



2021-2022 Florida Job Growth Grant Fund Workforce Training Grant Proposal

Proposal Instructions: Please read this document carefully and provide the information requested below. Some questions may request that a separate narrative be completed. If additional space is needed, attach a word document with your entire answer.

Entity Information

Name of Entity: Manatee Technical College (School District of Manatee County)

Federal Employer Identification Number (if applicable): ██████████

Primary Contact Name: Dr. Valerie Viands

Title: Director, Manatee Technical College

Mailing Address: 6305 State Road 70 E.

Bradenton, FL 34203

Phone Number: 941-751-7900 x 1001

Email: viandsv@manateeschools.net

Secondary Contact Name: Justin Erickson

Title: Assistant Director, Manatee Technical College

Phone Number: 941-751-7900 x 1025

Workforce Training Grant Eligibility

Pursuant to 288.101, F.S., the Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. This includes workforce training grants to support programs offered at state colleges and state technical centers.

Eligible entities must submit proposals that:

- Support programs and associated equipment at state colleges and state technical centers.
- Provide participants with transferable and sustainable workforce skills applicable to more than a single employer.
- Are offered to the public.
- Are based on criteria established by the state colleges and state technical centers.
- Prohibit the exclusion of applicants who are unemployed or underemployed.

1. Program Requirements:

(If additional space is needed, attach a word document with your entire answer.)

Each proposal must include the following information describing how the program satisfies the eligibility requirements listed on page 1.

A. Provide the title and a detailed description of the proposed workforce training.

Diesel Systems Technology 1 for high skill, high wage employment (1,609 jobs/yr, mean salary over \$50k/yr) in the rapidly expanding Transportation, Distribution and Logistics business sector. See attachment for details.

B. Describe how this proposal supports programs at state colleges or state technical centers.

Funding will allow Manatee Technical College to add Diesel Systems Technology 1 to enhance its career preparation offerings in the Transportation, Distribution and Logistics career cluster. See attachment for details.

C. Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.

Skills taught will be applicable to regional employers in this business sector including PGT Innovations, Sunset Automotive Group, Manatee County Government, Manatee District Schools, and automobile and fleet dealers. Students will prepare for industry-standard ASE certifications. See attachment for details.

D. Describe how this proposal supports a program(s) that is offered to the public?

This proposal supports a postsecondary career certificate program which will be offered to the public through Manatee Technical College, the state technical college in Manatee County, serving adults age 18 and older (and 16-17 year-old dual-enrolled high school students in some programs). See attachment for details.

E. Describe how this proposal is based on criteria established by the state colleges and state technical centers.

Criteria on which this proposal is based include industry demand supported by State and Regional Demand Occupations Lists, Florida's Major Industries, the Bradenton Area Economic Development Corporation (EDC) Key Business Sectors, local business media, and employer surveys. See attachment for details.

F. Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals?

Yes No

This proposal TARGETS unemployed and underemployed individuals. See attachment for details.

- G.** Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of program completers anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.

By enhancing workforce training in Transportation, Distribution and Logistics, this proposal promotes economic opportunity by providing training in an occupation relevant to the infrastructure and future growth of Florida Workforce Region 18 (Manatee and Sarasota counties) and the state of Florida. MTC anticipates 14 students per year will complete the training. The economic impact to this region alone will be over \$500,000 per year. Metrics to measure success: 14 students per year will earn a credential. See attachment for details.

2. Additional Information:

(If additional space is needed, attach a word document with your entire answer.)

- A.** Is this an expansion of an existing training program? Yes No
 If yes, please provide an explanation for how the funds from this grant will be used to enhance the existing program.
-

- B.** Does the proposal align with Florida's Targeted Industries?
[\(View Florida's Targeted Industries here.\)](#) Yes No

If yes, please indicate the specific targeted industries with which the proposal aligns.
 If no, with which industries does the proposal align?

Transportation, Logistics & Distribution

- C.** Does the proposal align with an occupation(s) on the Statewide Demand Occupations List and/or the Regional Demand Occupations List?
[\(View Florida's Demand Occupations Lists here.\)](#) Yes No

If yes, please indicate the specific occupation(s) with which the proposal aligns.
 If no, with which occupation does the proposal align?

Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional 2021-2022 Demand Occupations Lists with over 1,600 combined job openings per year in FL.

D. Indicate how the training will be delivered (e.g., classroom-based, computer-based, other).
 If in-person, identify the location(s) (e.g., city, campus, etc.) where the training will be available.

If computer-based, identify the targeted location(s) (e.g. city, county, statewide, etc.) where the training will be available.

In-person. Classroom and lab based at Manatee Technical College, Main Campus, Bradenton. Industrial cooperative education (internships) with area employers.

E. Indicate the number of anticipated annual enrolled students and completers in the proposed program.

MTC anticipates 16 students will enroll and 14 students will complete per year (87.5% overall completion rate).

(See sections 1G & 2H.)

F. Indicate the length of program (e.g., quarters, semesters, weeks, etc.), including anticipated beginning and ending dates.

August 2022 June 2023

Begin Date: _____ End Date: _____

Diesel Systems Technician 1 (1050 clockhours / one school year).

G. Describe the plan to support the sustainability of the program after grant completion.

Tuition and fees will sustain the program after grant completion. Enrollment--see attached employer surveys.

H. Identify any certifications, degrees, etc. that will result from the completion of the program. Please include the Classification of Instructional Programs (CIP) code and the percent of completers in each code, corresponding with Section E.

Diesel Systems Technology 1: Career Certificate, CIP 47.0613, 87.5% completion rate.

I. Does this project have a local match amount? Yes No

If yes, please describe the entity providing the match and the amount. (Do not include in-kind.)

Manatee Technical College \$66,152 (from Workforce Funds). Possible engine and engine scanner from a local dealership. Normally, dealerships are happy to make donations of vehicles to programs such as this. However, these are extraordinary times. Supply chain and distribution issues are causing such a strain on dealers, they do not have any inventory (new or used) to donate.

J. Provide any additional information or attachments to be considered for the proposal.

Employer surveys from Diesel employers. Letters of support from Manatee County Port Authority, PGT Innovations, Sunset Automotive Group, Bradenton Area EDC, CareerSource Suncoast, Sarasota-Manatee Area Manufacturers Association, CareerEdge, Woodruff & Sons Contractors, Superior Asphalt, Dobbs Equipment, and the School District of Manatee County.

3. Program Budget

(If additional space is needed, attach a word document with your entire answer.)

Estimated Costs and Sources of Funding: Include all applicable workforce training costs and other funding sources available to support the proposal.

1.) Total Amount Requested \$ 436,000.00
 Florida Job Growth Grant Fund _____

A. Other Workforce Training Project Funding Sources:

City/County \$ _____
 Private Sources \$ _____

Other (grants, etc.) \$ 66,152.00
Total Other Funding \$ 66,152.00

Please Specify: Workforce fund

B. Workforce Training Project Costs:

Equipment \$ 376,000.00
 Personnel \$ 66,152.00
 Facilities \$ 60,000.00
 Tuition \$ _____
 Training Materials \$ _____

Other \$ _____
Total Project Costs \$ 502,152.00

Please Specify: _____

Note: The total amount requested must be calculated by subtracting the total other workforce training project funding sources in A. from the total workforce training project costs in B.

- C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding, how equipment purchases will be associated with the training program, if applicable, and any other pertinent budget-related information.

\$376,000 Equipment (see attached cost list for details)
 \$60,000 Facilities electrical upgrade for Diesel lab
 \$66,152 Salary/Benefits for 1 FT instructor

Upon receipt of award notification, MTC will request approval from the School Board to expend the Workforce Training Grant funds. Steps include hiring instructors, developing the curriculum, ordering equipment, recruiting students. MTC will begin accepting applications for enrollment in the spring of 2022 for an August 2022 start date. Students pay tuition and fees per semester; it is anticipated 75% will qualify for federal financial aid.

4. Approvals and Authority

(If additional space is needed, attach a word document with your entire answer.)

- A. If entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g. approval of a board, commission or council)?

Approval from the School Board of Manatee County.

- B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the entity and the Florida Department of Economic Opportunity:

i. Provide the schedule of upcoming meetings for the group for a period of at least six months.

ii. State whether entity is willing and able to hold special meetings, and if so, upon how many days' notice.

i. Board meeting dates March-Aug 2022: 3/8, 4/12, 4/26, 5/10, 5/24, 6/14, 6/28, 7/26, 8/9, 8/23

ii. Special meetings may be called by the Superintendent by serving a written notice of the time, date, location, and purpose of such meeting upon each Board member at least two (2) days in advance of the meeting.

- C. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the entity. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc.


The district school superintendent as executive officer has all necessary authority to execute proposals on behalf of the district school board (FS 1001.33 and FS 1001.51).

WORKFORCE TRAINING GRANT PROPOSAL

I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Entity: Manatee Technical College, School District of Manatee County

Name and Title of Authorized Representative: Cynthia Saunders, Superintendent

Representative Signature:  (Mar 28, 2022 10:27 EDT)

Signature Date: Pending board approval.



**2021-22 Florida Job Growth Grant Fund
Workforce Training Grant Proposal**

Entity Information:

Name of Entity: **Manatee Technical College (School District of Manatee County)**

Federal Employer Identification Number: [REDACTED]

Primary Contact Name: **Dr. Valerie Viands**

Title: **Director, Manatee Technical College**

Mailing Address: **6305 E. State Road 70, Bradenton, FL 34203**

Phone Number: **941.751.7900 x 1001** *Email:* viandsv@manateeschools.net

Secondary Contact Name: **Justin Erickson**

Title: **Assistant Director, Manatee Technical College**

Phone Number: **941.751.7900 x 1025**

1. Program Requirements:

A. Title and detailed description of the proposed workforce training:

Manatee Technical College (MTC) proposes to offer workforce training within the targeted industry of **Transportation, Distribution and Logistics**. The proposed career certificate program is **Diesel Systems Technician 1** (T650100). In this career certificate program, participants will prepare for employment in the **Transportation, Distribution and Logistics industry** to fill a growing need in the Suncoast Workforce Region and the state of Florida.

Diesel Systems Technician 1 (T650100) is a 1,050-clockhour program. The program is composed of four courses with one primary SOC Code:

49-3031 – Bus and Truck Mechanics and Diesel Engine Specialists

Bus and Truck Mechanics and Diesel Engine Specialists are on the current year Statewide Demand Occupations List, the Regional Demand Occupations List, the Regional Targeted Occupations List, and is an occupation within a Targeted Industry (state and region). Per the 2021-22 Florida Demand Occupations List, **49-3031 – Bus and Truck Mechanics and Diesel Engine Specialists** is a High-Skill, High-Wage occupation with 295 annual openings in WR18; mean wage is \$25.12, and entry wage is \$16.82.

