Adv Tech 2010-11

Automotive - Hybrid Vehicle #1

Summary:

Purchase a Hybrid Vehicle. Build a curriculum to instruct Automotive students on the latest service practices and procedures.

Description

Purchase a Hybrid Vehicle that is needed to stay current with educational and industry standards. Private and public institutions have curriculum and vehicles available for students. Lane's Automotive Program needs to stay on the cutting edge of industry trends for proper student training.

Questions and Answers

How is the initiative linked to the Unit Plans most recently submitted?

- 1. How does it continue the achievement of those goals?
- 2. If this is a continuation of an initiative started last year, make sure that relationship is clear.

How is this initiative linked to the efficiencies and productivities plans you had last year?

- 1. How does it continue the achievement of these plans?
- 2. If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.

This is a continuation from last year's unit plan. Provide advanced technical training center that can compete with public and private schools by providing students with the latest technology and equipment in a hands on environment.

Describe the resources needed:

Equipment

• 1 Hybrid Vehicle (\$20,000 each)

Request: Carl Perkins (EQP) \$20,000

Curriculum Development

• 100 Curriculum Development (4,533 each)

Request: Curriculum Development 100 hours (CD) \$4,533

What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.

Faculty will review, update and publish a set of program learning outcomes and associated performance indicators to include: employability skills, shop/laboratory safety, technical expertise, ability to pass industry certifications.

Department Priority:

7

Unit Resources:

There are no unit resources available.

Funding Request: Carl Perkins

Is this a Career & Technical Education program approved by the state and offered through Lane for credit?

Yes

If not a Career & Technical Education program, does your request provide considerable support for students enrolled in these programs?

Yes

Do you have an advisory committee that meets 2-3 times per year?

Yes

If request is for personnel, will funds be used to replace an existing position?

How will funding this initiative increase or sustain the academic achievement and technical skills attainment (GPA of 2.0 or better) of Career and Technical Education students?

This proposal is a request for funds to purchase full hybrid vehicle. The vehicle will be an addition to the lab training stations and will be used in all eight areas of instruction. The program curriculum will be designed to support the new training. The training from the station will directly enhance the student's ability to be successful in today's work environment. It will also promote a safe working atmosphere in the practical application for the students. It will also

provide an option for Diesel, Electronics, Drafting and Construction Technology students to expand their skills to the heavy-duty industry. This addition would create a stand-alone course, having nine sections of Automotive curriculum.

How will funding this initiative increase or sustain the number of CTE students that graduate or receive a one year certificate from Lane and help prepare the students for employment?

This training station will enable professional technical students in the Diesel, Automotive, Electronics, Drafting and Construction Technology programs to achieve their educational goals and technical skills in a manner that meets our industry expectations. A well-trained student will have a higher success rate, will be more productive in our community, and will support Lane Community College in the future.

EQUIPMENT \$

20000

COMPUTER HARDWARE \$

COMPUTER SOFTWARE \$

MATERIALS & SUPPLIES \$

CURRICULUM DEVELOPMENT (Hours)

PART-TIME FACULTY \$

TIMESHEET STAFF \$

TRAVEL \$

Can this initiative be partially funded?

No

EQUIPMENT \$

(E) Explanation of effect of partial funding:

COMPUTER HARDWARE \$

(CH) Explanation of effect of partial funding:

COMPUTER SOFTWARE \$

(CS) Explanation of effect of partial funding:

MATERIALS & SUPPLIES \$

(MS) Explanation of effect of partial funding:

CURRICULUM DEVELOPMENT (HOURS)

(CD) Explanation of effect of partial funding:

PART-TIME FACULTY \$

(PF) Explanation of effect of partial funding:

TIMESHEET STAFF \$

(TS) Explanation of effect of partial funding:

TRAVEL \$

(T) Explanation of effect of partial funding:

Funding Request: Curriculum Development

1. List the following information

- Course Numbers (titles if not currently offered)
- Instructor Name(s) who will work on the curriculum development
- Whether each of the courses is in, or has been through, the curriculum approval process

Egan Riordon 463-5092

AM143 Brakes AM145 Engine Repair AM147 Suspension and Steering AM149 Manual Drive Trains and Axles AM242 Automatic Transmissions/ Transaxles AM243 Electrical and Electronic Systems AM244 Engine Performance AM246 Heating and Air Conditioning New Hybrid Vehicle Course

