

Science 2011-12

Flow Meters for Water Conservation Technician AAS Program

Summary:

Second-year students in the Water Conservation Technician Program learn hands-on skills to measure and analyze water flow in commercial and industrial settings. The Commercial and Industrial Water Conservation Course borrowed infrared flow meters and now needs to purchase its own meters.

Description

A goal of the Commercial/Industrial Water Conservation course is to prepare students to evaluate flows in water service systems in the Commercial/Industrial sectors of the built environment. In the past, to gather valuable flow data, technicians needed to interrupt water service to the building to insert an "inline" analog measuring device that disrupts end-use activity. Recent product advancement greatly improves the ability to generate flow measurement by incorporating infrared technology which allows the measurement device to be applied to the exterior of the water piping and therefore, eliminates the need to interrupt water service to the building. Gathered data can then be downloaded into a spreadsheet for information management. The purpose of this proposal is to purchase three infrared water flow measuring devices which will give Water Conservation Technician students the ability to learn how to measure water flow using a non-intrusive digital device.

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.

Provides practical experience using industry standard equipment

The Water Conservation Technician program began offering classes fall 2009. Planning has included purchasing currently deployed technology to assist student with learning how to use and evaluate output generated by the technology.

Describe the resources needed:

3 infrared, externally applied, Water Flow Meters

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.

Students will be able to accurately measure water flow in gallons per minute (GPM) in a variety of industrial and commercial building water supply situations. This outcome will be assessed in hands-on fieldwork conducted within the Commercial and Industrial Water Conservation Course.

A. Students will be required to measure a known water flow rate in GPM in multiple commercial and industrial water supply systems with an accuracy of 1-2 percent.

B. Students will be placed into small teams and using the infrared water flow meter, will measure a water supply system with a known flow rate (GPM) and evaluate meter output.

Department Priority:

9

Unit Resources:

Priority ranking for this initiative was determined by SAC members drawing numbers randomly. All the initiatives are valuable to the Division and to the proposing disciplines; all have the support of the Division.

The program has relied on borrowing flow meters for students to use. Acquiring flow meters for the program will ensure that students have access to this essential tool.

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?

No

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 equipment will give students the opportunity for practical experience using one of the recent advances in the Water Conservation Technician tool kit.

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?

Using current technology is a sign of a quality program. Students enrolling in the Water Conservation Technician program initially will be attracted to and remain in the program because of the quality of program instruction and its use of current technology. Enrolled students also will see the incentive of a high percentage of students employed in the water industry after graduation.

EQUIPMENT \$

21000

COMPUTER HARDWARE \$

COMPUTER SOFTWARE \$

MATERIALS & SUPPLIES \$

CURRICULUM DEVELOPMENT (Hours)

PART-TIME FACULTY \$

TIMESHEET STAFF \$

TRAVEL \$

Can this initiative be partially funded?

Yes

EQUIPMENT \$

14000

(E) Explanation of effect of partial funding:

Fewer students will have the opportunity to get direct hands-on experience with the equipment if we can purchase only one or two units.

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

Funding Request: Technology Fee