- B. *Describe how this proposal supports programs at state colleges or state technical centers.*

Funding of this proposal will allow Manatee Technical College to add this career certificate program to enhance its program offerings in the Transportation career cluster and its line-up of over 50 career certificate programs. This proposal supports MTC in its ability to meet its mission to produce highly skilled individuals and resourceful leaders through collaborative education to meet the ever-changing needs of our communities and the workforce. The vision of MTC is to be recognized as a leader in transforming people's lives through quality education. MTC trains students in occupations relevant to the infrastructure and future growth of Florida Workforce Region 18 (Manatee and Sarasota counties) and the state of Florida. Thousands of students have entered the workforce and enhanced their personal and professional lives through the education they received at MTC. Local business and industry leaders contribute to the success of Manatee Technical College in meeting its mission, as is evidenced in the strong support being offered by PGT Innovations, Sunset Automotive Group, Bradenton Area EDC, CareerSource Suncoast, Sarasota-Manatee Area Manufacturers Association, CareerEdge, Dobbs Equipment, Woodruff and Sons, Superior Asphalt, Masella's Auto Repair, and the School District of Manatee County.

- C. *Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.*

This proposal will provide participants with **transferable and sustainable workforce skills applicable to more than a single employer** in the Transportation, Manufacturing, and Logistics & Distribution major industries in Florida (Enterprise Florida), with Trade, Transportation & Utilities being the existing industry generating the most demand in FL Workforce Region 18 (CareerSource Suncoast).

Students who complete the **Diesel Systems Technician 1** (T650100) program will learn transferable, sustainable workforce skills in electrical & electronics, engines, and brakes applicable to **local employers** such as FedEx, Manatee County Government, the School District of Manatee County, Dobbs Equipment, PGT Innovations, Woodruff & Sons, Sunset Automotive Group, Superior Asphalt, Masella's Auto Repair, and diesel vehicle dealerships such as Mercedes, Chevrolet, Ford, GMC, Jeep, Land Rover, Cadillac, and Ram. Students will prepare for related ASE certifications.

The Diesel program offers a sequence of courses that provides participants coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in

the targeted industries. The program provides technical skill proficiency and includes competency-based applied learning that contributes to **transferable, sustainable workforce skills**: the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, occupation-specific skills, and knowledge of all aspects of the industry. The program will prepare students for industry-standard Automobile Service Excellence (ASE) certifications.

D. *Describe how this proposal support a program(s) that is offered to the public.*

This proposal supports a postsecondary career certificate program which will be offered to the public through Manatee Technical College, the state technical college in Manatee County, serving adults age 18 and older. Manatee Technical College is a public postsecondary technical college. MTC is part of the School District of Manatee County, a Florida public school-district, and as such its programs are offered to the public. MTC is fully accredited by the Council on Occupational Education. MTC abides by all state and federal nondiscrimination laws. MTC provides equal access for special populations to CTE programs through its application, matriculation, and registration processes, as well as with laptops and assistive technology.

E. *Describe how this proposal is based on criteria established by the state colleges and state technical centers.*

MTC makes decisions to offer workforce-training programs based on state and community need and student demand. Criteria include State and Regional Demand Occupations Lists, High Skill/High Wage Occupations, Enterprise Florida Inc. Targeted Industries, Bureau of Labor Market Statistics Employment Projections, annual openings and average growth rate, help wanted online data, formal/informal surveys, employer input, and information obtained from the Bradenton Area Economic Development Corporation, CareerSource Suncoast, industry associations, and respected news media.

The Transportation industry has been especially hard-hit by supply-chain disruptions stemming from the Covid-19 pandemic.

A survey of local employers needing Diesel Mechanics (see attached) revealed the following information:

- 50% are looking to hire 1 – 5
- 33% are looking to hire 5 to 10
- 17% are looking to hire 20+
- 100% were interested in sending their current workforce for training
- Hourly wage ranges were \$15-20 (28.5%), \$20-30 (43%), \$30+ (28.5%)

On November 9, 2021, online job sites promoted openings in diesel:

- 73 Diesel Mechanic jobs available in Manatee County on Indeed.com
- 59 Diesel Mechanic jobs available in Bradenton on SimplyHired.com

F. *Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals? YES.*

This program will target unemployed and underemployed individuals. Most of the students attending Manatee Technical College are unemployed or underemployed. They are attending MTC for the improved possibilities of better employment and career opportunities. It is typical for around 75% of students to qualify for federal financial aid.

G. *Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of program completers anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.*

This proposal will promote economic opportunity by offering workforce training for an occupation that is **High-Skill, High-Wage** and **on the Demand Occupations List**. By enhancing workforce training in the Transportation industry, this proposal promotes economic opportunity by providing training in occupations relevant to the infrastructure and future growth of Florida Workforce Region 18 (Manatee and Sarasota counties) and the state of Florida. MTC anticipates 14 students (87.5%) per year will complete the training. The **economic impact** to this region alone will be over **\$500,000 per year** based on a **graduate placement rate of 95%**. The metrics used to measure the success of the training will be **87.5% completion rate** with students achieving career certificates and or industry certifications to validate technical skill attainment, i.e., 14 students per year will earn a credential.

3.C.

DETAILED BUDGET NARRATIVE

\$376,000	Equipment needed to offer the Diesel program (see program cost list)
\$ 60,000	Facilities Electrical upgrades to support Diesel equipment
\$ 50,498	Salary 1.0 FTE Instructor
<u>\$ 15,654</u>	Benefits 1.0 FTE Instructor
\$502,152	TOTAL PROJECT COSTS
- \$66,152	TOTAL OTHER FUNDING (Workforce Funds)
\$436,000	TOTAL AMOUNT REQUESTED

Capitalized purchases include a diesel instructor tool kit, diesel build-a-bay, alignment rack, tire changer/balancer, ADAs diagnostic system, diagnostic tools, and diesel tune. Capitalized purchases are estimated at \$345,290 and account for most of the equipment list.

Manatee Technical College will pay for the instructor salary and benefits from Workforce Funds. Subsequent years will be supported by tuition and fees and workforce funding.

A Note on Other Funding: Possible engine and engine scanner from a local dealership. Supply chain and distribution issues are causing a strain on dealers; they do not have any inventory (new or used) to donate at this time.

PROGRAM EQUIPMENT LIST

DIESEL TECHNICIAN	
Capitalized Equipment	Cost
Diesel instructor tool kit w/ cert	114,000.00
Diesel Build a Bay	81,178.00
Alignment Rack	62,000.00
Tire Changer/Balancer	38,706.00
ADAs Diagnostic System	28,106.00
PRO-LINK® Edge Diagnostic Tool	16,000.00
Diesel Tune	5,300.00
Non-Capitalized Equipment	
Diff Vac	2,300.00
Graco oil king (need 2)	1,200.00
Leaktamer smoke machine	1,200.00
Adapters -coolant tester	900.00
Standard Flammable storage Cabinet	850.00
DEF Refractometers (need 3)	600.00
Graco coolant king	550.00
Battery/Engine starter (need at least 2)	500.00
cooling system pressur tester	300.00
Tire workstation organizer	263.00
spillcontainment workstation	200.00
Combustion leak tester	100.00
Hose reels, piping and drops	8,092.00
Additional tools	13,655.00
TOTAL EQUIPMENT COSTS	\$ 376,000.00

DIESEL TECHNICIAN EMPLOYER SURVEY

OCTOBER 2021

Company Name	What is the estimated number of diesel technician job openings anticipated in the next 5 years?	What is the estimated average salary range of a technician per hour	How many incumbent workers are in need of training in this field over the next 5 years?
Dobbs Equipment	20+	\$20-\$30	I do not have an exact amount, but many!
PGT Innovations	5-10	\$20-\$30	10
Woodruff & Sons, Inc.	1-5	\$15-\$20	I would say all, Technology has really solidified itself within the diesel mechanic realm where as it seems like the first tool you go to anymore is a laptop. So continual training is beneficial more than ever.
SUPERIOR ASPHALT, INC.	1-5	\$20-\$30	3-4
Manatee County School District	5-10	\$15-\$20	5
Sunset Automotive Group	1-5	\$30+	1-5
Masella's Auto Repair	5-10	\$30+	1-5



October 5, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

CareerEdge Funders Collaborative, the workforce development initiative of the Greater Sarasota Chamber of Commerce, strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

The MTC project supports CareerEdge's goal to meet employer high demand, entry-level positions while providing a living wage, benefits, and career opportunities to local talent.

CareerEdge requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

A handwritten signature in black ink that reads "Kristi Hoskinson". The signature is written in a cursive, flowing style.

Kristi Hoskinson

Vice President of CareerEdge | The Greater Sarasota Chamber of Commerce



Eric Troyer
Chairman

Rick Mosholder
Vice Chair

Walter Spikes, Jr.
Treasurer

Ted Ehrlichman
President & CEO

October 05, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

CareerSource Suncoast strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I. Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

The MTC project completely supports the CareerSource Suncoast goal to recruit, train, and retain talent for employers in the Suncoast. CareerSource Suncoast requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

Joshua Matlock

Joshua Matlock (Oct 5, 2021 10:37 EDT)

Joshua Matlock

EVP/Chief Operating Officer

CareerSource Suncoast

Direct: (941) 803-4568

Email: jmatlock@careersourcesc.com



DOBBS

EQUIPMENT



JOHN DEERE

October 19, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

Dobbs Equipment strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

Dobbs Equipment requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

Joseph Delaney

Talent Acquisition Recruiter

Dobbs Equipment, LLC

2730 South Falkenburg Road | Riverview, FL 33578

(O) [813-620-1000](tel:813-620-1000) | (M) [813-538-4222](tel:813-538-4222) |

Joseph.Delaney@dobbsequipment.com



DOBBS
EQUIPMENT

HITACHI

Leeboy

TOPCON

BOMAG

FINN



Anna Maria • Bradenton • Bradenton Beach • Ellenton • Holmes Beach • Lakewood Ranch • Longboat Key • Palmetto • Parrish

PACESETTER INVESTORS
Lakewood Ranch Commercial
Truist

ELITE INVESTOR
Hancock Whitney Bank

LEADERSHIP INVESTORS
Air Products & Chemicals, Inc.
Bank of America
Benderson Development Company
FELD Entertainment
Fifth Third Bank of Florida
FPL
Herald-Tribune Media Group
IMG Academy
LECOM
Manatee Chamber of Commerce
MCR Health
Michael Saunders & Company
Peak Development Partners
PNC Bank
Sarasota Bradenton International Airport
SouthState Bank
SouthTech
Star2Star Communications
TECO Peoples Gas
University of South Florida Sarasota-Manatee

TRUSTEE INVESTORS
Anna Maria Island Chamber of Commerce
Atlas Building Company
The Bank of Tampa
Blalock Walters, P.A.
Cadence Bank
Carr, Riggs & Ingram, LLC
Conley Buick GMC
Gulfcoast Community Foundation
Halfacre Construction Company
It Works!
Manatee Healthcare Systems
Mauldin & Jenkins, LLC, CPA's
ME&S General Contractors, Inc.
Micron LLC
Miller Enterprises, Inc.
Shumaker, Loop & Kendrick, LLP
Sun Hydraulics
SUNZ Holdings
Synovus Bank
The Mosaic Company
Tropicana Products
Vecenergy Resources
Willis A. Smith Construction, Inc.

