VENTURA COLLEGE

# Diesel Mechanics

# ADVISORY COUNCIL

## April 14, 2022

For more information:
805.289.6430
www.venturacollege.edu/careered

Ventura College

VENTURA COLLEGE CAREER EDUCATION

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# Program History & Vision


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# What is a Program Advisory Council?

- A group of individuals who represent a cross-section of an occupational area
- Serves a key role in assisting career and technical education programs to remain dynamic and in touch with its community and industry partners
- Business and labor representation should comprise the majority of the membership

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# Federal Mandate

Federal

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins) is the federal legislation that funds career and technical education (CTE) nationwide. It was most recently reauthorized in 2019 as the Strengthening Career and Technical Education Act for the 21st Century (Perkins V).

CTE programs receiving federal funding through Perkins must "have extensive business and industry involvement, as evidenced by not less than one annual business and industry advisory committee meeting" (Section 135(b) of Perkins).

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# State Mandate

California Code of Regulations
Title 5. Education
Division 6. California Community Colleges

*§55601*: Appointment of Vocational Education Advisory Committee

*The governing board of each community college district participating in a vocational education program shall appoint a vocational education advisory committee to develop recommendations on the program and to provide liaison between the district and potential employers.*

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# Role of Advisory Council

- Make recommendations, give advice, and provide input to keep programs current and prepare students for careers in the field
  - ✓ Skills, knowledge, competencies required for occupations
  - ✓ New industry standards and trends
  - ✓ New content, courses, programs based on labor market data
- It is NOT empowered to set policy
- Teaching methodologies are determined by college faculty

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# Duties of Advisory Members

- Make recommendations, give advice, and provide input to keep programs current and prepare students for careers in the field
  - ✓ New content, courses, programs based on labor market data
  - ✓ Skills, knowledge, competencies required for occupations
  - ✓ New industry standards and trends
- Assist in securing resources
  - ✓ Facilities, equipment, technology
  - ✓ Mentoring, field trips, guest speakers
  - ✓ Internships and employment for students and graduates
- Help identify qualified part-time faculty
- Help recruit new students
- Inform the public of services the college can provide

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# Review of Course Curriculum

Questions to Consider

- Are the student learning outcomes realistic?
- What skills do workers need in your field? Are we teaching the knowledge and skills that industry recognizes for entry-level employees in the field?
- Are there new content or courses that need to be added?
- Are there content or courses than no longer need to be required?
- Are there equipment/facilities that you can identify that would better prepare students to enter your field?
- What changes/trends are occurring that will affect employer needs?

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# DIESEL MECHANICS Associate in Science Degree

| REQUIRED COURSES: | | Units |
|---|---|---|
| DM V10 | Diesel Preventive Maintenance | 2 |
| DM V10L | Diesel Preventive Maintenance Laboratory | 1.5 |
| DM V12 | Diesel Electrical/Electronic Systems | 3 |
| DM V12L | Diesel Electrical/Electronic Systems Laboratory | 3 |
| DM V26 | Diesel Engines | 2 |
| DM V26L | Diesel Engines Laboratory | 3 |
| DM V28 | Diesel Fuel Management Systems | 2.5 |
| DM V28L | Diesel Fuel Management Systems Laboratory | 3 |
| DM V30 | Truck and Trailer Brake Systems | 2 |
| DM V30L | Truck and Trailer Brake Systems Laboratory | 1.5 |
| DM V34 | Truck Suspensions and Steering Systems | 2 |
| DM V34L | Truck Suspensions and Steering Systems Laboratory | 1.5 |
| DM V40 | Heating, Ventilation and Air Conditioning (HVAC) | 2 |
| DM V40L | Heating, Ventilation and Air Conditioning (HVAC) Laboratory | 1.5 |
| DM V42 | Hydraulic Systems | 2 |
| DM V42L | Hydraulic Systems Laboratory | 1 |
| DM V44 | Drivetrain - Medium and Heavy-Duty Vehicles | 2 |
| DM V44L | Drivetrain Laboratory - Medium and Heavy-Duty Vehicles | 1.5 |
| **TOTAL** | | **37** |

## PROGRAM STUDENT LEARNING OUTCOMES

Upon successful completion of the **Diesel Mechanics** program students will be able to:

- Demonstrate an understanding of operation, service and repair of medium and heavy duty vehicles.
- Analyze, diagnose and repair operational faults with medium and heavy duty vehicles.
- Perform maintenance inspection and maintenance service required of medium and heavy duty vehicles.

