day of each payment period. Failure to pay all fees due at the time class begins will result in the student not being able to attend class and/or clinical.

## **CLASS SCHEDULE**

Classes meet Monday through Friday from 8:00 A.M. until 2:30 P.M. Lunch breaks are 30 minutes in length. This amounts to 30 hours of classroom instruction per week.

## **ATTENDANCE POLICY**

In an effort to develop appropriate employability skills, FMTC students are expected to attend all class sessions. As is expected in the workplace, when it is necessary to be absent due to illness or emergency situations, all students are to notify the instructor on or before the date of the absence. The student attendance policy for each post-secondary program is consistent with industry standards.

Campus attendance is kept via a computerized system. It is the responsibility of the student to **log in and out** in order to receive credit for class time. This allows the school to keep accurate attendance records for the actual number of hours and minutes attended.

All students are expected to be in attendance at least 90% of their scheduled hours during each payment period. Students failing to maintain the 90% attendance standard may not be permitted to continue in their program and may be withdrawn.

### **Absences and Tardies**

A student who is absent for 6 consecutive class sessions, without prior approval and without contacting the instructor, will be withdrawn from enrollment in his/her program.

Students who are late for class, including returning late from lunch, must notify their instructor and clock in upon arrival. Students who leave school early must notify their instructor and clock out. This time out of class is recorded as time absent and is counted against the required 90% attendance.

Adult students who know they will be out of school for an extended period of time may apply for a Leave of Absence. Students who exercise a Leave of Absence may have to extend their time in their program and pay additional fees.

### **Leaving Campus During School Hours**

Students must notify their instructor when leaving campus early. This is for the safety of students, to accurately track time, and to allow the instructor to best utilize instructional resources. Students may leave campus for lunch provided they return in the time allotted.

## **PLAN OF INSTRUCTIONAL PRACTICES**

### **Teaching Methods**

Lecture, demonstration, discussion, group interaction, verbal and written quizzes, skill practice, individualized instruction, computerized tutorials, interactive learning, web-based learning, and online courses are among the teaching methods utilized.

Textbooks, workbooks, projects, journals, reports, simulations, hands-on computer experience, collaborative learning, guest speakers, board examples, field trips, customer service projects, program job shadowing, cooperative on-the-job training, computerized tutorials, computerized assessment, interactive learning, web-based learning, and online courses are used for instruction.

### **Safety**

A basic outline of safety standards and practices is covered at the beginning of class along with a continuous implementation of safety principles.

### **Evaluation**

Class performance, quizzes, tests, attendance, portfolio assessments, completion of project assignments, decision-making, work habits, achievement of entry-level competencies, and other methods are used for evaluation.

### **Work-Based Activities**

Work-based learning activities play an integral part of the curriculum of FMTC’s career-technical training programs. These activities are planned with two objectives in mind. First, the activity provides students with the opportunity to develop and apply ‘real world’ experience using the knowledge and skills attained in the program. Second, the activity provides the instructor with objective input from potential employers or customers of program graduates. Each work-based activity has a written instructional plan outlining objectives, experiences, competencies, and evaluation required during the activity.

Work-based activities are program specific and may include:

- Unpaid in-school shop activities to provide customer service opportunities under the direct supervision of the program instructor.
- Unpaid job shadowing experiences that may include in-school or off-campus employer-based experiences under the supervision of a qualified employer representative who is working closely with the program instructor.
- Paid or unpaid cooperative training experiences conducted at the employer’s work location under the supervision of a qualified employer representative and under the direction of the program instructor.

### **Cooperative Education (Co-Op)**

Cooperative training is coordinated by the instructor and career specialist. Co-Op is for students who have shown competence in program training that indicates readiness for placement in an on-the-job program. To be eligible for a Co-Op experience, students must have completed at least 75% of the required program hours. Requirements may differ for those receiving VA Benefits. Veterans will be accepted into the program in accordance with the Department of Veterans Affairs’ approved program.