PARTNERS
Bradenton Area Convention & Visitors Bureau
CareerSource Suncoast
City of Bradenton
City of Palmetto/Palmetto CRA
Manatee County Government
Manatee Technical College
Port Manatee
School District of Manatee County
Town of Longboat Key

October 19, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

The Bradenton Area Economic Development Corporation(EDC), the lead organization for economic development in Manatee County, strongly supports Manatee Technical College's (MTC) application for a Florida Job's Growth Grant. This grant will assist in funding Workforce Training programs focused on the creation of a talent pipeline for the Transportation and Distribution & Logistics industry sectors in Manatee County.

Global Logistics & Supply Chain Technology and Diesel Systems Technician I are the proposed training programs. These programs will support the creation of a talent pipeline for Transportation, Storage & Distribution Managers, Bus & Truck Mechanics and Diesel Engine Specialists. They are classified as high-skill, high-wage occupations on both the state and regional demand occupations lists with over 2,100 job openings per year in Florida.

The workforce training MTC offers is critical as we endeavor to provide employers with skilled talent, as well as individuals with increased opportunities for high-skill, high- wage jobs. As such, the EDC enthusiastically supports MTC's application for this Jobs Growth Grant Fund request.

Sincerely,

Sharon Hillstrom
President & CEO
Bradenton Area Economic Development Corporation

THINK GLOBAL. THINK BRADENTON AREA.

Lakewood Ranch at the McClure Center | 4215 Concept Court, Bradenton, FL 34211 | Phone +1.941.803.9030



1070 TECHNOLOGY DRIVE ■ NORTH VENICE, FL 34275
PH: 941.480.1600 ■ F: 941.480.2778
PGTINNOVATIONS.COM

October 18, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

PGT Innovations strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

The MTC project completely supports the PGT Innovation's goal to find local, qualified talent to fill our positions that require high skill in their respective trades.

PGT Innovations requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

Bryant Underwood
Corporate Recruiter – Human Resources

THE PGT INNOVATIONS FAMILY OF BRANDS





October 5, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

Please know that the Sarasota-Manatee Area Manufacturers Association (SAMA) strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high- wage careers.

The MTC project completely supports SAMA's goal to help create careers in high demand, supporting our regional manufacturers, and offering the graduate an above average livable wage.

The Sarasota-Manatee Area Manufacturers Association requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

A handwritten signature in black ink that reads 'Rob Harris'.

Rob Harris, SAMA, Executive Director

SUNSET

AUTOMOTIVE GROUP

CONNECTED THROUGH COMMUNITY



October 6, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

Sunset Automotive Group strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high- wage careers.

The MTC project completely supports the Sunset Automotive Group goal to diagnose and repair vehicles and trucks with diesel engine technology including several Chevrolet, GMC, and Cadillac trucks and work vans, Volkswagen passenger cars, and others in our dealership group.

Sunset Automotive Group requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region' s need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

Jennifer Gardner
Sunset Automotive Group



Superior Asphalt, Inc.

October 19, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

Superior Asphalt, Inc. strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

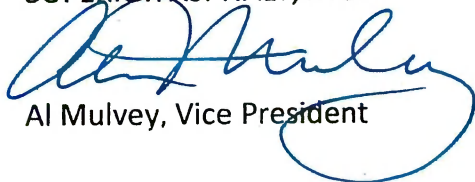
The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

The MTC project completely supports Superior Asphalt's goal to hire highly skilled locally trained employees.

Superior Asphalt, Inc. requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Regards,

SUPERIOR ASPHALT, INC.



Al Mulvey, Vice President



Woodruff & Sons, Inc.

6450 - 31st St. E.
P.O. Box 10127
Bradenton, FL 34282-0127

Phone: 941-756-1871
Fax: 941-755-1379

Woodruff & Sons, Inc.

2125 U.S. 12
P.O. Box 450
Michigan City, IN 46361

Phone: 219-872-8605
Fax: 219-879-5339

www.woodruffandsons.com

October 19, 2021

Subject: Florida Job Growth Grant Fund-Workforce Training Project

To Whom It May Concern:

Woodruff & Sons, Inc. strongly supports the Manatee Technical College (MTC) application for a Florida Job Growth Grant to help fund a Workforce Training Project to open two new programs supporting the Transportation, Distribution & Logistics industries in Manatee County.

The workforce training programs are Global Logistics & Supply Chain Technology and Diesel Systems Technician I.

Transportation, Storage & Distribution Managers and Bus & Truck Mechanics and Diesel Engine Specialists are High-Skill, High-Wage occupations on both the State and Regional Demand Occupations Lists with over 2,100 job openings per year in Florida.

The workforce training Manatee Technical College offers is critical in Florida Workforce Region 18 to provide employers with skilled, productive, and competitive talent and to provide all individuals, including those with disabilities, with increased opportunities for self-sufficiency and high-skill, high-wage careers.

The MTC project completely supports the Woodruff & Sons, Inc. goal to hire additional trained and high-skilled diesel technicians.

Woodruff & Sons, Inc. requests the DEO's consideration to grant Manatee Technical College the funding necessary to open these three programs to meet our region's need for high-skills training in Transportation, Distribution & Logistics.

Sincerely,

Chad Wakeman

JOBS BY OCCUPATION

FLORIDA

SOC Code	SOC Title	Employment				Total Job Openings	2019 Median Hourly Wage (\$)*	Education	
		2020	2028	Growth	Percent Growth			FL†	BLS†
00-0000	Total, All Occupations	9,321,946	10,500,053	1,178,107	12.6	10,332,256	-	-	-
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	3,266	3,535	269	8.2	2,638	25.88	PS	PS
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	1,141	1,185	44	3.9	854	-	PS	PS
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	472	480	8	1.7	449	17.31	PS	HS
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	3,443	3,726	283	8.2	3,425	20.47	PS	PS
49-2098	Security and Fire Alarm Systems Installers	7,070	8,404	1,334	18.9	8,748	20.98	PS	HS
49-3000	<i>Vehicle and Mobile Equipment Mechanics, Installers, and Repairers</i>	114,920	124,785	9,865	8.6	101,698	-	-	-
49-3011	Aircraft Mechanics and Service Technicians	14,165	16,059	1,894	13.4	11,790	30.75	PS	PS
49-3021	Automotive Body and Related Repairers	9,726	10,710	984	10.1	8,831	19.22	PS	HS
49-3022	Automotive Glass Installers and Repairers	1,013	1,120	107	10.6	926	16.98	NR	HS
49-3023	Automotive Service Technicians and Mechanics	53,198	56,011	2,813	5.3	45,348	20.40	PS	PS
49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	14,192	15,924	1,732	12.2	12,878	24.86	PS	HS
49-3041	Farm Equipment Mechanics and Service Technicians	1,358	1,420	62	4.6	1,168	17.58	PS	HS
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	6,662	7,326	664	10.0	6,231	24.34	PS	HS
49-3043	Rail Car Repairers	504	559	55	10.9	478	31.71	PS	HS
49-3051	Motorboat Mechanics and Service Technicians	3,475	3,990	515	14.8	3,493	24.18	PS	HS
49-3052	Motorcycle Mechanics	1,108	1,311	203	18.3	1,168	-	PS	PS
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	2,306	2,620	314	13.6	2,280	19.94	A	HS
49-3091	Bicycle Repairers	279	301	22	7.9	277	13.29	NR	HS
49-3092	Recreational Vehicle Service Technicians	778	927	149	19.2	900	-	PS	HS
49-3093	Tire Repairers and Changers	6,156	6,507	351	5.7	5,930	14.32	NR	HS
49-9000	<i>Other Installation, Maintenance, and Repair Occupations</i>	199,787	224,363	24,576	12.3	192,508	-	-	-
49-9011	Mechanical Door Repairers	2,187	2,387	200	9.1	1,764	18.03	HS	HS
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	1,328	1,419	91	6.9	1,030	21.48	HS	HS
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	34,777	38,091	3,314	9.5	31,771	20.73	PS	PS
49-9031	Home Appliance Repairers	3,414	3,775	361	10.6	3,460	19.84	PS	HS
49-9041	Industrial Machinery Mechanics	14,197	16,525	2,328	16.4	13,588	21.13	PS	HS
49-9043	Maintenance Workers, Machinery	1,554	1,729	175	11.3	1,364	18.82	PS	HS
49-9044	Millwrights	759	860	101	13.3	659	18.50	PS	HS
49-9051	Electrical Power-Line Installers and Repairers	5,874	6,372	498	8.5	4,612	23.02	PS	HS
49-9062	Medical Equipment Repairers	3,773	4,278	505	13.4	3,888	22.24	PS	A
49-9063	Musical Instrument Repairers and Tuners	224	222	-2	-0.9	185	-	HS	HS
49-9064	Watch Repairers	193	167	-26	-13.5	125	-	PS	HS
49-9069	Precision Instrument and Equipment Repairers, All Other	329	357	28	8.5	316	-	PS	HS
49-9071	Maintenance and Repair Workers, General	95,902	108,740	12,838	13.4	92,182	16.88	PS	HS
49-9092	Commercial Divers	420	486	66	15.7	455	-	A	PS
49-9094	Locksmiths and Safe Repairers	1,950	2,104	154	7.9	1,905	17.08	PS	HS
49-9095	Manufactured Building and Mobile Home Installers	278	253	-25	-9.0	132	-	PS	HS
49-9096	Riggers	873	978	105	12.0	817	23.72	NR	HS
49-9097	Signal and Track Switch Repairers	216	213	-3	-1.4	181	-	HS	HS
49-9098	Helpers--Installation, Maintenance, and Repair Workers	6,722	7,411	689	10.2	7,914	13.38	NR	HS
49-9099	Installation, Maintenance & Repair Workers, Other	17,219	19,704	2,485	14.4	18,338	17.33	HS	HS
51-0000	Production Occupations	317,426	337,333	19,907	6.3	324,755	-	-	-
51-1000	<i>Supervisors of Production Workers</i>	25,217	26,910	1,693	6.7	23,002	-	-	-
51-1011	First-Line Supervisors of Production and Operating Workers	25,217	26,910	1,693	6.7	23,002	26.75	PS	HS
51-2000	<i>Assemblers and Fabricators</i>	68,666	71,361	2,695	3.9	66,995	-	-	-
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	1,453	1,329	-124	-8.5	851	33.20	PS	HS

