Funded 2010-2011 Program Review Instructional Equipment

**Auto Collision Repair Technology**

**Fluke Insulation Tester 1587ET $1200**

We are currently not testing the insulation of the high voltage cables that we use. We are also not testing the cable in the cars that we convert. This program has much community support. We will continue to teach members of the community the importance of electric vehicles and demonstrate how electric vehicles reduce the dependence of foreign oil.

**Pruis Battery for classroom. $1300**

Students need to be able to remove, dismantle, test, assemble and re-install hybrid batteries. This will enable up to teach the methods necessary.

**Pruis Plug-in Conversion for the classroom $2500**

Currently we can only show pictures of how these plug-in conversions are done. With this unit, we can teach hands-on what items are included in an plug-in conversion; what problems may exists; and how the unit is installed.

This program has much community support. We will continue to teach members of the community the importance of electric vehicles and demonstrate how electric vehicles reduce the dependence of foreign oil. With this conversion we can now teach both major power sources available to electric vehicles

**Midtronics Hybrid Battery Tester $1640**

Electric vehicles today have switched from older battery technology (lead-acid) to lithium. The ACRT and Electronics program built our first electric car using lead-acid batteries. Our second electric car is designed to run on lithium batteries. We need to this tester so that we can complete our second electric vehicle. This program has much community support. We will continue to teach members of the community the importance of electric vehicles and demonstrate how electric vehicles reduce the dependence of foreign oil. Students need to be able to run diagnostics on existing hybrid battery systems in vehicles. They will also be able to test individual cells for replacement.

**Further Justifications for all four:**

The automotive field is changing rapidly. Many car manufacturers are building Hybrids or Electric vehicles to cut dependency on foreign oil. Electric vehicles manufacturers are switching from old battery technology to lithium. We need to teach students the most modern battery technology and how to deal with the unique differences of lithium batteries.

Fluke insulation Tester: We need to be able to test the insulation on all cables.

Battery Tester: By using lithium batteries, Electric vehicles will have a longer range and faster charging rate.

This will definitely attract students to COM. COM will attract students from the entire Bay Area by having a wide range of Electric Vehicles for students to work on and the most up to date Electric Vehicle technology. We are the only school in the area that teaches a truly hands on Electric Vehicle and Hybrid maintenance class. Students learn the most current and up to date technology available. We will be the only school in the area with working student built vehicles of both battery types.

Automobile manufacturers will be introducing lithium powered Electric Vehicles in 2011. Students entering the field of Electric Vehicles need training and experience on vehicles operated on lithium power to be successful in repair and diagnosis of these power systems. Students need to be ready to meet the demands of the new and evolving jobs in auto technology with the understanding of the benefits and short-comings of different power sources.
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The best way to measure success is through enrollment and number of students successfully completing AS degrees, master technician certification, career and skill certificates and ACRT classes. The Auto Collision Repair classes are grouped together so students can earn skill certificates and career certificates. Some students may choose to go to four year institutions and can use the courses they’ve taken in the ACRT program for either electives or required courses at state universities. In recent years, some of our students have transferred to state colleges such as Chico State University to enroll in the Manufacturing Technology program and other related degrees.

The Electric Vehicle program has much support from the community. COM is leading the way by showing it is feasible to convert vehicles from gas to electric. The entire world is looking for ways to cut their dependency on oil.

ART – Photography
Arkay RC-2100 Stainless Steel Model Print Dryer for Resin Coated Prints $1582.94

Students can dry their prints and take them home immediately after class to evaluate. Every black & white class needs this equipment.

Outcomes:
- Demonstrate the development of compositional skills.
- Integrate basic composition skills including 2-d design.
- Practice an increased awareness of different qualities of light.

Demonstrate the development of compositional skills.
This is a basic piece of industry standard equipment, which all traditional labs use.