Students may be returned to the program for additional training if they do not function satisfactorily on the job or when the cooperative agreement is terminated at the request of the student, parent, employer, or program instructor.

Additional information regarding cooperative training opportunities may be obtained from the program instructor or career specialist. The lack of a valid driver’s license may be a barrier to obtaining a Co-Op placement.

## **GRADING POLICIES**

### **Grading Categories:**

Assessments	25%
Career Application (shop)	30%
Employability Skills	45%

**Grading Scale:** Students must maintain a minimum of a 75% grade average to progress in the program (80% in health science programs). A record of the student’s progress is kept by the instructor and available to the student in the FOCUS Student Portal. High school grades for dual enrolled students are reported to the assigned high school.

90 – 100	A
80 – 89	B
75 – 79	C
< 75	Failing

Each program has an employability skills rubric based on employee expectations in the industry.

### **Program Progress**

Students are required to complete the program of training within the hours allotted by the state of Florida for completion. The student’s rate of progress will be closely monitored by the instructor to ensure program completion in a timely manner.

## **SATISFACTORY ACADEMIC PROGRESS**

In order to receive and continue to receive financial assistance of any type, a student must maintain satisfactory academic

progress. The Financial Aid department will require a progress report to be completed and submitted to the Financial Aid Office prior to each disbursement. Students are considered to be making Satisfactory Academic Progress (SAP) if they successfully complete their scheduled clock hours, achieve a specific cumulative grade average (CGA), and do not exceed the maximum time limits to complete their course of study. Each student's academic progress will be checked at 450 clock hours for students enrolled in programs one academic year or greater. Progress will be checked at the half-way point for programs less than one academic year. No SAP is required prior to the first disbursement.

### **REQUIREMENTS FOR CERTIFICATE**

Students meeting the following requirements are awarded a full program certificate:

- 1) Mastery of 85% of program competencies as determined by the instructor
- 2) A final grade of 75% or better (80% Health Sciences) in each course
- 3) Proof of state-mandated basic skills levels
- 4) Attendance of a minimum of 90% of scheduled hours each payment period (95% of scheduled hours for some Health Science programs). Under unique circumstances, instructors in our competency-based programs have the discretion to graduate students who fall short of 90% as long as #1-3 above are met.

### **DRESS CODE**

**Required Uniform:** FMTC navy blue uniform work shirt (ordered at orientation), navy blue work pants (no jeans), work shoes (non-slip soles, composite toe preferred), and visible FMTC student ID badge.

### **PROGRAM STRUCTURE**

Below is a summary of the Diesel Maintenance Technician program structure. For more detailed information for each course, visit the FLDOE Curriculum Framework website: <https://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/2026-27-frameworks/transportation-distribution-logistics.stml>

#### **OCP A Diesel Engine Mechanic/Technician Helper**

Basic skills and safety, diesel engine fundamentals, service and repair manuals, engine rebuild and overhaul, and employability skills and entrepreneurship.

#### **OCP B Diesel Air Brakes Technician**

Air supply and service systems, mechanical/foundation, parking brakes, hydraulic brake systems, wheel bearings, mechanical/foundation, air and hydraulic antilock brake systems (ABS), and automatic traction control (ATC).

#### **OCP C Diesel Preventive Maintenance Technician**

Inspecting and servicing engine systems record findings; diagnosing and repairing fuel systems, air induction & exhaust systems, cooling systems, lubrication systems, instruments & control systems, safety equipment, hardware, HVAC, electrical/electronic battery & starting systems, electrical/electronic charging systems, electrical/electronic lighting systems, air brake systems, and hydraulic brake systems; inspect, service and record drive train systems; diagnose and repair suspension & steering systems, tires & wheels, and frame & fifth wheel.

### **TEXTBOOKS**

Online curriculum is provided by the instructor. An optional physical textbook can be purchased by students.