Source: Florida Department of Economic Opportunity, Bureau of Workforce Statistics & Economic Research

2021-22 Regional Demand Occupations List

Sorted by Occupational Title

Workforce Development Area 18 - Manatee and Sarasota Counties

Selection Criteria:

- 1 FLDOE Training Code 3 (PSAV Certificate), 4 (Community College Credit/Degree), or 5 (Bachelor's Degree)
- 2 30 annual openings and positive growth
- 3 Mean Wage of \$15.24/hour and Entry Wage of \$12.40/hour
- 4 High Skill/High Wage (HSHW) Occupations:
Mean Wage of \$23.89/hour and Entry Wage of \$15.24/hour

SOC Code†	HSHW††	Occupational Title†	Annual		2019 Hourly Wage		FLDOE Training Code	In EFI Targeted Industry?	Data Source†††
			Percent Growth	Annual Openings	Mean	Entry			
132011	HSHW	Accountants and Auditors	1.51	260	32.43	19.88	5	Yes	R
113011	HSHW	Administrative Services Managers	1.55	1,537	44.46	25.26	4	Yes	S
493011	HSHW	Aircraft Mechanics and Service Technicians	1.67	1,474	31.54	16.75	3	Yes	S
532011	HSHW	Airline Pilots, Copilots, and Flight Engineers	1.44	610	113.51	69.15	4	Yes	S
274011		Audio and Video Equipment Technicians	3.23	869	23.38	14.44	4	Yes	S
493021		Automotive Body and Related Repairers	1.26	1,104	21.85	14.10	3	Yes	S
493023		Automotive Service Technicians and Mechanics	0.66	5,668	21.81	12.68	3	Yes	S
433031		Bookkeeping, Accounting, and Auditing Clerks	0.59	524	20.00	13.40	4	Yes	R
493031	HSHW	Bus and Truck Mechanics and Diesel Engine Specialists	1.53	1,609	25.12	16.82	3	Yes	S
533021		Bus Drivers, Transit and Intercity	1.52	1,744	19.81	13.59	3	No	S
131199	HSHW	Business Operations Specialists, All Other	1.63	188	32.05	16.67	4	Yes	R
535021	HSHW	Captains, Mates, and Pilots of Water Vessels	2.09	742	29.34	18.11	3	Yes	S
472031		Carpenters	1.36	8,240	20.27	14.09	3	Yes	S
472051		Cement Masons and Concrete Finishers	1.22	1,755	19.31	14.49	3	Yes	S
351011	HSHW	Chefs and Head Cooks	4.03	1,939	27.41	15.75	3	Yes	S
131031	HSHW	Claims Adjusters, Examiners, and Investigators	0.26	2,070	30.92	20.07	3	Yes	S
532012	HSHW	Commercial Pilots	1.74	592	78.64	26.04	3	Yes	S
131141	HSHW	Compensation, Benefits, and Job Analysis Specialists	1.61	756	26.93	17.88	4	Yes	S
131041	HSHW	Compliance Officers	1.11	2,155	34.71	19.90	3	Yes	S
151143	HSHW	Computer Network Architects	1.57	979	51.96	34.03	3	Yes	S
151199	HSHW	Computer Occupations, All Other	1.49	1,118	37.67	17.86	3	Yes	S
151131	HSHW	Computer Programmers	2.17	1,169	41.69	23.31	3	Yes	S
151121	HSHW	Computer Systems Analysts	1.89	2,652	43.26	24.53	4	Yes	S
151151	HSHW	Computer User Support Specialists	2.08	127	25.35	16.30	3	Yes	R
119021	HSHW	Construction Managers	2.19	124	51.76	36.70	4	Yes	R
131051	HSHW	Cost Estimators	0.78	1,532	31.50	19.43	4	Yes	S
151141	HSHW	Database Administrators	1.52	669	45.51	27.69	4	Yes	S
319091		Dental Assistants	1.52	139	20.82	16.72	3	Yes	R
292021	HSHW	Dental Hygienists	1.42	1,022	28.14	18.37	4	Yes	S
292032	HSHW	Diagnostic Medical Sonographers	2.57	522	30.43	22.17	3	Yes	S
472111		Electricians	1.47	190	22.97	16.27	3	Yes	R

Source: Florida Department of Economic Opportunity, Bureau of Workforce Statistics and Economic Research (WSER)

JOBS BY OCCUPATION

WORKFORCE DEVELOPMENT AREA 18 - MANATEE AND SARASOTA COUNTIES

SOC Code	SOC Title	Employment				Total Job Openings	2019 Median Hourly Wage (\$)*	Education	
		2020	2028	Growth	Percent Growth			FL**	BLS**
00-0000	Total, All Occupations	323,562	366,748	43,186	13.3	368,302	-	-	-
47-4021	Elevator Installers and Repairers	53	59	6	11.3	56	33.87	PS	HS
47-4051	Highway Maintenance Workers	76	78	2	2.6	71	14.45	PS	HS
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	24	27	3	12.5	26	18.72	HS	HS
47-4090	Miscellaneous Construction and Related Workers	520	618	98	18.8	663	16.01	-	-
49-0000	Installation, Maintenance, and Repair Occupations	14,550	16,434	1,884	12.9	14,120	-	-	-
49-1000	<i>Supervisors of Installation, Maintenance, and Repair Workers</i>	1,005	1,146	141	14.0	930	-	-	-
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	1,005	1,146	141	14.0	930	23.85	PS	HS
49-2000	<i>Electrical and Electronic Equipment Mechanics, Installers, and Repairers</i>	1,119	1,243	124	11.1	1,151	-	-	-
49-2011	Computer, Automated Teller, and Office Machine Repairers	228	259	31	13.6	238	19.11	PS	SC
49-2022	Telecommunications Equipment Installers & Repairers, Exc. Line Installers	687	759	72	10.5	709	23.15	PS	PS
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	45	48	3	6.7	36	17.44	PS	PS
49-2098	Security and Fire Alarm Systems Installers	77	94	17	22.1	99	23.69	PS	HS
49-3000	<i>Vehicle and Mobile Equipment Mechanics, Installers, and Repairers</i>	3,839	4,299	460	12.0	3,617	-	-	-
49-3011	Aircraft Mechanics and Service Technicians	176	217	41	23.3	170	31.60	PS	PS
49-3021	Automotive Body and Related Repairers	429	492	63	14.7	416	19.05	PS	HS
49-3023	Automotive Service Technicians and Mechanics	2,136	2,343	207	9.7	1,951	14.46	PS	PS
49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	294	350	56	19.0	295	21.09	PS	HS
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	254	279	25	9.8	238	22.34	PS	HS
49-3051	Motorboat Mechanics and Service Technicians	197	232	35	17.8	206	14.83	PS	HS
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	65	74	9	13.8	64	20.02	A	HS
49-3093	Tire Repairers and Changers	133	139	6	4.5	126	12.70	NR	HS
49-9000	<i>Other Installation, Maintenance, and Repair Occupations</i>	8,587	9,746	1,159	13.5	8,422	-	-	-
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,534	1,763	229	14.9	1,517	19.91	PS	PS
49-9041	Industrial Machinery Mechanics	431	493	62	14.4	401	19.64	PS	HS
49-9043	Maintenance Workers, Machinery	107	120	13	12.1	95	12.51	PS	HS
49-9052	Telecommunications Line Installers and Repairers	351	394	43	12.3	375	19.66	PS	HS
49-9062	Medical Equipment Repairers	180	204	24	13.3	185	18.86	PS	A
49-9071	Maintenance and Repair Workers, General	3,841	4,369	528	13.7	3,711	16.19	PS	HS
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	14	15	1	7.1	15	12.08	HS	HS
49-9097	Signal and Track Switch Repairers	1	1	0	0.0	1	-	HS	HS
49-9098	Helpers--Installation, Maintenance, and Repair Workers	221	249	28	12.7	269	13.15	NR	HS
49-9099	Installation, Maintenance & Repair Workers, Other	1,083	1,249	166	15.3	1,167	14.85	HS	HS
51-0000	Production Occupations	13,206	13,832	626	4.7	13,088	-	-	-
51-1000	<i>Supervisors of Production Workers</i>	981	1,059	78	8.0	912	-	-	-
51-1011	First-Line Supervisors of Production and Operating Workers	981	1,059	78	8.0	912	25.85	PS	HS
51-2000	<i>Assemblers and Fabricators</i>	3,387	3,295	-92	-2.7	2,998	-	-	-
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Workers, Tapers, and Finishers	379	360	-19	-5.0	317	15.23	-	-
51-2041	Structural Metal Fabricators and Fitters	163	164	1	0.6	138	17.91	PS	HS
51-2091	Fiberglass Laminators and Fabricators	151	172	21	13.9	172	16.13	PS	HS
51-2098	Assemblers and Fabricators, All Other, Including Team Assemblers	2,691	2,596	-95	-3.5	2,368	-	-	-
51-3000	<i>Food Processing Workers</i>	1,211	1,346	135	11.1	1,486	-	-	-
51-3011	Bakers	472	549	77	16.3	635	9.41	PS	NR
51-3021	Butchers and Meat Cutters	426	463	37	8.7	477	11.83	HS	NR
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	85	92	7	8.2	95	11.66	NR	NR
51-3023	Slaughterers and Meat Packers	3	3	0	0.0	3	13.31	PS	NR
51-3092	Food Batchmakers	156	168	12	7.7	204	11.59	NR	HS

Source: Florida Department of Economic Opportunity, Bureau of Workforce Statistics & Economic Research

TEST SERIES

Take a look under the hood:
all the details you need on the ASE Test Series.

There are 52 ASE certification tests, covering almost every imaginable aspect of the automotive repair and service industry.

If you're learning about ASE certification tests for the first time, we recommend that you begin with the [General Information page](#), which describes the tests in general, and then click on the individual Test Series links below to learn more about the individual tests available in each Test Series.

Registration

To take ASE tests, you must register and pay in advance. [Click here](#) to register for an ASE Certification Test.

ASE Certification Test Series

English

Click on the Test Series title to see details about that series.

