



MEDIUM & HEAVY TRUCK TECHNOLOGY Program Review 2003-2004

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ADVISORY COMMITTEE:

Jose Castro, San Antonio R.O.P.
Juan Castro, Metropolitan Transit
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Bill Cornett, Citrus College
Vic Cunnynggham, Cal-Rods/NHRA
Marti DeYoung, Citrus College
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Dennis Korn, Citrus College
Kent Lindow, Boulder Engineering
Charles Ross, California Resource Board
Don Scurti, Cal-Rods
Pat Talaska, SEMA
Michael Winters, Gabrielina H.S.

LIST OF DEGREES OFFERED:

Associate in Science in Applied Arts

LIST OF CERTIFICATES/AWARDS OFFERED:

Medium and Heavy Truck Repair

LIST OF SKILL AWARDS OFFERED:

Allison Transmissions
Detroit Diesel Engine DDEC I and II
Diesel Rebuilding: Caterpillar
Diesel Rebuilding: Cummins
Diesel Rebuilding: Detroit
Diesel Technician
Electronic Control Systems
Heavy Duty Brake Systems

PROGRAM DESCRIPTION

This program prepares student for entry-level work or promotions in the field of medium and heavy truck technology and diesel engine repair. Employment opportunities are maintenance technician, diesel mechanic, heavy equipment, industrial off-road, over-the-road, and stationary.

MISSION

RECOMMENDATIONS

- a. It is recommended that a change of program title to “Medium and Heavy Diesel Truck Technology” would make the program easier for students to find, for counselors to distinguish, and would still serve our needs within the industry.

COMMENDATIONS

- a. The Medium and Heavy Truck Technology Program trains and educates men and women to become technicians, service advisors, service writers, and other employees in the expanding diesel technology field. Preparing students for careers is part of the mission of the California Community Colleges as well as part of the Citrus College mission.
- b. Evening courses offer focused, advanced, specialized classes that are easily accessed by returning students for career advancement.

NEED

RECOMMENDATIONS

- a. New business partners will increase job placement for completing students.
- b. Students should be encouraged to visit the Job Placement office to receive help in resume writing, interviewing skills, and job placement.
- c. Modularization of block classes should be explored to reflect NATEF standards and to appeal to industry partners and contract education opportunities.

COMMENDATIONS:

- a. U.S. Department of Labor, Bureau of Labor Statistics, indicates that by the year 2012, 38,000 additional workers in the field of “bus and truck mechanics and diesel engine specialists” will be needed.
- b. Citrus College is participating in the formation of the Southern California Regional Transit Training (SCRTT). This consortium will link eleven Community Colleges for

diesel technology training with the major employers in the diesel transportation industry in southern California: Commerce Municipal Bus Lines, Culver City Municipal Bus Lines, Foothill Transit, Gardena Municipal Bus Lines, L.A. County Metropolitan Transit Authority, Long Beach Transit, Montebello Bus Lines, Norwalk Transit, Orange County Transit Authority, Omnitrans, Santa Clarita Transit, Santa Monica Municipal Bus Lines, Torrance Transit System.

- c. The three largest truck owner/operators in the United States have major facilities in southern California: The U.S. Army has over a million vehicles, most of which are diesel; the U.S. Postal service has over 800,000 vehicles, approximately half are diesel; United Parcel Service has approximately 250,000 vehicles, approximately half are diesel.
- d. The largest railroads in the U.S. have classification yards in the greater Los Angeles area: Union Pacific, Burlington, Santa Fe. All railroad locomotives are diesel powered.
- e. The Citrus College Medium and Heavy Truck Technology Program has partnered with the Air Resources Board of the California Environmental Protection Agency to provide testing and field support for emission testing.
- f. Faculty and Advisory Council members work together to place qualified students into jobs.
- g. Mr. Cornett has visited local truck dealers and truck terminals to recruit employees as students for career upgrades and employers as industry partners.
- h. New curriculum in Diesel and Gasoline Generator Technology was written in response to the energy issues in California.
- i. New curriculum was written for a survey of transportation technology to attract high school and ROP students.
- j. Substitute teachers are made available to cover classes when Mr. Cornett is recruiting at career fairs, though these events are usually attended in non-teaching hours.
- k. Citrus College offers truck and diesel engine repair exposure to elementary and middle school students in the College for Kids Program in the summer. Television, newspaper, and magazine articles on the College for Kids Program has brought significant positive attention to the Transportation Department at Citrus College
- l. Spring 2004 surveys indicate that 81% of enrolled students have a Medium and Heavy Truck Technology certificate as their educational goal, 56% want to obtain a degree, 10% hope to transfer, and 44% plan to go directly into a job from Citrus College.

QUALITY RECOMMENDATIONS

- a. Syllabi need strengthening and consistency within the program. The Director and faculty will address this.
- b. Customer Service Curriculum could provide additional skills for all transportation technology students.
- c. Completion of ASE requirements would meet the faculty component required for NATEF certification.
- d. Create Student Learning Outcome rubrics for skill attainment in basic classes to enhance job readiness and prepare students for advanced and specialized classes.
- e. Continue to recruit and retain females in the Medium and Heavy Truck Technology Program. Nontraditional enrollment, though increasing, has still not reached 25%.

- f. Advisory Council members recommended including Retrofitting into the entry-level classes.
- g. NATEF certification will be pursued for the Medium and Heavy Truck Technology program with the assistance of the Automotive faculty.
- h. It is recommended that the San Jose ROP, the only NATEF certified diesel program in California, be visited by faculty and the administrator.

COMMENDATIONS

- a. Mr. Cornett supplies and maintains a huge lab by himself. He has made the area visually attractive as well as functional, making it a favorite stop for campus tours.
- b. The Medium and Heavy Truck Technology Program hosts an annual Advisory Council meeting. Employers and other professionals review the curriculum, the program, and the student outcomes and provide input to meet industry standards. Advisory members also provide information about their labor market for our completing students.
- c. Students can complete the program in one year, qualified for entry-level work in the diesel technology field.
- d. The faculty team reflects the diversity of the Citrus student population with the exception that a qualified female instructor has not yet been identified.
- e. Faculty meet or exceed minimum qualifications.
- f. Class offerings always include the introductory or intermediate class. Specialized and advanced classes are offered in the evening on a rotating basis, taught by adjunct professors who are professionals in diesel technology.
- g. Student surveys indicate that instruction is very clear and very useful.
- h. An average of four females each semester enroll in Medium and Heavy Truck Technology.
- i. Mr. Cornett has made outstanding efforts to support the success of students with documented disabilities. An average of four students each semester are referred by the Department of Rehabilitation.
- j. Over the past three years, 29 skill awards have been issued to Medium and Heavy Truck Technology students, two A.S. degrees in Applied Arts with an emphasis on Medium and Heavy Truck Technology have been earned, and about 15 certificates are awarded annually.
- k. According to Core Indicator data, Citrus College diesel students are retained in employment at a higher rate (83.33%) than the state negotiated level of performance (82.75%).
- l. According to Core Indicator data, Citrus College diesel students complete their program at a higher rate (79.17%) than the state negotiated level of performance (59.82%).
- m. Mr. Cornett is to be commended for his high level of visibility in the community through career fairs, dealer contacts, media coverage, and other efforts.

FEASIBILITY

RECOMMENDATIONS

- a. Tech G, the building in which all of the Medium and Heavy Truck Technology classes and labs are held, lacks a proper air conditioning and heating system, which can make

learning challenging in the summer and winter. Temperature control in these rooms would provide a more appropriate learning environment.

- b. The Safety Coordinator will assist in the exploration of a classroom build out within the existing Tech G building.
- c. Off-campus sites with appropriate equipment could be arranged for instructional use in order to meet the NATEF requirement.
- d. Course outlines and offerings will be reviewed again during the NATEF certification process.
- e. The Safety Coordinator will work with Facilities, the faculty, and the Vocational Education Director regarding the feasibility of mounting a diesel engine to run inside of Tech G for instructional purposes.

COMMENDATIONS

- a. The Medium and Heavy Truck technology Program receives donated vehicles, engines, and diesel components from manufacturers and dealers as a result of Mr. Cornett's outreach efforts. These donations total hundreds of thousands of dollars each year.
- b. Revenue based on FTEs from this program continues to rise, though class offerings have been reduced.

COMPLIANCE

COMMENDATIONS

- a. Mr. Cornett works closely with the Safety Coordinator on campus to assure that the classroom, lab, and yard in the Medium and Heavy Truck Technology Program are a safe learning and working environment.

RECOMMENDATIONS

- a. NATEF certification would strengthen the program, distinguishing it from other diesel programs in California.