2. List each course number (or title) and the materials to be created for each class

- Instructional goals, objectives, syllabi and outlines
- Lab instruction packets
- Practice, quiz, presentation &/or demonstration materials
- Other (specify)

Courses Impacted: AM143 Brakes AM145 Engine Repair AM147 Suspension and Steering AM149 Manual Drive Trains and Axles AM242 Automatic Transmissions/ Transaxles AM243 Electrical and Electronic Systems AM244 Engine Performance AM246 Heating and Air Conditioning New Hybrid Vehicle Course

Instructional goals, objectives, syllabi and outlines Lab instruction packets Practice, quiz, presentation &/or demonstration materials

3. List each course number (or title) and give your timeline for beginning and completing each course curriculum development.

Courses Impacted: AM143 Brakes AM145 Engine Repair AM147 Suspension and Steering AM149 Manual Drive Trains and Axles AM242 Automatic Transmissions/ Transaxles AM243 Electrical and Electronic Systems AM244 Engine Performance AM246 Heating and Air Conditioning New Hybrid Vehicle Course

Curriculum Development Summer 2010, Course Offering 2010.

4. What are up to 3 departmental instructional goals that are met through the development of curriculum in each class?

To prepare the graduate for employment as an automotive service technician working at company-owned repair stations, fleets, independent garages, gas stations, or new car dealerships.

The graduate will use automotive service resources to complete lab projects and become familiar with computer accessed information, internet accessed information and information available in print related to automotive repair.

be able to perform computations for gear ratios, engine displacement, electrical circuits, power

output, vehicle alignment angles, conversion between the metric system and standard system, and use of precision measuring tools.

diagnose and repair current vehicles using advanced diagnostic tools and equipment.

Successfully complete ASE certification tests. Demonstrate and use industry safety standards.

Provide advanced technical training center that can compete with public and private schools by providing students with the latest technology and equipment in a hands on environment.

5. List each course number (or title) and give the value of the development of curriculum in each course to other faculty members.

AM143 Brakes AM145 Engine Repair AM147 Suspension and Steering AM149 Manual Drive Trains and Axles AM242 Automatic Transmissions/ Transaxles AM243 Electrical and Electronic Systems AM244 Engine Performance AM246 Heating and Air Conditioning New Hybrid Vehicle Course

Egan Riordon 100 hours of C/D

6. List each course number (or title) and say how many students will be served by the development of curriculum in each class.

168 students per year.

7. List each course number (or title) and give the specific benefits to students that you expect from the development of curriculum in each class.

Provide hybrid vehicle training center so the student has up to date technical industry training skills with the latest technology and equipment so that they are competitive with other graduates. Thus making the student immediately employable.

8. List each course number (or title) and give the specific benefits for diversity that you expect from the development of curriculum in each class.

A hybrid car is a car designed to contain both the gasoline and electric powered motors. A hybrid car is one of the complex systems of car that we have in the current era. Since it has both the gasoline and electric motors powered systems, it has very many benefits, such as gallons of fuel saved and Metric tons of greenhouse gasses eliminated.

9. List each course number (or title) and give the specific benefits to sustainability that you expect from the development of curriculum in each class.

A new study released earlier this month by the University of California, Berkeley held exciting news for the burgeoning electric car market: electric car sales could jump to 86 percent of U.S. light vehicle sales in 2030 if consumers don't have to buy their batteries themselves.

Considering that auto emissions are one of the largest contributors of carbon dioxide in our country, this forecast means Americans could soon be enjoying reduced smog in our cities and increased energy independence.

10. List each course number (or title) and give the specific effects on distributed learning that you expect from the development of curriculum in each class.

This delivery method electronically through Moodle that eliminates the need for paper, additional classroom space, transportation of individual students, and thus significantly reduces carbon impact. As well as a practical learning environment for the students to operate learned skills on the Hybrid Vehicle.

Hours requested for Curriculum Development funding:

Please enter the amount of one of the following:

- 100 hours maximum for new development.
- 70 hours maximum for course revision
- 50 hours for 3-4 credit conversion
- other (use if multiple courses addressed in one initiative

Do not enter any characters other than numbers and a decimal.

How many hours are you requesting? If there are multiple courses addressed in the initiative, please list each course number (or title) and give the number of hours requested for each course.

100

Can this initiative be partially funded?

No

Partially funded curriculum development HOURS requested:

Explanation of effect of partial funding:

Funding Request: Technology Fee