Automobile & Light Truck Certification Tests (A Series)

Automobile & Light Truck Certification Tests (A1 - A9)

Objective:

To identify and recognize those Automobile and Light Truck (up to Class 3) Technicians who can demonstrate knowledge of the skills necessary to diagnose, service, and repair cars, SUVs, and light duty trucks.

Tests Offered:

- A1 – Engine Repair (50 scored questions)
- A2 – Automatic Transmission/Transaxle (50)
- A3 – Manual Drive Train & Axles (40)
- A4 – Suspension & Steering (40)
- A5 – Brakes (45)
- A6 – Electrical/Electronic Systems (50)
- A7 – Heating & Air Conditioning (50)
- A8 – Engine Performance (50)
- A9 – Light Vehicle Diesel Engines (50)

(For A-series accordion): **Tests A1-A8 are available in Spanish as well. Visit [ASE.com/Spanish](https://www.ase.com/Spanish) for more information.*

Master Status Requirements:

Those are certified in tests A1 – A8 are recognized as ASE-Certified Master Automobile Technicians. *NOTE: A9 is NOT a requirement for Master Automobile Technician Status.*

Recertification:

Technicians must retest every five years to retain their certification. The Automobile & Light Truck recertification tests (A1R – A8R) are about half as long as the initial certification tests.

English

Service Consultants:

Tests A1 through A9 are intended for technicians who perform vehicle repairs. ASE offers a separate C1 certification test specifically for service consultants, who work with repair technicians and car owners. Click here for more information on the C1 test.

Download the Study Guide:

Automobile & Light Truck Study Guide: Includes Tests A1 – A9, Automobile Service Consultant (C1), Alt. Fuels CNG (F1), and Exhaust Systems (X1).

This guide contains test specifications, tasks lists, sample test questions, and training resources.

Collision Repair & Refinish Certification Tests (B Series)	+
Damage Analysis & Estimating Certification Test (B6)	+
Automobile Service Consultant Certification Test (C1)	+
Truck Equipment Certification Tests (E Series)	+
Alternate Fuels Certification Test (F1)	+
Auto Maintenance and Light Repair Certification Test (G1)	+
Transit Bus Certification Tests (H Series)	+
Advanced Engine Performance Specialist Certification Test (L1)	+
Electronic Diesel Engine Diagnosis Specialist Certification Test (L2)	+
Light Duty Hybrid/Electric Vehicle Specialist Test (L3)	+
Parts Specialist Certification Tests (P Series)	+
School Bus Certification Tests (S Series)	+
Medium-Heavy Truck Certification Tests (T Series)	-

Medium-Heavy Truck Certification Tests (T1 – T8)

Objective:

English

To identify and recognize those Medium and Heavy Truck Technicians who can demonstrate knowledge of the skills necessary to diagnose, service, and repair different systems of Class 4 through Class 8 trucks and tractors.

Tests Offered:

- T1 – Gasoline Engines (50 scored questions)
- T2 – Diesel Engines (55)
- T3 – Drive Train (40)
- T4 – Brakes (50)
- T5 – Suspension & Steering (50)
- T6 – Electrical/ Electronic Systems (50)
- T7 – Heating, Ventilation & Air Conditioning (HVAC) (40)
- T8 – Preventive Maintenance Inspection (50)

Master Certification Requirements:

Those who are certified in tests T2 – T8 are recognized as ASE Certified Master Medium-Heavy Truck Technicians. Master Truck Technicians who were current as of January 1, 2017, are exempt from the T8 test requirement until the first of their other truck certifications expires. When the time comes to recertify in any of the required truck tests, they will also need to take and pass the T8 test. *NOTE: T1 is not required for Master Medium-Heavy Truck Technician Status.*

Recertification:

Technicians must retest every five years to retain their certification. The Medium-Heavy Truck recertification tests (T1R – T8R) are about half as long as the initial certification tests.

Download the Study Guide:

Medium-Heavy Truck Study Guide - this guide contains test specifications, tasks lists, sample test questions, and training resources.

- Undercar Specialist Exhaust Systems Test (X1)** +
- ASE Military Tactical Wheeled Vehicle Certification Tests (MIL Series)** +
- Non-Certification Assessments** +

Master Status

Master Technician status is earned when you achieve certification in all required testing areas for that series. For example, technicians certified in tests A1 through A8 are Master Automobile Technicians. Those certified in tests T2 through T8 are Master Medium/Heavy Truck Technicians, and so forth. However, Master Technician status is not for life. You must keep each one of those certifications current to maintain Master Technician status. If you lose Master Technician status due to the lapse of one or more required certifications, it can be reinstated by taking and passing the Recertification Tests.

Who Writes the Test Questions?

ASE Certification tests are written in workshops by a national panel of seasoned automotive industry professionals and executives, including working technicians, automobile manufacturers, aftermarket manufacturers, and educators. Not by any single person at ASE.

Exams are segmented by sub-specialty such as automobile, medium/heavy truck, truck equipment, school bus, collision repair, and more. There are over 50 tests, each designed to discern the automotive service technician's knowledge of job-related skills. [Learn More](#)



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Florida Department of Education
Curriculum Framework

Program Title: Diesel Systems Technician 1
Program Type: Career Preparatory
Career Cluster: Transportation, Distribution and Logistics

Career Certificate Program – Career Preparatory

Program Number	T650100
CIP Number	0647061305
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	Refer to the Program Structure section
CTSO	SkillsUSA
SOC Codes (all applicable)	49-3031 – Bus and Truck Mechanics and Diesel Engine Specialists
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Transportation, Distribution and Logistics career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution and Logistics career cluster.

The content includes but is not limited to maintaining and repairing diesel engines and electrical systems; reconditioning diesel fuel injection systems; overhauling diesel engines; and performing diesel engine preventive maintenance.

The course content should also include training in communication, leadership, human relations and employability skills; and safe efficient work practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of four occupational completion points.

The courses after the core (OCP-A) may be taken in any sequence.

Benchmarks identified with a designation of P-1, P-2, or P-3 are ASE tasks.

When offered at the postsecondary level, this program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44 (3) (b), F.S.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	DIM0101	Diesel Engine Mechanic/Technician Helper	DIESEL MECH @7 7G	150 hours	49-9098
B	DIM0102	Diesel Electrical and Electronics Technician		300 hours	49-3031
C	DIM0104	Diesel Engine Technician		300 hours	49-3031
D	DIM0105	Diesel Brakes Technician		300 hours	49-3031

National Standards

Industry or National Standards corresponding to the standards and/or benchmarks for the Diesel Systems Technician program can be found using the following link:

<http://www.aseeducation.org/program-accreditation>

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Proficiently explain and apply required shop and personal safety tasks.
- 02.0 Identify the basic diesel components and functions.
- 03.0 Explain and apply required tasks associated with the proper use and handling of tools and equipment.
- 04.0 Identify principles, assemblies, and systems of engine operation.
- 05.0 Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.
- 06.0 Demonstrate workplace employability skills related to personal standards and work habits/ethics.
- 07.0 Diagnose and repair General electrical systems.
- 08.0 Diagnose and repair Battery systems.
- 09.0 Diagnose and repair Starting systems.
- 10.0 Diagnose and repair Charging systems.
- 11.0 Diagnose and repair Lighting systems.
- 12.0 Diagnose and repair Gauges and warning devices.
- 13.0 Diagnose and repair related electrical systems.
- 14.0 General engine diagnosis and repair.
- 15.0 Cylinder head and valve train diagnosis and repair.
- 16.0 Engine block diagnosis and repair.
- 17.0 Lubrication systems diagnosis and repair.
- 18.0 Cooling system diagnosis and repair.
- 19.0 Air induction and exhaust systems diagnosis and repair.
- 20.0 Fuel system diagnosis and repair.
 - 20.01 Fuel supply system.
 - 20.02 Electronic fuel management system.
- 21.0 Diagnose and repair engine brakes.
- 22.0 Diagnose and repair air supply and service systems.
- 23.0 Diagnose and repair mechanical/foundation air brake systems.
- 24.0 Diagnose and repair parking brakes.
- 25.0 Diagnose and repair hydraulic systems.
- 26.0 Diagnose and repair mechanical/foundation hydraulic brake systems.
- 27.0 Diagnose and repair power assist units.
- 28.0 Diagnose and repair air and hydraulic antilock brake systems (ABS) and automatic traction control (ATC).
- 29.0 Diagnose and repair wheel bearings.

Florida Department of Education
Student Performance Standards

Program Title: Diesel Systems Technician 1
Career Certificate Program Number: T650100

Course Number: DIM0101
Occupational Completion Point: A
Diesel Engine Mechanic/Technician Helper – 150 Hours – SOC Code 49-3031

Course Description:

The Diesel Engine Mechanic/Technician Helper course prepares students for entry into the Diesel Engine Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study shop and personal safety skills, basic diesel components, tools and equipment, occupational safety, engine operation, and workplace employment skills.

ASE = Required Supplemental Tasks

CTE Standards and Benchmarks	Priority Number
01.0 Proficiently explain and apply required shop and personal safety tasks.--The student will be able to:	
01.01 Identify basic shop organization and management regulations.	
01.02 Identify and apply general and required shop safety rules and procedures.	ASE
01.03 Utilize safe procedures for handling of tools and equipment.	ASE
01.04 Identify and use proper placement of floor jacks and jack stands.	ASE
01.05 Identify and use proper procedures for safe lift operation.	ASE
01.06 Utilize proper ventilation procedures for working within the lab/shop area.	ASE
01.07 Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.	ASE
01.08 Identify the location and use of eye wash stations.	ASE
01.09 Identify and comply with the required use of PPE during lab/shop activities.	ASE
01.10 Secure hair and jewelry for lab/shop activities.	ASE
01.11 Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits.	ASE
01.12 Demonstrate awareness of the safety aspects of high voltage circuits (such as high intensity discharge (HID) lamps, ignition systems, injection systems, etc.).	ASE