Black bags for loading film into reels in total darkness. Large Changing Bag, 27” x 27” $501.27 (for 20)

The students will have developing bags, which do not have light leaks which ruin the film. It is a basic skills tool.

Outcomes: Student success in basic film development.
Measured by: critiques, grades, student success.

Magnetic critique boards 4x8’ $725.67 (for 4)
Currently students push pin right through their prints and it takes a long time to put up and take down prints. This is wasted time that could be spent on more detailed critiques or in the lab printing.

Students and artists need critique boards that they can add and subtract prints from quickly, allowing for changing the order of the prints and thus the end statement.

Gra Lab enlarging timer 450R $1917.40 (for 10)
Functional timers help in successful printing.

CREDIT ESL
Books for the ESL Lab lending library available to support the reading classes. $750 (for 75 books)

There are books presently in our collection, but there is a need to update and replace the number of books available to our students. Yearly approximately 75 books must be replaced due to wear and loss, both signs of passionate readers.
The more students read the greater their improvement is. These specially adapted books are not readily available in public libraries or bookstores.

The ESL lending library serves about 400 students annually. Part of the ESL reading course requirements includes reading a certain number of books from our collection, so it is required for existing students. More reading material that is adapted for ESL students results in better access to reading materials for all our students.

As students read more, their reading speed and comprehension improve. Reading is critical to any student's academic success.

We look at the number of books students are reading each semester. This number has been increasing. A certain amount of wear and tear occurs each year, so there is a need to replace some books.

**RESULTS:**

*The SLO for ESL 56 for Spring 2012: 80% of the students completing the course will read and report on 250 pages or 5 books of approved reading material at their level.*

*Results: 100% of the ESL class reached the goal.*

*The SLO for ESL 66 for Spring 2012: 80% of the students completing the course will read and report on 500 pages or 10 books of approved reading material at their level.*

*Results: 92% of the ESL class reached the goal.*

*The 2 students from ESL 66 that did not reach the goal reached 50% and 57% of the above goal.*

**Health Center**

**Adult and infant manikins for teaching CPR; $1720**

Our existing manikins with the exception of one are 20 years old. They are stained, have cracks and some do not compress adequately to simulate actual compression. Two of the baby manikins are missing arms and legs.

Students learn and retain CPR skills through hands-on practice and simulation. Proper manikins will provide better simulation and better retention of skills.

More manikins will provide more access for practice time. Approximately 100 students are certified annually through the PE, nursing and dental programs. CPR is required for nursing and dental disciplines.

The expected outcome of CPR practice is the ability of the student to assess the need for CPR of an unconscious victim. Once certified, nursing and dental students will be able to complete their internship in a timely fashion.

New manikins will help to certify students faster with more practice time available throughout the semester. Measurements will include # of students certified, hours to complete the course and returning students to renew certification.
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**MUSIC**

Two piano benches: One Artist and one standard  $606.80

The benches that these replace are broken and dangerous for the students and faculty that use them. We requested these replacement benches last year as well. Besides being dangerous, they squeak, and the current artist bench is almost impossible.

The current benches are broken and unsafe and should be replaced.

Improving the performances by removal of the distraction of squeaky and broken benches improve the instructional environment which exists in the classroom as well as in the concert environment. Having safe benches for use by both the students and faculty.

Access to the piano, a large part of the piano student performer's classroom/concert requirements will be improved. An adjustable bench accommodates the many variations in height and arm length of the students (and faculty) so that they can be properly positioned.

The student will be able to fulfill his/her musical performance requirements in safety and with proper position, hopefully resulting in a better performance.

Good equipment which allows the student to better fulfill classroom obligations will draw students who want to be in a safe supportive environment in classroom as well as on the concert stage.

We don't want the safety of any students jeopardized and the distraction of a wobbly or noisy bench can be a major distraction in the student's work in the classroom or on stage.