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# DIESEL ENGINE REPAIR Certificate of Achievement

| REQUIRED COURSES: | | Units |
|---|---|---|
| DM V10 | Diesel Preventive Maintenance | 2 |
| DM V10L | Diesel Preventive Maintenance Laboratory | 1.5 |
| DM V12 | Diesel Electrical/Electronic Systems | 3 |
| DM V12L | Diesel Electrical/Electronic Systems Laboratory | 3 |
| DM V26 | Diesel Engines | 2 |
| DM V26L | Diesel Engines Laboratory | 3 |
| DM V28 | Diesel Fuel Management Systems | 2.5 |
| DM V28L | Diesel Fuel Management Systems Laboratory | 3.0 |
| **TOTAL** | | **20** |

## PROGRAM STUDENT LEARNING OUTCOMES

Upon successful completion of the **Diesel Engine Repair** program students will be able to:

- Demonstrate an understanding of operation, service and repair of medium and heavy duty diesel engines and their associated systems.
- Analyze, diagnose and repair operational engine, fuel management and emission system faultswith medium and heavy duty vehicles.
- Perform maintenance, inspection, diagnosis and repair of diesel engines, fuel management and emission systems common on medium and heavy duty vehicles.

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# MEDIUM AND HEAVY DUTY VEHICLE REPAIR
## Certificate of Achievement

| REQUIRED COURSES: | | Units |
|---|---|---|
| DM V30 | Truck and Trailer Brake Systems | 2 |
| DM V30L | Truck and Trailer Brake Systems Laboratory | 1.5 |
| DM V34 | Truck Suspensions and Steering Systems | 2 |
| DM V34L | Truck Suspensions and Steering Systems Laboratory | 1.5 |
| DM V40 | Heating, Ventilation and Air Conditioning (HVAC) | 2 |
| DM V40L | Heating, Ventilation and Air Conditioning (HVAC) Laboratory | 1.5 |
| DM V42 | Hydraulic Systems | 2 |
| DM V42L | Hydraulic Systems Laboratory | 1 |
| DM V44 | Drivetrain - Medium and Heavy-Duty Vehicles | 2 |
| DM V44L | Drivetrain Laboratory - Medium and Heavy-Duty Vehicles | 1.5 |
| **TOTAL** | | **17** |

## PROGRAM STUDENT LEARNING OUTCOMES

Upon successful completion of the **Medium and Heavy Duty Vehicle Repair** program students will be able to:

- Demonstrate an understanding of operation, service and repair of medium and heavy duty diesel trucks, trailers and their associated systems.
- Analyze, diagnose and repair truck and trailer brake, suspension and hydraulic system faults with medium and heavy duty vehicles.
- Perform maintenance, inspection, diagnosis and repair of diesel truck and trailer brakes, suspensions, drivetrain, hydraulic and air conditioning systems commonly used on medium and heavy duty vehicles and associated equipment.

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# Course Offerings by Semester

| FALL | SPRING | SUMMER |
|---|---|---|
| DM V10/L<br>Diesel Preventive Maintenance | DM V26/L<br>Diesel Engines | DM V42/L<br>Hydraulic Systems |
| DM V12/L<br>Diesel Electrical / Electronic Systems | DM V28/L<br>Diesel Fuel Management Systems | |
| DM V30/L<br>Truck and Trailer Brake Systems | DM V40/L<br>Heating, Ventilation, and Air Conditioning (HVAC) | |
| DM V34/L<br>Truck Suspension and Steering Systems | DM V44/L<br>Drivetrain – Medium and Heavy-Duty Vehicles | |

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# Enrollment Data

| Course | Course Title | 2016-17 Enrollment | 2017-18 Enrollment | 2018-19 Enrollment | 2019-20 Enrollment | 2020-21 Enrollment | 2021-22 Enrollment |
|---|---|---|---|---|---|---|---|
| DM V10 | Diesel Preventive Maintenance | 20 | 22 | 20 | 24 | 18 | 19 |
| DM V10L | Diesel Maintenance Lab | 20 | 22 | 20 | 24 | 18 | 19 |
| DM V12 | Diesel Electrical Systems | 16 | 18 | 19 | 24 | 16 | 15 |
| DM V12L | Diesel Electrical Systems Lab | 16 | 18 | 19 | 24 | 16 | 15 |
| DM V26 | Diesel Engines | 21 | 16 | 17 | 23 | 11 | 14 |
| DM V26L | Diesel Engines Lab | 21 | 16 | 17 | 23 | 11 | 14 |
| DM V28 | Diesel Fuel Management | 22 | 15 | 14 | 22 | 11 | 13 |
| DM V28L | Diesel Fuel Management Lab | 22 | 15 | 14 | 22 | 11 | 13 |
| DM V30 | Truck Brake Systems | No Class | 18 | 19 | 19 | 22 | 10 |
| DM V30L | Truck Brake Lab | No Class | 18 | 19 | 19 | 23 | 10 |
| DM V34 | Truck Suspension and Steering | No Class | 17 | 15 | 21 | 17 | 8 |
| DM V34L | Truck Susp & Steering Lab | No Class | 17 | 15 | 20 | 17 | 8 |
| DM V40 | Heating, Vent, & AC (HVAC) | No Class | 18 | 22 | 24 | 5 | 12 |
| DM V40L | Heating and A/C Lab | No Class | 18 | 22 | 24 | 5 | 12 |
| DM V42 | Hydraulic Systems | No Class | 17 | 11 | 17 | 18 | Summer |
| DM V42L | Hydraulic Systems Lab | No Class | 17 | 11 | 17 | 18 | Summer |
| DM V44 | Drivetrain - Heavy-Duty | No Class | 16 | 14 | 22 | 16 | 12 |
| DM V44L | Drivetrain Lab - Heavy-Duty | No Class | 16 | 14 | 22 | 16 | 12 |
| | Average Enrollment | 19.8 | 17.4 | 16.8 | 21.7 | 14 | 12.9 |

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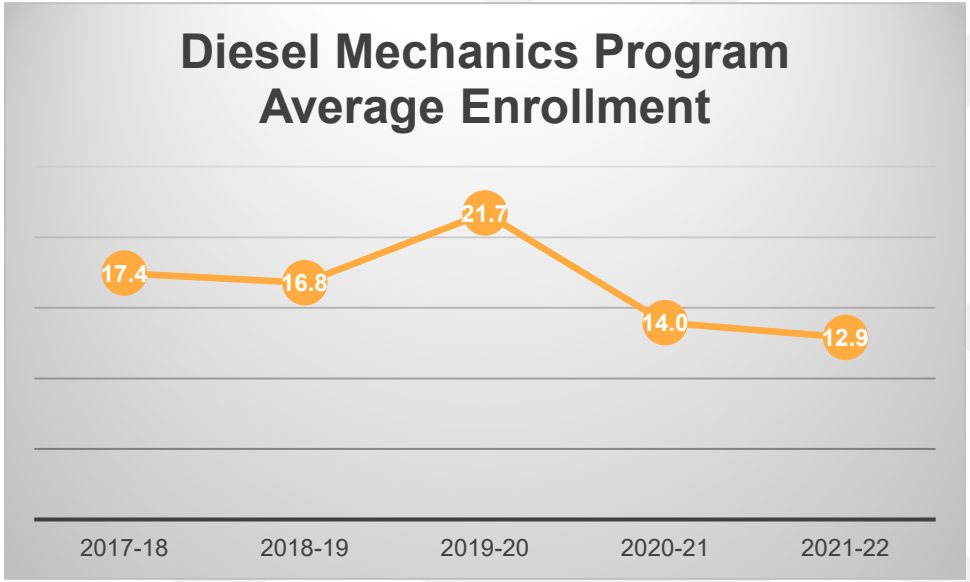
# Enrollment Data



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# Program Graduates

- **2018 – 11 Graduates**
  - 9 Working in industry
  - 1 Continuing education
  - 1 Not in industry
- **2019 – 9 Graduates**
  - 6 Working in industry
  - 1 Continuing education
  - 2 Not in industry
- **2020 – 14 Graduates**
  - 11 Working in industry
  - 2 Continuing education
  - 1 Not in industry
- **2021 – 13 Graduates**
  - 8 Working in industry
  - 1 Continuing education
  - 1 Military
  - 3 Not in industry

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# Program Needs

- Facilities
  - A shop large enough to expand the program and support industry needs
- Internships
  - Develop Internships that would allow students to gain experience during the winter and summer breaks
    - Current Internships with Gibbs Truck Center
  - Create Part-time positions that would allow students to work in the industry while completing their education
- Facility Tours

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# Recent Donations

- Book vouchers (student online bundles)
- Student scholarships
- Program endowment

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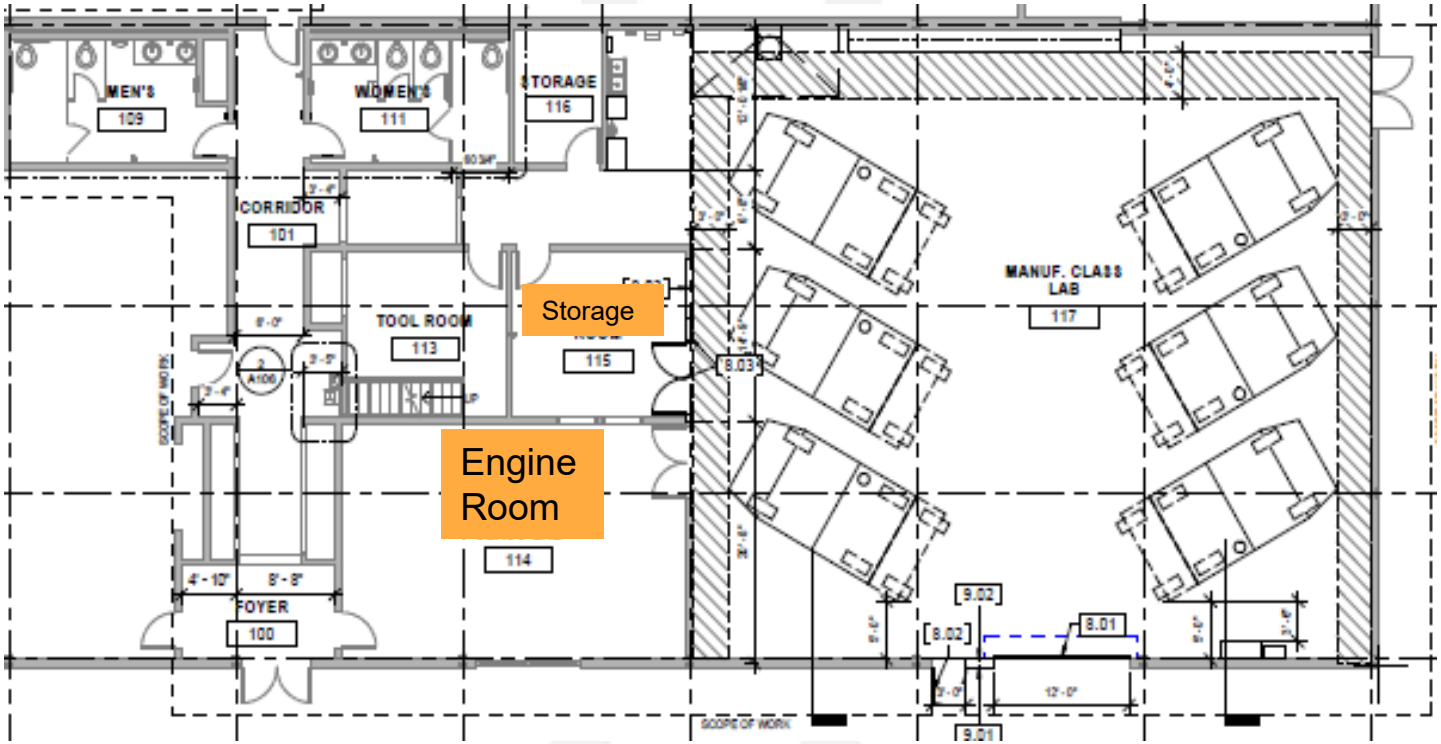
# Facilities Update



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# Next Advisory Meetings

| FALL | SPRING |
| --- | --- |
| Tuesday, November 15, 2022<br>4 – 5:30 pm | Thursday, April 20, 2023<br>4 – 5:30 pm |

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# THANK YOU

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