CTE Standards and Benchmarks		Priority Number
01.13	Locate and demonstrate knowledge of Safety Data Sheets (SDS).	ASE
01.14	Assist in activities and job tasks, in accordance with local, state, and federal safety and environmental regulations.	
01.15	Identify and comply with personal and environmental safety practices associated with the handling, storage, and disposal of chemicals and hazardous materials.	
02.0	Identify the basic diesel components and functions.--The student will be able to:	
02.01	Identify types of bearings and their uses.	
02.02	Identify drive power train components and functions.	
02.03	Identify threaded fasteners by size, type, thread series, thread classes, material hardness, and compatibility	
03.0	Explain and apply required tasks associated with the proper use and handling of tools and equipment.--The student will be able to:	
03.01	Identify tools and demonstrate their proper usage.	ASE
03.02	Identify standard and metric designation.	ASE
03.03	Demonstrate proper cleaning, storage, and maintenance of tools and equipment.	ASE
03.04	Demonstrate proper use of precision measuring tools (i.e. micrometer, dial-indicator, dial-caliper, etc.).	ASE
04.0	Identify principles, assemblies, and systems of engine operation.--The student will be able to:	
04.01	Explain the basic principles in the operation of the four-stroke-cycle diesel engine	
04.02	Identify engine assemblies and systems.	
04.03	Identify the components of and explain the operating principles of two and four-stroke cycle engines.	
04.04	Identify governor types and their operating principles.	
05.0	Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.--The student will be able to:	
05.01	Identify information needed and the service requested on a repair order.	ASE
05.02	Identify purpose and demonstrate proper use of fender covers, mats.	ASE
05.03	Demonstrate use of the three C's (Concern, Cause, and Correction).	ASE
05.04	Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction.	ASE
05.05	Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.)	ASE
06.0	Demonstrate workplace employability skills related to personal standards and work habits/ethics.--The student will be able to:	

CTE Standards and Benchmarks	Priority Number
06.01 Reports to work daily on time; able to take directions and motivated to accomplish the task at hand.	ASE
06.02 Dresses appropriately and uses language and manners suitable for the workplace.	ASE
06.03 Maintains appropriate personal hygiene.	ASE
06.04 Meets and maintains employment eligibility criteria, such as drug/alcohol-free status, clean driving record, etc.	ASE
06.05 Demonstrates honesty, integrity and reliability.	ASE
06.06 Complies with workplace policies/laws	ASE
06.07 Contributes to the success of the team, assists others and requests help when needed.	ASE
06.08 Works well with all customers and coworkers.	ASE
06.09 Negotiates solutions to interpersonal and workplace conflicts.	ASE
06.10 Contributes ideas and initiative.	ASE
06.11 Follows directions.	ASE
06.12 Communicates (written and verbal) effectively with customers and coworkers.	ASE
06.13 Reads and interprets workplace documents; writes clearly and concisely.	ASE
06.14 Analyzes and resolves problems that arise in completing assigned tasks.	ASE
06.15 Organizes and implements a productive plan of work.	ASE
06.16 Uses scientific, technical, engineering and mathematics principles and reasoning to accomplish assigned tasks.	ASE
06.17 Identifies and address the needs of all customers, providing helpful, courteous and knowledgeable service and advice as needed.	ASE

**Florida Department of Education
Student Performance Standards**

Course Number: DIM0102
Occupational Completion Point: B
Diesel Electrical and Electronics Technician – 300 Hours – SOC Code 49-3031

Course Description:

The Diesel Electrical and Electronics Technician course prepares students for entry into the Diesel Engine Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study general electrical systems, batteries, starting, charging, lighting, gauges, warning devices, and related electrical system diagnostics, service, and repair.

For every task in Diesel Electrical and Electronics Technician, the following safety task must be strictly enforced:

Comply with personal and environmental safety practices associated with clothing; eye protection; hand protection; proper lifting practices; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of fuels/chemicals/materials in accordance with federal, state, and local regulations.

The first task in Diesel Electrical and Electronics Technician is to listen to and verify the operator’s concern, review past maintenance and repair documents, and determine necessary action.

EE Task List:	
	P-1 = 38
	P-2 = 15
	P-3 = 12
Total	65

CTE Standards and Benchmarks		Priority Number
07.0	Diagnose and repair general electrical systems.--The student will be able to:	
07.01	Read and interpret electrical/electronic circuits using wiring diagrams.	P-1
07.02	Check continuity in electrical/electronic circuits using appropriate test equipment.	P-1
07.03	Check applied voltages, circuit voltages, and voltage drops in electrical/electronic circuits using appropriate test equipment.	P-1
07.04	Check current flow in electrical/electronic circuits and components using appropriate test equipment.	P-1
07.05	Check resistance in electrical/electronic circuits and components using appropriate test equipment.	P-1
07.06	Locate shorts, grounds, and opens in electrical/electronic circuits.	P-1
07.07	Diagnose parasitic (key-off) battery drain problems; perform tests; determine needed action.	P-1
07.08	Inspect and test fusible links, circuit breakers, relays, solenoids, and fuses; replace as needed.	P-1
07.09	Inspect and test spike suppression devices; replace as needed.	P-3
07.10	Check frequency and pulse width signal in electrical/electronic circuits using appropriate test equipment.	P-3

CTE Standards and Benchmarks		Priority Number
08.0	Diagnose and repair battery systems.--The student will be able to:	
08.01	Identify battery type; perform appropriate battery load test; determine needed action.	P-1
08.02	Determine battery state of charge using an open circuit voltage test.	P-1
08.03	Inspect, clean, and service battery; replace as needed.	P-1
08.04	Inspect and clean battery boxes, mounts, and hold downs; repair or replace as needed.	P-1
08.05	Charge battery using appropriate method for battery type.	P-1
08.06	Inspect, test, and clean battery cables and connectors; repair or replace as needed.	P-1
08.07	Jump start a vehicle using jumper cables and a booster battery or auxiliary power supply using proper safety procedures.	P-1
08.08	Perform battery capacitance test; determine needed action.	P-2
08.09	Identify and test low voltage disconnect (LVD) systems; determine needed repair.	P-2
09.0	Diagnose and repair starting systems.--The student will be able to:	
09.01	Perform starter circuit cranking voltage and voltage drop tests; determine needed action.	P-1
09.02	Inspect and test components (key switch, push button and/or magnetic switch) and wires and harnesses in the starter control circuit; replace as needed	P-2
09.03	Inspect and test starter relays and solenoids/switches; replace as needed.	P-1
09.04	Remove and replace starter; inspect flywheel ring gear or flex plate.	P-1
10.0	Diagnose and repair charging systems.--The student will be able to:	
10.01	Test instrument panel mounted volt meters and/or indicator lamps; determine needed action.	P-1
10.02	Identify causes of a no charge, low charge, or overcharge problems; determine needed action.	P-1
10.03	Inspect and replace alternator drive belts, pulleys, fans, tensioners, and mounting brackets; adjust drive belts and check alignment.	P-1
10.04	Perform charging system voltage and amperage output tests; perform AC ripple test; determine needed action.	P-1
10.05	Perform charging circuit voltage drop tests; determine needed action.	P-1
10.06	Remove and replace alternator.	P-1
10.07	Inspect, repair, or replace cables, wires, and connectors in the charging circuit.	P-1
11.0	Diagnose and repair lighting systems.--The student will be able to:	
11.01	Interface with vehicle's on-board computer; perform diagnostic procedures using recommended electronic service tool(s) (including PC based software and/or data scan tools); determine needed action.	P-1

CTE Standards and Benchmarks		Priority Number
11.02	Identify causes of brighter than normal, intermittent, dim, or no headlight and daytime running light (DRL) operation.	P-1
11.03	Test, aim, and replace headlights.	P-1
11.04	Test headlight and dimmer circuit switches, relays, wires, terminals, connectors, sockets, and control components/modules; repair or replace as needed.	P-1
11.05	Inspect and test switches, bulbs/LEDs, sockets, connectors, terminals, relays, and control components/modules of parking, clearance, and taillight circuits; repair or replace as needed.	P-1
11.06	Inspect and test instrument panel light circuit switches, relays, bulbs/LEDs, sockets, connectors, terminals, wires, and printed circuits/control modules; repair or replace as needed.	P-2
11.07	Inspect and test interior cab light circuit switches, bulbs/LEDs, sockets, low voltage disconnect (LVD), connectors, terminals, wires, and control components/modules; repair or replace as needed.	P-2
11.08	Inspect and test tractor-to-trailer multi-wire connector(s); repair or replace as needed.	P-1
11.09	Inspect, test, and adjust stoplight circuit switches, bulbs/LEDs, sockets, connectors, terminals, wires and control components/modules; repair or replace as needed.	P-1
11.10	Inspect and test turn signal and hazard circuit flasher(s), switches, relays, bulbs/LEDs, sockets, connectors, terminals, wires and control components/modules; repair or replace as needed.	P-1
11.11	Inspect and test reverse lights and warning device circuit switches, bulbs/LEDs, sockets, horns, buzzers, connectors, terminals, wires and control components/modules; repair or replace as needed.	P-1
12.0	Diagnose and repair gauges and warning devices.--The student will be able to:	
12.01	Interface with vehicle's on-board computer; perform diagnostic procedure, verify instrument cluster operations using recommended electronic service tool(s) (including PC based software and/or data scan tools); determine needed action.	P-1
12.02	Identify causes of intermittent, high, low, or no gauge readings; determine needed action.	P-2
12.03	Identify causes of data bus-driven gauge malfunctions; determine needed action.	P-3
12.04	Inspect and test gauge circuit sensor/sending units, gauges, connectors, terminals, and wires; repair or replace as needed.	P-2
12.05	Inspect and test warning devices (lights and audible) circuit sensor/sending units, bulbs/LEDs, sockets, connectors, wires, and control components/modules; repair or replace as needed.	P-1
12.06	Inspect, test, replace, and calibrate (if applicable) electronic speedometer, odometer, and tachometer systems.	P-2
13.0	Diagnose and repair related electrical systems.--The student will be able to:	
13.01	Interface with vehicle's on-board computer; perform diagnostic procedures using recommended electronic service tool(s) (including PC based software and/or data scan tools); determine needed action.	P-1
13.02	Identify causes of constant, intermittent, or no horn operation; determine needed action.	P-1
13.03	Inspect and test horn circuit relays, horns, switches, connectors, wires, clock springs, and control	P-2

CTE Standards and Benchmarks	Priority Number
components/modules; repair or replace as needed.	
13.04 Identify causes of constant, intermittent, or no wiper operation; diagnose the cause of wiper speed control and/or park problems; determine needed action.	P-2
13.05 Inspect and test wiper motor, resistors, park switch, relays, switches, connectors, wires and control components/modules; repair or replace as needed.	P-2
13.06 Inspect wiper motor transmission linkage, arms, and blades; adjust or replace as needed.	P-2
13.07 Inspect and test windshield washer motor or pump/relay assembly, switches, connectors, terminals, wires, and control components/modules; repair or replace as needed.	P-3
13.08 Inspect and test side view mirror motors, heater circuit grids, relays, switches, connectors, terminals, wires, and control components/modules; repair or replace as needed.	P-3
13.09 Inspect and test heater and A/C electrical components including: A/C clutches, motors, resistors, relays, switches, connectors, terminals, wires, and control components/modules; repair or replace as needed.	P-3
13.10 Inspect and test auxiliary power outlet, integral fuse, connectors, terminals, wires, and control components/modules; repair or replace as needed.	P-3
13.11 Identify causes of slow, intermittent, or no power window operation; determine needed action.	P-3
13.12 Inspect and test motors, switches, relays, connectors, terminals, wires, and control components/modules of power window circuits; repair or replace as needed.	P-3
13.13 Inspect and test block heaters; determine needed repairs.	P-2
13.14 Inspect and test cruise control electrical components; repair or replace as needed.	P-3
13.15 Inspect and test switches, relays, controllers, actuator/solenoids, connectors, terminals, and wires of electric door lock circuits.	P-3
13.16 Inspect and test engine cooling fan electrical control components/modules, wiring; repair or replace as needed.	P-2
13.17 Identify causes of data bus communication problems; determine needed action.	P-2

**Florida Department of Education
Student Performance Standards**

Course Number: DIM0104
Occupational Completion Point: C
Diesel Engine Technician – 300 Hours – SOC Code 49-3031

Course Description:

The Diesel Engine Technician course prepares students for entry into the Diesel Engine Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study engine, cylinder head, valve train, engine block, lubrication, cooling, air induction, exhaust, fuel, and engine brakes diagnostics, service, and repair.