**Environmental Landscaping Design**

Materials for native plant propagation.  $4300

The ELND program needs to acquire the additional supplies and materials to establish a native plant propagation facility. Landscape designers are using more native plants in their sustainable landscapes. Students graduating from our program should be familiar with native plants of the area and how to design sustainable landscapes.

Students will learn the proper methods for the propagation of native plants and how they can be used in sustainable landscapes.

This type of program will attract a large number of people from the community who want to learn how to design sustainable landscapes through the use of native plants.

Students will be able to design sustainable landscapes using native plants. In order for new construction to achieve lead points, they will need to use native plants to help them design sustainable landscapes.

Enrollment in classes will increase because we will be teaching what students are looking for in terms of environmental landscape.
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**Ohaus compact Portable electronic scales**  $530
Approximately 50 students per year will benefit from this equipment. If we have well equipped laboratories and students are satisfied, more students will register for our classes.

Classes such as soils and landscape ecology must conduct experiments, which require that students weigh soils and plant parts. These scales are crucial to teach classes such as Soils and Landscape Ecology.

**Tally register**  $302
Students who take many classes in the Department must count multiple objects: Insects, plants, seeds, and particles. They must have access to counters.

The quality of the instruction will be greatly improved. Currently, we have very few electronic scales and students are very limited in the execution of their experiments.

Roughly 60 students will benefit by the purchase of this equipment.

The learning outcomes of the soils class, ELND160 and Landscape Ecology 120A and B will be achieved.

[They are as follows – copied here from the course outlines]

ELND 120A
1. Define the meaning and evolution of the ecology concept.
2. Describe and contrasts ecosystem evolution and succession
3. Contrast the effect of various management practices on landscape ecology.
4. Employ library and Internet resources to gather information on plant ecology.

ELND 120B
1. Describe the process of succession on landscapes
2. Contrast structures and functions of various ecosystems.
3. Illustrate relationship between soil biological and physical properties and plant community dynamics.
4. Compare the effect of nutrient cycles on landscape ecology

ELNC 160:
A. Describe the effect of soil use on human evolution.
B. Recognize various physical and biological soil constituents.
C. Describe how soils form and evolve.
D. Describe interactions between soil properties and water and nutrient cycles.
E. Discuss the behavior of plant nutrients in the soil.
F. Analyze the effect of soil manipulations on soil properties and plant growth.
G. Interpret the results of a soil analysis.
H. Discuss the properties of various fertilizers.
I. Propose sustainable soil management.
J. Conduct research to find information about soil properties.

ASSESSMENT: We will assess how well the Learning Outcomes for the classes are achieved.
AUTO
Mastertech VCI with NETGEAR Router Kit (Scan Tool)
Domestic Region & Asian Combo Program  $4811.65

This scan tool was funded through the modernization project for the Transportation Technologies Complex. I was told that I did not have to prioritize my list of equipment if I stayed under the allocated dollar amount. They ordered from the top of the list working down until 85% of the budget was spent. They would order the last 15% after the first group was received in case there were any unexpected expenses. After everything was received they cut the last 15%. Had I known this I would have prioritized the equipment as this is a very important tool. It is the newest scan tool from Bosch Diagnostics and represents the industry move from stand-alone scan tools to PC based scan tools. Without learning this new technology our graduates will not be prepared to enter the workforce with the required industry standard technological skills.

It is the industry standard technology scan tool from Bosch Diagnostics and represents the industry move from stand-alone scan tools to PC based scan tools. Without learning this new technology our graduates will not be prepared for the job.

Communication Area Network (CAN) where all the vehicles systems communicate on a single bus. Replacing a brake light bulb with a bulb with a different wattage could cause a vehicle to not start. Students need to be knowledgeable in use of these types of scan tools to be able to perform even the simplest tasks.

One of the Student Learning Outcomes states that a student will be able to demonstrate the use of current technology used in the Automotive Service and Repair Industry. This is the technology used today.

Students are required to show competence in the use of equipment both on manipulative and written tests.