

NEW PROGRAM PROPOSAL: (Form NP)

Sponsoring Institution(s): Crowder College

Program Title: Diesel Technology

Degree/Certificate: Associate of Applied Science (**AAS**)

Options: N/A

Delivery Site(s): Crowder College, Neosho Campus

CIP Classification: 47.0605

Implementation Date: Fall 2011

Cooperative Partners: N/A

Expected Date of First Graduation: Spring 2013

AUTHORIZATION

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FORM SE: Student Enrollment Projections

NEED:

As addressed in Section C below, there continues to be a relatively high demand for mechanics trained in the repair of diesel engines and other related over-the-road truck components such as brakes, suspension systems, power trains, hydraulics, etc. Help wanted ads in area newspapers are consistently seeking qualified individuals for employment in this field. Industry contacts active in our advisory panels confirm the need in our region of the state for reliable and high quality diesel mechanic training. Crowder currently has an approved Diesel certificate program offering basic hands-on training but graduates are somewhat limited in future potential due the lack of required general education, computing, and/or business courses which they will obtain in the proposed AAS degree.

A. Student Demand:

- i. Estimated enrollment each year for the first five years for full-time and part-time students (Form SE)

STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	24	26	27	29	30
Part Time	6	6	6	8	8
FT equivalent (if PT students go HT)	27	29	30	33	34
Total	30	32	34	36	38

- ii. Will enrollment be capped in the future? No

B. Societal Need:

Discussion with area shop service managers and personal directors has led to the determination that the local area workforce pool lacks the skills, education and required credentials to work at most local truck repair shops. We have learned that it can be difficult to find qualified truck repair technicians as these positions require a highly educated, skilled and credentialed worker. Nationwide, truck repair facilities also report that their current workforce is aging, and they will have a greater need to replace retiring workers with highly educated and skilled workers. Truck technicians provide a service that is vital to the everyday living of all Americans.

C. Methodology used to determine “B” and “C” above.

Evaluation of industry need included online research of national and state reporting agencies, communication with area/local repair facilities and through the information of an advisory board.

DUPLICATION AND COLLABORATION: If similar programs currently exist in Missouri, what makes the proposed program necessary and/or distinct from the others at public institutions, area vocational technical schools, and private career schools?

Although other Diesel Technology programs exist at public institutions within the state, the nearest post-secondary program to Crowder’s Neosho campus is at Ozark Community Technical College (OTC) in Springfield, approximately 90 miles to the east. We believe that our proximity to both Joplin (25 miles to the north), a recognized trucking center, and to the currently booming northwest Arkansas economy (Wal-Mart’s international headquarters is located in Bentonville, only 43 miles to our south) gives us a unique opportunity to provide a service to both potential students and employers in our service area without creating any significant negative impact to other existing programs. In addition, it should be noted here that Crowder has already been offering similar training successfully for the past several years through our approved Ag Diesel AAS program and our Diesel Technology certificate. The essence of this request is to upgrade this existing 2-year certificate to full AAS status by the inclusion of the required general education courses.

Does delivery of the program involve a collaborative effort with any external institution or organization?

Yes, to the extent that all of our current classes in Diesel Technology meet the basic ASE/NATEF standards and we are on-track to seek certification from that body in the very near future.

D. Market Demand:

- i. National, state, regional or local assessment of labor need for citizens with these skills

Data from the most recent release by the Missouri Economic Research and Information Center (MERIC) presented in summary fashion below, indicates that the job demand from both a regional and statewide perspective are consistent with the number of graduates expected from the new Diesel Technology AAS program.

In addition, Joplin, Missouri, which is only 25 miles north of Crowder's Neosho campus has long been known as both national and regional trucking center with several major carriers having both operations and business offices located there. Many students in our existing Diesel certificate program are currently employed in this Joplin transportation market while pursuing additional Diesel courses at Crowder. It is anticipated that this new AAS program will be similarly received.

Missouri Economic Research and Information Center (MERIC) Data:				
Job Designation	Projected Openings for Diesel Technology Graduates			
	Total: 2008 - 2018		Annual Average	
	State-Wide	SW Region*	State-Wide	SW Region*
Bus and Truck Mechanics and Diesel Engine Specialists	1,354	109	135	11
Farm Equipment Mechanics	218	16	22	2
Mobile Heavy Equipment Mechanics, Except Engines	732	37	73	4
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	2,045	91	205	9
Totals	4,349	253	435	26

* - SW Region = Barry, Barton, Dade, Jasper, Lawrence, McDonald, and Newton counties

PROGRAM STRUCTURE (Form PS)

- A. Total credits required for graduation: 63 Credits
- B. Residency requirements, if any: Standard Crowder College requirements.
- C. General education: Total credits: 16 Credit Hours

Courses:

COLL 101 College Orientation		1 credit hour
English		6 credit hours
Choose from among:		
ENGL 100 Mechanics of Composition	3 credit hours	
ENGL 101 English Composition	3 credit hours	
ENGL 102 Advanced English Composition	3 credit hours	
ENGL 203 Technical Writing	3 credit hours	
SPCH 101 Fundamentals of Speech		3 credit hours
BSAD 121 Business Math		3 credit hours
Missouri Constitutional Requirement		3 credit hours
Choose from among:		
PLSC 103 National, State, Local Government	3 credit hours	
HIST 106 U.S. History I	3 credit hours	

- D. Major requirements: Total credits: 47 Credit Hours

Courses:

DIES 124 Preventive Maintenance		4 credit hours
DIES 134 Diesel Hydraulics		4 credit hours
DIES 144 Diesel Engines I		4 credit hours
DIES 164 Diesel Brake Systems		4 credit hours
DIES 184 Diesel Electricity/Electronics I		4 credit hours
DIES 204 Diesel Powertrains		4 credit hours
DIES 224 Diesel Suspension and Steering		4 credit hours
DIES 234 Diesel Air Conditioning		4 credit hours
DIES 244 Diesel Internship		4 credit hours
DIES 284 Diesel Electricity/Electronics II		4 credit hours
DIES 294 Diesel Engines II		4 credit hours
BSAD 125 Business Computer Applications		3 credit hours

- E. Free elective credits: None
- F. Requirements for thesis, internship or other capstone experience:
Students will be required to complete 160 hours of internship as a part of DIES 244 (Diesel Internship).
- G. Any unique features such as interdepartmental cooperation: None.

PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS (Form PG)

Institution Name: Crowder College

Program Name: Diesel Technology

Date: April 13, 2011

Student Preparation

Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.

The Compass Test will be administered to determine level of competence in math and reading comprehension. A cut score will be determined and students will be enrolled in appropriate developmental courses in math, reading, and writing as needed.

- Characteristics of a specific population to be served, if applicable.

Adults seeking retraining and/or education and skill preparation as a diesel mechanic.

Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.

Instructors teaching in the Diesel Technology program must have a minimum of three years (6,000 hours) of related job experience in the diesel maintenance/repair field as well as meeting the college's basic criteria for instructors.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.

Full time faculty will teach approximately 65% of credit hours in the program. The remaining 35% will be assigned to part time or adjunct faculty. The college anticipates that full time faculty, with appropriate credentials, will teach the core program offerings in the degree and rely on adjuncts in specialty areas as required.

- Expectations for professional activities, special student contact, teaching/learning innovation.

The instructor(s) will be expected to participate in appropriate professional development activities relevant to their teaching assignment to enhance their skills in teaching, tutoring and internship activities.

Enrollment Projections

- Student FTE majoring in program by the end of five years.

In line with the student enrollment projections previously presented (Form SE), it is expected that Fulltime Equivalent Enrollment in the program at the end of five years will be 34 students.

- Percent of full time and part time enrollment by the end of five years.

Based upon trends already observed in our existing Diesel Technology Certificate program, we expect the percentage of fulltime enrollees in the program to run at about 80% over the first five years of the program, leaving 20% of the enrollees as part time.

Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.

Based on a realistic historical estimate of 50% of program starters graduating, we would expect to see 15 graduates per year at the three year mark and 17 at five years.

- Special skills specific to the program.

Graduates of the program will be able to diagnose and repair problems in all types of diesel engines and related systems including preventive maintenance, brakes, hydraulics, power trains, air conditioning, steering/suspension, and electrical/computer systems.

- Proportion of students who will achieve licensing, certification, or registration.

It is anticipated that at least 50% of program graduates will eventually obtain an ASE certification in diesel mechanics, depending upon the requirements of individual employers.

- Placement rates in related fields, in other fields, unemployed.

Given demand for qualified diesel mechanics in the college's service area, it is anticipated that approximately 90% of program graduates will find employment in the trucking, heavy equipment, or agricultural fields. The remaining 10% will either be unable to find suitable employment or will take mechanically oriented jobs (i.e. maintenance, farm labor, etc.)

- Transfer rates, continuous study.

It is anticipated that fewer than 10 percent of the graduates will have immediate plans to transfer or continue their education. Some will opt to continue their education on a part time basis while continuing full employment.

Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide reasons.

Primary accreditation is through Crowder College's normal HLC/AQIP program. In addition, it is anticipated that we will seek ASE/NATEF certification/accreditation for the Diesel Technology before the end of the second year of the program.

Alumni and Employer Survey

- Expected satisfaction rates for alumni, including timing and method of surveys
- Expected satisfaction rates for employers, including timing and method of surveys

* Faculty and Student satisfaction surveys will be administered according to school policy, through the college's institutional research department