For every task in Diesel Engine Technician, the following safety task must be strictly enforced:

Comply with personal and environmental safety practices associated with clothing; eye protection; hand protection; proper lifting practices; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of fuels/chemicals/materials in accordance with federal, state, and local regulations.

The first task in Diesel Engine Technician is to listen to and verify the operator’s concern, review past maintenance and repair documents, and determine necessary action.

DE Task List:	
	P-1 = 35
	P-2 = 32
	P-3 = 21
Total	88

CTE Standards and Benchmarks		Priority Number
14.0	General engine diagnosis and repair.--The student will be able to:	
14.01	Inspect fuel, oil, Diesel Exhaust Fluid (DEF), coolant levels, and condition; determine needed action.	P-1
14.02	Identify and diagnose the causes of engine fuel, oil, coolant, air, and other leaks; determine needed action.	P-1
14.03	Listen and interpret engine noises; determine needed action.	P-3
14.04	Observe engine exhaust smoke color and quantity; determine needed action.	P-2
14.05	Check and diagnose no cranking, cranks but fails to start, hard starting, and starts but does not continue to run problems; determine needed action.	P-1
14.06	Identify and diagnose causes of engine surging, rough operation, misfiring, low power, slow deceleration, slow acceleration, and shutdown problems; determine needed action.	P-1
14.07	Identify and diagnose engine vibration problems; determine needed action.	P-2
14.08	Check, record, and clear electronic diagnostic (fault) codes; monitor electronic data; determine needed action.	P-1
14.09	Perform air intake system restriction and leakage tests; determine needed action.	
14.10	Perform intake manifold pressure (boost) test; determine needed action.	

CTE Standards and Benchmarks	Priority Number
14.11 Perform exhaust pressure test; determine needed action for DPF.	
14.12 Perform cylinder contribution test; determine needed action.	
15.0 Cylinder head and valve train diagnosis and repair.--The student will be able to:	
15.01 Inspect cylinder head for cracks/damage; check mating surfaces for warpage; check condition of passages; inspect core/expansion and gallery plugs; determine needed action.	P-2
15.02 Disassemble head and inspect valves, guides, seats, springs, retainers, rotators, locks, and seals; determine needed action.	P-3
15.03 Measure valve head height relative to deck, valve face-to-seat contact; determine needed action.	P-3
15.04 Inspect valve train components; determine needed action.	P-1
15.05 Reassemble cylinder head.	P-3
15.06 Inspect, measure, and replace/reinstall overhead camshaft; measure/adjust end play and backlash.	P-3
15.07 Inspect electronic wiring harness and brackets for wear, bending, cracks, and looseness; determine needed action.	P-1
15.08 Inspect and adjust valve bridges (crossheads); adjust valve clearances and injector settings.	P-2
15.09 Remove, clean, inspect for visible damage, and replace cylinder head(s) assembly.	
15.10 Clean and inspect threaded holes, studs, and bolts for serviceability; determine needed action.	
15.11 Inspect pushrods, rocker arms, rocker arm shafts, and blocked oil passages; perform needed action.	
15.12 Inspect cam followers; perform needed action.	
16.0 Engine block diagnosis and repair.--The student will be able to:	
16.01 Perform crankcase pressure test; determine needed action	P-1
16.02 Remove, inspect, service, and install pans, covers, gaskets, seals, wear rings, and crankcase ventilation components.	P-2
16.03 Disassemble, clean, and inspect engine block for cracks/damage; measure mating surfaces for warpage; check condition of passages, core/expansion and gallery plugs; inspect threaded holes, studs, dowel pins, and bolts for serviceability; determine needed action.	P-2
16.04 Inspect cylinder sleeve counter bore and lower bore; check bore distortion; determine needed action.	P-2
16.05 Clean, inspect, and measure cylinder walls or liners for wear and damage; determine needed action.	P-2
16.06 Replace/reinstall cylinder liners and seals; check and adjust liner height (protrusion).	P-2
16.07 Inspect in-block camshaft bearings for wear and damage; determine needed action.	P-3
16.08 Clean and inspect crankshaft for surface cracks and journal damage; check condition of oil passages; check passage plugs; measure journal diameter; determine needed action.	P-2

CTE Standards and Benchmarks		Priority Number
16.09	Inspect main bearings for wear patterns and damage; replace as needed; check bearing clearances; check and correct crankshaft end play.	P-2
16.10	Inspect, install, and time gear train; measure gear backlash; determine needed action.	P-2
16.11	Inspect connecting rod and bearings for wear patterns; measure pistons, pins, retainers, and bushings; perform needed action.	P-3
16.12	Determine piston-to-cylinder wall clearance; check ring-to-groove fit and end gap; install rings on pistons.	P-3
16.13	Assemble pistons and connecting rods; install in block; install rod bearings and check clearances.	P-2
16.14	Check condition of piston cooling jets (nozzles); determine needed action.	P-2
16.15	Inspect and measure crankshaft vibration damper; determine needed action.	P-3
16.16	Install and align flywheel housing; inspect flywheel housing(s) to transmission housing/engine mating surface(s) and measure flywheel housing face and bore runout; determine needed action.	P-3
16.17	Inspect flywheel/flex-plate (including ring gear) and mounting surfaces for cracks and wear; measure runout; determine needed action.	P-2
17.0	Lubrication systems diagnosis and repair.--The student will be able to:	
17.01	Test engine oil pressure and check operation of pressure sensor, gauge, and/or sending unit, test engine oil temperature and check operation of temperature sensor; determine needed action.	P-1
17.02	Check engine oil level, condition, and consumption; determine needed action.	P-1
17.03	Inspect and measure oil pump, drives, inlet pipes, and pick-up screens; check drive gear clearances; determine needed action.	P-3
17.04	Inspect oil pressure regulator valve(s), by-pass and pressure relief valve(s), oil thermostat, and filters; determine needed action.	P-3
17.05	Inspect, clean, and test oil cooler and components; determine needed action.	P-3
17.06	Inspect turbocharger lubrication system; determine needed action.	P-2
17.07	Determine proper lubricant and perform oil and filter change.	P-1
18.0	Cooling system diagnosis and repair.--The student will be able to:	
18.01	Check engine coolant type, level, condition, and consumption; test coolant for freeze protection and additive package concentration; determine needed action.	P-1
18.02	Test coolant temperature and check operation of temperature and level sensors, gauge, and/or sending unit; determine needed action.	P-1
18.03	Inspect thermostat(s), by-passes, housing(s), and seals; replace as needed.	P-2
18.04	Recover coolant, flush, and refill with recommended coolant/additive package; bleed cooling system.	P-1
18.05	Inspect coolant conditioner/filter assembly for leaks; inspect valves, lines, and fittings; replace as needed (if equipped).	P-1

CTE Standards and Benchmarks		Priority Number
18.06	Inspect water pump and hoses; replace as needed.	P-1
18.07	Inspect, clean, and pressure test radiator. Pressure test cap, tank(s), and recovery systems; determine needed action.	P-1
18.08	Inspect thermostatic cooling fan system (hydraulic, pneumatic, and electronic) and fan shroud; replace as needed.	P-1
18.09	Inspect turbo charger cooling systems; determine needed action.	P-2
19.0	Air induction and exhaust systems diagnosis and repair.--The student will be able to:	
19.01	Perform air intake system restriction and leakage test; determine needed action.	P-1
19.02	Perform intake manifold pressure (boost) test; determine needed action.	P-3
19.03	Check exhaust back pressure; determine needed action.	P-3
19.04	Inspect turbocharger(s), wastegate, and piping systems; determine needed action.	P-2
19.05	Inspect turbocharger(s) (variable ratio/geometry VGT), pneumatic, hydraulic, electronic controls, and actuators.	P-2
19.06	Check air induction system: piping, hoses, clamps, and mounting; service or replace air filter as needed.	P-1
19.07	Inspect intake manifold, gaskets, and connections; replace as needed.	P-3
19.08	Inspect, clean, and test charge air cooler assemblies; replace as needed.	P-2
19.09	Inspect exhaust manifold, piping, mufflers, and mounting hardware; repair or replace as needed.	P-2
19.10	Inspect exhaust after treatment devices; determine necessary action.	P-2
19.11	Inspect and test preheater/inlet air heater, or glow plug system and controls; perform needed action.	P-2
19.12	Inspect exhaust gas recirculation (EGR) system including EGR valve, cooler, piping, filter, electronic sensors, controls, and wiring; determine needed action.	P-2
20.0	Fuel system diagnosis and repair.--The student will be able to:	
20.01	Fuel supply system	
20.01.1	Check fuel level, and condition; determine needed action.	P-1
20.01.2	Inspect fuel tanks, vents, caps, mounts, valves, screens, crossover system, supply and return lines and fittings; determine needed action.	P-1
20.01.3	Inspect, clean, and test fuel transfer (lift) pump, pump drives, screens, fuel/water separators/indicators, filters, heaters, coolers, ECM cooling plates, and mounting hardware; determine needed action.	P-1
20.01.4	Inspect and test pressure regulator systems (check valves, pressure regulator valves, and	P-1

CTE Standards and Benchmarks		Priority Number
	restrictive fittings); determine needed action.	
20.01.5	Check fuel system for air; determine needed action; prime and bleed fuel system; check primer pump.	P-1
20.02	Electronic fuel management system	
20.02.1	Interface with vehicle's on-board computer; perform diagnostic procedures using electronic service tool(s) (to include PC based software and/or data scan tools); determine needed action.	P-1
20.02.2	Check and record electronic diagnostic codes and trip/operational data; monitor electronic data; clear codes; determine further diagnosis.	P-1
20.02.3	Locate and use relevant service information (to include diagnostic procedures, flow charts, and wiring diagrams).	P-1
20.02.4	Inspect and replace electrical connector terminals, seals, and locks.	P-1
20.02.5	Inspect and test switches, sensors, controls, actuator components, and circuits; adjust or replace as needed.	P-1
20.02.6	Using electronic service tool(s) access and interpret customer programmable parameters.	P-1
20.02.7	Perform on-engine inspections, test and adjustments on electronic unit injectors (EUI); determine needed action	P-2
20.02.8	Remove and install electronic unit injectors (EUI) and related components; recalibrate ECM (if applicable).	P-2
20.02.9	Perform cylinder contribution test utilizing electronic service tool(s).	P-1
20.02.10	Perform on-engine inspections and tests on hydraulic electronic unit injectors (HEUI) and system electronic controls; determine needed action.	P-2
20.02.11	Perform on-engine inspections and tests on hydraulic electronic unit injector (HEUI) high pressure oil supply and control systems; determine needed action.	P-2
20.02.12	Perform on-engine inspections and tests on high pressure common rail (HPCR) type injection systems; determine needed action.	P-2
20.02.13	Inspect high pressure injection lines, hold downs, fittings and seals; determine needed action.	P-2
21.0	Diagnose and repair engine brakes.--The student will be able to:	
21.01	Inspect and adjust engine compression/exhaust brakes; determine needed action.	P-2
21.02	Inspect, test, and adjust engine compression/exhaust brake control circuits, switches, and solenoids; determine needed action.	P-3
21.03	Inspect engine compression/exhaust brake housing, valves, seals, lines, and fittings; repair or replace as needed.	P-3

Florida Department of Education
Student Performance Standards

Course Number: DIM0105
Occupational Completion Point: D
Diesel Brakes Technician – 300 Hours – SOC Code 49-3031

Course Description:

The Diesel Brakes Technician course prepares students for entry into the Diesel Engine Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study diagnostic, service, and repair of air, and hydraulic brakes.

For every task in Diesel Brakes Technician, the following safety task must be strictly enforced:

Comply with personal and environmental safety practices associated with clothing; eye protection; hand protection; proper lifting practices; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of fuels/chemicals/materials in accordance with federal, state, and local regulations.

The first task in Diesel Brakes Technician is to listen to and verify the operator’s concern, review past maintenance and repair documents, and determine necessary action.

BR Task List:	
P-1 =	39
P-2 =	9
P-3 =	7
Total	55

CTE Standards and Benchmarks		Priority Number
22.0	Diagnose and repair air supply and service systems.--The student will be able to:	
22.01	Identify and diagnose poor stopping, air leaks, premature wear, pulling, grabbing, dragging, or balance problems caused by supply and service system malfunctions; determine needed action.	P-1
22.02	Check air system build-up time; determine needed action.	P-1
22.03	Drain air reservoir/tanks; check for oil, water, and foreign material; determine needed action.	P-1
22.04	Inspect air compressor inlet; inspect oil supply and coolant lines, fittings, and mounting brackets; repair or replace as needed.	P-1
22.05	Inspect and test air system pressure controls: governor, unloader assembly valves, filters, lines, hoses, and fittings; replace as needed.	P-1
22.06	Inspect air system lines, hoses, fittings, and couplings; repair or replace as needed.	P-1
22.07	Inspect and test air tank relief (safety) valves, one-way (single) check valves, two-way (double) check-valves, manual and automatic drain valves; replace as needed.	P-1
22.08	Inspect and clean air drier systems, filters, valves, heaters, wiring, and connectors; repair or replace as needed.	P-1
22.09	Inspect and test brake application (foot/treadle) valve, fittings, and mounts; check pedal operation; replace	P-1

CTE Standards and Benchmarks		Priority Number
	as needed.	
22.10	Inspect and test stop light circuit switches, wiring, and connectors; repair or replace as needed.	P-1
22.11	Inspect and test hand brake (trailer) control valve, lines, fittings, and mountings; repair or replace as needed.	P-1
22.12	Inspect and test brake relay valve; replace as needed.	P-1
22.13	Inspect and test quick release valves; replace as needed.	P-1
22.14	Inspect and test tractor protection valve; replace as needed.	P-1
22.15	Inspect and test emergency (spring) brake control/modulator valve(s); replace as needed. (as applicable)	P-1
22.16	Inspect and test low pressure warning devices, wiring, and connectors; repair or replace as needed.	P-1
22.17	Inspect and test air pressure gauges, lines, and fittings; replace as needed.	P-2
23.0	Diagnose and repair mechanical/foundation air brake systems.--The student will be able to:	
23.01	Identify and diagnose poor stopping, brake noise, premature wear, pulling, grabbing, or dragging problems caused by the foundation brake, slack adjuster, and brake chamber problems; determine needed action.	P-1
23.02	Inspect and test service brake chambers, diaphragm, clamp, spring, pushrod, clevis, and mounting brackets; repair or replace as needed.	P-1
23.03	Identify type, inspect and service slack adjusters; perform needed action.	P-1
23.04	Inspect camshafts, tubes, rollers, bushings, seals, spacers, retainers, brake spiders, shields, anchor pins, and springs; replace as needed.	P-1
23.05	Inspect, clean, and adjust air disc brake caliper assemblies; determine needed repairs.	P-2
23.06	Inspect and measure brake shoes or pads; perform needed action.	P-1
23.07	Inspect and measure brake drums or rotors; perform needed action.	P-1
24.0	Diagnose and repair parking brakes.--The student will be able to:	
24.01	Inspect and test parking (spring) brake chamber diaphragm and seals; replace parking (spring) brake chamber; dispose of removed chambers in accordance with local regulations.	P-1
24.02	Inspect and test parking (spring) brake check valves, lines, hoses, and fittings; replace as needed.	P-1
24.03	Inspect and test parking (spring) brake application and release valve; replace as needed.	P-1
24.04	Manually release (cage) and reset (uncage) parking (spring) brakes in accordance with manufacturers' recommendations.	P-1
24.05	Identify and test anti compounding brake function.	P-1
25.0	Diagnose and repair hydraulic systems.--The student will be able to:	
25.01	Identify and diagnose poor stopping, premature wear, pulling, dragging, balance, or pedal feel problems	P-2

CTE Standards and Benchmarks		Priority Number
	caused by the hydraulic system; determine needed action.	
25.02	Inspect and test master cylinder for internal/external leaks and damage; replace as needed.	P-1
25.03	Inspect hydraulic system brake lines for leaks and damage, flexible hoses, and fittings for leaks and damage; replace as needed.	P-1
25.04	Inspect and test metering (hold-off), load sensing/proportioning, proportioning, and combination valves; replace as needed.	P-3
25.05	Inspect and test brake pressure differential valve and warning light circuit switch, bulbs/LEDs, wiring, and connectors; repair or replace as needed.	P-2
25.06	Inspect disc brake caliper assemblies; replace as needed.	P-1
25.07	Inspect/test brake fluid; bleed and/or flush system; determine proper fluid type.	P-1
25.08	Inspect and clean wheel cylinders; replace as needed.	
25.09	Test and adjust brake stop light switch, bulbs, wiring, and connectors; repair or replace as needed.	
26.0	Diagnose and repair mechanical/foundation hydraulic brake systems.--The student will be able to:	
26.01	Identify and diagnose poor stopping, brake noise, premature wear, pulling, grabbing, dragging, or pedal feel problems caused by mechanical components; determine needed action.	P-2
26.02	Inspect and measure rotors; perform needed action.	P-1
26.03	Inspect and measure disc brake pads; inspect mounting hardware; perform needed action.	P-1
26.04	Check parking brake operation; inspect parking brake application and holding devices; adjust and replace as needed.	P-2
26.05	Inspect and measure drum brake shoes and linings; inspect mounting hardware, adjuster mechanisms, and backing plates; perform needed action.	
27.0	Diagnose and repair power assist units.--The student will be able to:	
27.01	Identify and diagnose stopping problems caused by the brake assist (booster) system; determine needed action.	P-3
27.02	Inspect, test, repair, or replace hydraulic brake assist (booster), hoses, and control valves; determine proper fluid type.	P-3
27.03	Check emergency (back-up, reserve) brake assist system.	P-3
28.0	Diagnose and repair air and hydraulic antilock brake systems (ABS) and automatic traction control (ATC).--The student will be able to:	
28.01	Observe antilock brake system (ABS) warning light operation (includes trailer and dash mounted ABS warning light); determine needed action.	P-1
28.02	Diagnose antilock brake system (ABS) electronic control(s) and components using self-diagnosis and/or electronic service tool(s); determine needed action.	P-1

CTE Standards and Benchmarks		Priority Number
28.03	Identify poor stopping and wheel lock-up caused by failure of the antilock brake system (ABS); determine needed action.	P-1
28.04	Test and check operation of antilock brake system (ABS) air, hydraulic, electrical, and mechanical components; perform needed action.	P-1
28.05	Test antilock brake system (ABS) wheel speed sensors and circuits; adjust or replace as needed.	P-1
28.06	Bleed the ABS hydraulic circuits according to manufacturers' procedures.	P-2
28.07	Observe automatic traction control (ATC) warning light operation; determine needed action.	P-3
28.08	Diagnose automatic traction control (ATC) electronic control(s) and components using self-diagnosis and/or specified test equipment (scan tool, PC computer); determine needed action.	P-3
28.09	Verify power line carrier (PLC) operations.	P-2
28.10	Diagnose, service, and adjust antilock brake system (ABS) wheel speed sensors and circuits following manufacturers' recommended procedures (including voltage output, resistance, shorts to voltage/ground, and frequency data).	
29.0	Diagnose and repair wheel bearings.--The student will be able to:	
29.01	Clean, inspect, lubricate and replace wheel bearings and races/cups; replace seals and wear rings; inspect spindle/tube; inspect and replace retaining hardware; adjust wheel bearings. Verify end play with dial indicator method.	P-1
29.02	Identify, inspect or replace unitized/preset hub bearing assemblies.	P-2

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Benchmarks identified with a designation of P-1, P-2, or P-3 are ASE tasks.

The safety guidelines in the student performance standards have been recommended in the ASE Program Certification Standards for Medium/Heavy Truck Technician Training Program administered by Automotive Service Excellence (ASE) Education Foundation.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student. Access MyCareerShines by visiting: www.mycareershines.org.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In a Career Certificate Program offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9.0, Language 9.0, and Reading 9.0. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary 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 provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml>