FY11-12

BHES Bio microcentrifuge

DeAnza College eppendorf

(1)

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

$2,075

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: Biology **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 5 /18/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Microcentrifuge Eppendorf

1.b. How Will The Equipment Be Used?

Will be used by multiple instructors in order to facilitate student participation and understanding in scientific processes.
Will be used in lab order to provide students a better understanding of laboratory processes.
Enable the conduction of laboratory experiments.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Yes

1.d. What Is The Anticipated Annual Cost Of Maintenance?

none

1.e. Where Will It Be Located? Is There Sufficient Space?

The items will be located in the Biology Storeroom – SC 2110, and there is sufficient space.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

The equipment will support students in many of the high-enrollment Biology courses. The devices will be implemented most immediately in our Biology major series

2.b. How Will The Equipment Improve Student Learning Or Student Services?

It will allow students practical lab experience in the Biological sciences

2.c. What Data Or Evidence Supports Your Request?

A Purdue University study showed that "hands-on" learning approach improved learning (Riskowski et al, 2009). This will provide more of a "hands-on" method by allowing students to both see experience procedures previously just provided in a lecture-style format.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

N/A

3.b. How Will Outcomes Be Measured For Future Planning?

The SLOs can be separately evaluated with pre and post assessments of student attitudes and learning.

3.c. What Evidence Supports Your Requests?

The Biology Department has an excellent record of assessing SLOs, with over 60% of our active courses either having officially started or fully completed an assessment cycle. The SLOs can be separately evaluated with pre and post assessments of student attitudes and learning.

FY11-12

(2) (10) (11) (50)

BHES Biol

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: Biology

(2) poly pro bath $1,498

(10) DNA electro. syst $875

(11) comp. survey syst $725

(50) Touch pad clickers $2,085

Request # (as per spreadsheet)

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 10/18/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

We are requesting the following items:

1. Touch panel student response systems (Clickers)
2. Comprehensive Survey Set (Preserved Organisms)
3. PolyPro Dual Water Bath
4. DNA Electrophoresis System II

1.b. How Will The Equipment Be Used?

1. Will be used in both lecture and lab by multiple instructors in order to facilitate student participation and understanding and provide a rapid assessment tool for instructors.
2. Will be used in lab order to provide students a better understanding of the diversity of life with this comprehensive set of preserved organisms. Our current preserved organisms are both dated and inadequate.
3. Will be used in order to supplement our current older water baths, as well as provide the ability to run two lab sections concurrently using this equipment.
4. Will be used in order to supplement our current older DNA Electrophoresis Systems, as well as provide the ability to run two lab sections concurrently using this equipment.

1.c. Can The Equipment Be Shared With More Than One Discipline?

All items can be shared with more than one discipline, especially the student touch response systems and the water baths.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

0

1.e. Where Will It Be Located? Is There Sufficient Space?

The items will be located in the Biology Storeroom – SC 2110, and there is sufficient space.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

The student touch response systems can be used in a variety of programs/disciplines. The equipment will support students in many of the high-enrollment Biology courses. The devices will be implemented most immediately in our Human Biology and Introduction to Biology courses.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Student learning will improve in the following ways:

1. More equipment will lead to a greater number of lab groups with fewer students in each lab group. This will provide the opportunity for more students to directly participate in the lab activities which utilize the water baths and the DNA Electrophoresis System, and therefore improve student learning.
2. Having the Comprehensive Survey Set will improve student learning by providing students more of a "hands-on" method of understanding the diversity of life on Earth.
3. Utilizing student touch response systems will improve student learning by increasing student participation and by allowing instructors to instantly assess their students' understanding of the material being presented.

2.c. What Data Or Evidence Supports Your Request?

Having smaller lab groups have been shown to increase student interaction and learning (Webb, 1982). Having a greater number of water baths and DNA Electrophoresis Systems will accomplish this.

A Purdue University study showed that "hands-on" learning approach improved learning (Riskowski et al, 2009). Using the Comprehensive Survey Set will provide more of a "hands-on" method by allowing students to both see and hold organisms that were previously just provided in a lecture-style format.

Student touch response systems have been shown by many studies to be a useful tool in increasing student learning including (Martyn, 2007), (Guthrie & Karlin, 2004), (West, 2005), among others.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
Yes, can be used as an assessment tool to generate and study student responses in real time.

3.a.ii. Administrative Unit Outcomes?
N/A

3.a.iii. Student Services Outcomes?
N/A

3.a.iv. Program Level Outcomes?
Yes, can be used as an assessment tool to generate and study student responses in real time.

3.b. How Will Outcomes Be Measured For Future Planning?
It will give us direct and immediate feedback as to the effectiveness of class content.

3.c. What Evidence Supports Your Requests?

The Biology Department has an excellent record of assessing SLOs, with over 60% of our active courses either having officially started or fully completed an assessment cycle. The SLOs can be separately evaluated with pre and post assessments of student attitudes and learning.

FY11-12

BHES HTEC Ergo chairs

DeAnza College

(3)

Request for Measure C New Equipment Funding $ 32,625
For the Three-Year Period 2011-2014
Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: HTEC **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: **11/17/11**

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most

familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested
Ergonomically correct antimicrobial laboratory chairs

1. b. How Will The Equipment Be Used?
The chairs will be used by Health Technology and Medical Laboratory Technology students to better prepare them for the demands of the present and future healthcare workforce.

1.c. Can The Equipment Be Shared With More Than One Discipline?
Ergonomically correct laboratory chairs are needed for both the Health Technology and MLT programs.

1.d. What Is The Anticipated Annual Cost Of Maintenance?
There is no cost associated with annual maintenance of requested items.

1.e. Where Will It Be Located? Is There Sufficient Space?
Ergonomically correct antimicrobial laboratory chairs – S-73 & S-74

Yes, there is sufficient space for these requested items.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support
Health Technology & Medical Laboratory Technology

2.b. How Will The Equipment Improve Student Learning Or Student Services?
The updated equipment will help prepare students for the present and future healthcare workforce.
Ergonomically correct laboratory chairs are needed for both S-73 and S-74. Students enrolled in the MLT program perform a large amount of microscopic and bench testing. The chairs presently in the classroom do not adjust to accommodate student size variations. Health technology and MLT students routinely work with body fluids and must practice Universal Precautions as protection against biohazardous agents. Ergonomically correct laboratory chairs are necessary to prevent student injuries.

2.c. What Data Or Evidence Supports Your Request?
Both Health Technology and MLT Advisory groups have indicated that our programs need updated state of the art equipment in order to prepare students for the workforce today and that of the future.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
Student Learning Outcomes for both HTEC and MLT programs include compliance with OSHA standards, and continual safety when performing laboratory procedures and testing. The ergonomically correct laboratory chairs will support students in accomplishing this Learning Outcome. The current cloth covered classroom chairs present a biological hazard to students using biohazardous specimens.

3.a.ii. Administrative Unit Outcomes?
N/A

3.a.iii. Student Services Outcomes?
N/A

3.a.iv. Program Level Outcomes?
The Program Level Outcomes for both the phlebotomy and MLT programs are to adequately prepare the students to pass a national certification examination required to be employed in California. With the addition of the ergonomically correct chairs, students will be learning and training in a safe environment.

3.b. How Will Outcomes Be Measured For Future Planning?

Outcomes will continue to be measured by assessment, certification examination results and exam pass rate.

3.c. What Evidence Supports Your Requests?

Numerous articles on the importance of ergonomics in our lives.
Santa Clara Labor Market statistics from EDD indicate a strong growth rate for Health Technology and Medical Laboratory Technician positions.
President Obama's healthcare reform will require additional trained healthcare professionals.

FY11-12

BHES HTEC

(4) (17) (18) (19)

DeAnza College

LIS system

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

(4) Lab DNA student simulator LIS phlebotomy $8,335
(17) Lift table $1,490
(18) computers $7,700
(19) printers $2,724

REQUIRED SIGNATURES

Division: BHES-WE

Department: HTEC **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/17/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Laboratory Information System (LIS) and supporting equipment (printer, workstation, computer)
http://www.antekhealthware.com/events/Student_Simulator.php

1. b. How Will The Equipment Be Used?

The LIS system will be used by Health Technology and Medical Laboratory Technology students to better prepare them for the demands of the present and future healthcare workforce. The LIS and equipment will train the phlebotomy students in computer technology for patient identification and test requests.
MLT students will use the LIS system to enter test results and for case study analysis.

1.c. Can The Equipment Be Shared With More Than One Discipline?

The LIS and equipment will be used by both the Health Technology and Medical Laboratory Technology students.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

There is no cost associated with annual maintenance of requested items.

1.e. Where Will It Be Located? Is There Sufficient Space?

Laboratory Information System (LIS) and equipment – S-73 & S-74

Yes, there is sufficient space for these requested items.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Health Technology & Medical Laboratory Technology

2.b. How Will The Equipment Improve Student Learning Or Student Services?
LIS system is needed to bring the phlebotomy and MLT program up to industry standards.

2.c. What Data Or Evidence Supports Your Request?
Both Health Technology and MLT Advisory groups have indicated that our programs need updated state of the art equipment in order to prepare students for the workforce today and that of the future.
The LIS system will give both our Health Technology and MLT student's exposure to computer technology that mimics that in the workplace.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
The LIS system will help student enrolled in both of these programs to have the skills required of the present and future healthcare workforce. All test ordering and result entry is done via an LIS system. It is necessary to give our students this training to be competitive in the job market.

3.a.ii. Administrative Unit Outcomes?
N/A

3.a.iii. Student Services Outcomes?
N/A

3.a.iv. Program Level Outcomes?
The Program Level Outcomes for both the phlebotomy and MLT programs are to adequately prepare the students to pass a national certification examination required to be employed in California. By the the LIS system, students will be exposed to the latest technology and develop the skills needed to pass the certification examination.

3.b. How Will Outcomes Be Measured For Future Planning?
Outcomes will continue to be measured by assessment, certification examination results and exam pass rate.

3.c. What Evidence Supports Your Requests?
Santa Clara Labor Market statistics from EDD indicate a strong growth rate for Health Technology and Medical Laboratory Technician positions.

President Obama's healthcare reform will require additional trained healthcare professionals.

FY11-12

(5)

BHES AUTO Heated pots washer

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

$ 4,090

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: AUTO **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:AMK**

E-mail: kandulaanita@fhda.edu **Date**: **11/3/11**

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested
Water based solvent tanks. Heated parts washer.

1.b. How Will The Equipment Be Used?
The solvent tanks will be used to clean dirty parts and equipment.

1.c. Can The Equipment Be Shared With More Than One Discipline?
Yes, any department that has dirty parts or equipment can utilize this equipment as an environmentally friendly machine to clean parts. In addition, environmental studies can use the automotive shop as an example of a green shop.

1.d. What Is The Anticipated Annual Cost Of Maintenance?
We are anticipating an annual cost of $300.00 per year for two solvent tanks.

1.e. Where Will It Be Located? Is There Sufficient Space?
The new equipment will be replacing existing equipment and utilizing the same floor space.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Automotive
Environmental studies
Biology
All discipline on campus with dirty parts that need an environmentally friendly way to clean parts and equipment. In addition, the college will have one more green spot on campus that can be utilized in some way by every department.

2.b. How Will The Equipment Improve Student Learning Or Student Services?
Having a green certified automotive department will keep with the districts goal of becoming environmentally friendly and provide new areas of student learning. We will instill in our students the importance of protecting our environment. Once the automotive department is green certified new learning goals can be included in our Student learning outcomes.

2.c. What Data Or Evidence Supports Your Request?
Simply type green California into a web browser and you will find many reasons for the automotive department to become a green certified area. But first and foremost we want to lead in the greening of California.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
The green certification of the automotive shop will create an environment for students to learn environmental awareness.

3.a.ii. Administrative Unit Outcomes?
Our mission statement includes students' having environmental awareness and having a green certified automotive area will enhance this awareness.

3.a.iii. Student Services Outcomes?
Having more and more of our campuses become green will offer student services the opportunity to indicate how environmentally aware our campuses are. Also the more green programs our campus has, enhances training and transfer opportunities.

3.a.iv. Program Level Outcomes?

The automotive program is striving into new areas and maintaining a safe clean working environment for our students is our continuous goal.

3.b. How Will Outcomes Be Measured For Future Planning?

As the greening of California continues we can plan to make every department in our college green. Having the automotive department leading the way, will show others that being green can be a reality for everyone.

3.c. What Evidence Supports Your Requests?

Looking at environmental studies and what is being accomplished at and around the Kirsch Center, the automotive department will also become a campus leader in the greening of California. The new water based solvent tanks and the green shop certification of the auto shop adds to De Anza's campus Sustainability Management Plan.

FY 11-12 BHES AUTO engine stands

DeAnza College

(6)

$ 4,725

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: AUTO TECH **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Kandula **Signature:**_____

E-mail: **Date**: 11/16/2001

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

This request is for additional engine stands that are used during engine disassembly and assembly. Engine disassembly, inspection, machining, and reassembly is the core of engine building classes. Engine stands are an integral part of this process

1.b. How Will The Equipment Be Used?

These engine stands allow students to have a device that holds the main casting of the engine, allowing students to rotate it as it is being worked on. They are portable and can be wheeled to a certain location and stored each day after class

1.c. Can The Equipment Be Shared With More Than One Discipline?

No

1.d. What Is The Anticipated Annual Cost Of Maintenance?

Zero

1.e. Where Will It Be Located? Is There Sufficient Space?

These will be used and stored in the machine shop are of the automotive technology department. We will have sufficient space because we can part with old benches that are currently being used

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

This equipment will support the following classes:
Auto 94A – Auto 94F Machining and Engine Repair (day)
Auto 64 Machining and Engine Repair (evening)
Auto 64HP High Performance Engine Preparation

2.b. How Will The Equipment Improve Student Learning Or Student Services?

The majority of the student learning outcomes for engine classes are related to various steps of engine building. With better engine stands students will be able to work in a more organized environment. We have also seen that the few students that currently use these few engine stands that we have are more motivated and excited

2.c. What Data Or Evidence Supports Your Request?

We currently have five of these engine stands, but with up to thirteen groups working each year. Students that use these stands are much more organized and develop better routines. The groups that don't have the luxury of these stands, use standard work benches to complete their projects

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

This request supports student learning outcomes

3.a.ii. Administrative Unit Outcomes?

3.a.iii. Student Services Outcomes?

3.a.iv. Program Level Outcomes?

All of our student learning outcomes support our program level outcomes

3.b. How Will Outcomes Be Measured For Future Planning?

Part of the student learning outcome process is developing metrics for measuring the success of students. We have these metrics in place

3.c. What Evidence Supports Your Requests?

We currently have five of these engine stands, but with up to thirteen groups working each year. Students that use these stands are much more organized and develop better routines. The groups that don't have the luxury of these stands, use standard work benches to complete their projects. Having better working conditions will improve productivity and outcomes

FY 11-12

BHES ES

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

(7) microscopes $38,000

(8) dissecting microscopes $9,500

(9) binoclos $20,000

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 7-9

Dean/Manager's Name: Anita Kandula **Signature:** AMK

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

Careful analysis by all of the faculty and staff was conducted to determine the minimum critical needs for the Environmental Studies department. Instructors and staff of all five certificate/degree areas provided input to these requirements. The requested goods support one or more of the five certificate/degree programs in the ES department. The requested goods maintains or enhances current student learning objectives of our instructional mandate.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. Forty (40) microscopes for environmental studies lab (KC120).
2. Ten (10) dissecting microscopes for environmental studies lab (KC120).
3. Eighty (80) binoculars for use in the Cheeseman ESA Lab, the De Anza College Campus and in several field locations in Santa Clara County, Santa Cruz County and San Mateo County.

These three items: microscopes, dissecting microscopes and binoculars are all deemed replacement items as the current equipment is over seven years old and in critical need of replacement due to high student utilization, wear and tear and need for repair and recalibration.

This equipment needs to be replaced because De Anza students are working with inferior equipment that no longer provides a quality learning experience.

1.b. How Will The Equipment Be Used?

The **microscopes** are used in ESCI19 (Environmental Biology) classes every quarter as students learn microscope operating procedures, learn about Kingdoms Monera and Protista and in doing so they are required to find multiple organisms within these two kingdoms. Using **microscopes** Students observe and record the characteristics of these organisms.

note: The slides and organisms that we use with this equipment each quarter are covered by the current department budget.

The **dissecting microscopes** are used by the following courses: ESCI19 (Environmental Biology), ESCI20 (Conservation Biology), ESCI30 (Biodiversity Biology) and ES85A (California Native Plants and Animals). Students use the dissecting microscopes to observe 3D images (dissecting the multiple parts of a flower, observe microscopic invertebrates, etc.).

The **binoculars** are used by all Environmental Science (ESCI series) courses every quarter. Students learn proper binocular procedures and use the binoculars to identify birds and observe bird behaviors. Students describe and draw birds in different environments and ecosystems throughout the Santa Clara, Santa Cruz and San Mateo counties.

In order for the students to gain the greatest learning experience; each binocular, microscope and dissecting microscope should be used at a 2:1 ratio (2 students per 1 piece of equipment). Because this equipment is old and the growth of our student headcount has grown significantly over the past five years (3-4 times) we are now having 3-5 students assigned to each piece of equipment which doesn't give the student the full learning experience as we've laid out in our SLO's.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Equipment is shared and used by staff and students in all of the GE transfer courses in the Environmental Studies department and by students of the biology, history, ICS and ESL programs that utilize the Cheeseman Environmental Study Area in their coursework.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

Current estimate of annual cost of maintenance is $3,500

This is the cost of maintenance and repair.
Student materials -- Slides and organisms are currently covered by the ES department budget.

1.e. Where Will It Be Located? Is There Sufficient Space?

Microscopes and Dissecting microscopes are locked in a secured cabinet inside of the Kirsch Center Biodiversity Lab (KC120). There is sufficient room to store both types of microscopes in the locked and secured cabinet.

The binoculars are locked and stored in the Stewardship Resource Center and are controlled by a sign out/sign in system. There is sufficient storage space for the binoculars in this secured area.

The space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Biodiversity Specialist
2. Environmental Education and Nature-Based Learning
3. Environmental Stewardship
4. Wildlife Corridor Technician
5. GE Transfer Courses in Environmental Sciences

2.b. How Will The Equipment Improve Student Learning Or Student Services?

The refresh of this equipment will provide students continuing opportunity to observe and understand how the natural world works and the connections in nature and themselves. This equipment is integral to meeting the ESCI course requirements.

2.c. What Data Or Evidence Supports Your Request?

The existing equipment (microscopes, dissecting microscopes and binoculars are all over 7 year old). The equipment has been well-used by students and all are in need of significant repair, recalibration or are broken beyond repair. Additionally, ES and ESCI course enrollment has greatly increased since the ES Dept moved into the Kirsch Center. In order to meet increasing student demand for ES and ESCI courses, additional sections of course offerings were added. This has resulted in higher usage of equipment. These supplies are needed for student success of the SLO's and goals set for the students in our Environmental Studies department.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes, see SLOs listed below.

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity. Equipment used for bird watching, dissecting and diagramming plant anatomy, species identification and taxonomy.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources. Equipment used to teach students how to demonstrate use during educational outreach programs in a K-12 environment.

Environmental Stewardship – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape. Equipment used during the field our clinical work for species identification in the culverts and mountain ranges.

Wildlife Corridor Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape. Equipment used during the field our clinical work for species identification in the culverts and mountain ranges.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

Wildlife Corridor Technician – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY 11-12

BHES BIOL portable refrigerated aquarium syst

(12)

DeAnza College

Request for Measure C New Equipment Funding $ 5,200
For the Three-Year Period 2011-2014
Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: BIOLOGY **Request # (as per spreadsheet)**

Dean/Manager's Name: ANITA MUTHYALA-KANDULA **Signature:**_

E-mail: kandulaanita@fhda.edu **Date**: 11/2/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the

unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Portable refrigerated aquarium system & stand

1.b. How Will The Equipment Be Used?

Hold live specimens for biology class lab observations.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Possibly by Environmental Sciences.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

Periodic (semiannual) minor service of the refrigeration component incorporated into the routine maintenance contract for servicing the biology lab equipment.

1.e. Where Will It Be Located? Is There Sufficient Space?

Science Center 2 – first floor labs, storeroom and stockroom. Yes, space is sufficient. Since it is a portable unit, it can be moved as needed.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Primarily the Biology major program and core courses offered every quarter. But will also be used to support and expand activities in the non-major courses.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Accessibility to live specimens of a broad variety of organisms greatly increases student enthusiasm for biology topics and strongly enhances comprehension of abstract concepts and unfamiliar life forms. Subject matter becomes real, rather than abstract academics.
A portable unit will permit set-up of specimen displays ahead of time, since time between sections is insufficient to assemble suitable material in the lab room. Additionally, a reliable life-support system will enable us to borrow specimens from university lab sources by assuring them of our resources for adequate animal care.

2.c. What Data Or Evidence Supports Your Request?

Students demonstrate increased attention, discussion and peer communication when provided live specimens.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes. Students will be much better equipped to evaluate the correlation of structure and function in plants and animals; to contrast the structures used in processes of taxonomy, to analyze and compare the common physiological processes across higher taxonomy, and to apply the principles of the scientific method to studies in comparative biology research.

3.a.ii. Administrative Unit Outcomes?

3.a.iii. Student Services Outcomes?

3.a.iv. Program Level Outcomes?

Yes. Lead students in an understanding of life science concepts that will enable them to make informed decisions about global, cultural, social and environmental issues.

Provide students through an appropriate array of biological courses opportunities to acquire a solid academic foundation, develop communication and expression skills and critical thinking skills upon which to become successful in their pursuit of further education, career goals and to become life-time learners.

3.b. How Will Outcomes Be Measured For Future Planning?

Increased success rates in biology core courses and increased enrollment in biology special projects.

3.c. What Evidence Supports Your Requests?

Construction of rudimentary systems to temporarily hold live organisms always results in greater student participation and enthusiasm for biology lab activities.

FY11-12

BHES BIOL Muni ocean Aquarium

DeAnza College

(13)

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

$ 695-

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: BIOLOGY **Request # (as per spreadsheet)**

Dean/Manager's Name: ANITA MUTHYALA-KANDULA **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/7/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

"Mini-Ocean" refrigerated aquarium

1.b. How Will The Equipment Be Used?

Hold live specimens long term for biology class lab observations.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Possibly by Environmental Sciences.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

Periodic (semiannual) minor service of the refrigeration component incorporated into the routine maintenance contract for servicing the biology lab equipment.

1.e. Where Will It Be Located? Is There Sufficient Space?

SC-2108. Yes, space is sufficient. This unit would replace a system that has been in operation continuously for the past six years.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Primarily the Biology major program and core courses offered every quarter. But will also be used to support and expand activities in the non-major courses.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Accessibility to live specimens of a broad variety of organisms greatly increases student enthusiasm for biology topics and strongly enhances comprehension of abstract concepts and unfamiliar life forms. Subject matter becomes real, rather than abstract academics.
A reliable life-support system will enable us to borrow specimens from university lab sources by assuring them of our resources for adequate animal care. Also, a permanent system allows us to hold specimens for prolonged periods, thus permitting long-term observations and often using the same specimens for several quarters without the need to replace them.

2.c. What Data Or Evidence Supports Your Request?

Students demonstrate increased attention, discussion and peer communication when provided live specimens.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes. Students will be much better equipped to evaluate the correlation of structure and function in plants and animals; to contrast the structures used in processes of taxonomy, to analyze and compare the common physiological processes across higher taxonomy, and to apply the principles of the scientific method to studies in comparative biology research.

3.a.ii. Administrative Unit Outcomes?

3.a.iii. Student Services Outcomes?

3.a.iv. Program Level Outcomes?

Yes. Lead students in an understanding of life science concepts that will enable them to make informed decisions about global, cultural, social and environmental issues. Provide students through an appropriate array of biological courses opportunities to acquire a solid academic foundation, develop communication and expression skills and critical thinking skills upon which to become successful in their pursuit of further education, career goals and to become life-time learners.

3.b. How Will Outcomes Be Measured For Future Planning?

Increased success rates in biology core courses and increased enrollment in biology special projects.

3.c. What Evidence Supports Your Requests?

Construction of rudimentary systems to temporarily hold live organisms always results in greater student participation and enthusiasm for biology lab activities.

FY11-12

BHES B104 Oxygen meter

$695

(14)

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: BIOLOGY **Request # (as per spreadsheet)**

Dean/Manager's Name: ANITA MUTHYALA-KANDULA **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/2/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Dissolved oxygen meter

1.b. How Will The Equipment Be Used?

Monitoring dissolved oxygen for physiology and environmental class experiments and student projects..

1.c. Can The Equipment Be Shared With More Than One Discipline?

Possibly by Environmental Sciences.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

None.

1.e. Where Will It Be Located? Is There Sufficient Space?

Science Center 2 – first floor biology lab stockroom. Yes, space is sufficient.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Primarily the Biology major program and core courses offered every quarter. But will also be used to support and expand activities in the non-major courses and for biology student special projects.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Student access to easy-to-use yet precise instruments enhances their confidence and proficiency in conducting real experiments.
Our current instrumentation is obsolete, hard to use, and unreliable.

2.c. What Data Or Evidence Supports Your Request?

Students often want to utilize dissolved oxygen measurements in class projects, but get frustrated with the current instruments available. Open-ended experiments drive critical thinking.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes. Students will be much better equipped to evaluate the correlation of structure and function in plants and animals; to analyze and compare the common physiological processes across higher taxonomy, and to apply the principles of the scientific method to studies in comparative biology research.

3.a.ii. Administrative Unit Outcomes?

3.a.iii. Student Services Outcomes?

3.a.iv. Program Level Outcomes?

Yes. Lead students in an understanding of life science concepts that will enable them to make informed decisions about global, cultural, social and environmental issues. Provide students through an appropriate array of biological courses opportunities to acquire a solid academic foundation, develop communication and expression skills and critical thinking skills upon which to become successful in their pursuit of further education, career goals and to become life-time learners.

3.b. How Will Outcomes Be Measured For Future Planning?

Increased success rates in biology core courses and increased enrollment in biology special projects.

3.c. What Evidence Supports Your Requests?

Students often want to utilize dissolved oxygen measurements in class projects, but get frustrated with the current instruments available. Open-ended experiments drive critical thinking.

FY11-12

BHES BIOL

Icemaker

(15)

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

$ 6,000

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES

Department: BIOL **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Kandula-Muthyala **Signature: AMK**

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. **Please Describe Your Division Process For Preparing Your Request.**
   We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group,

we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Ice maker

1.b. How Will The Equipment Be Used?

It will be used to preserve cold specimens and supplies in the lab, it will be used to help conduct experiments at freezing point or temperatures below room temperature.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Yes

1.d. What Is The Anticipated Annual Cost Of Maintenance?

None

1.e. Where Will It Be Located? Is There Sufficient Space?

In the Biology stockroom in Science Center building 2, ground floor.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support
It can be shared with BIOL 6A,6B,6C, 10, 11,40B, 40C, HTEC, MLT

2.b. How Will The Equipment Improve Student Learning Or Student Services?
It will support experiments and student learning in many of the high-enrollment Biology courses. This would create a more engaging and authentic way to Biology.

2.c. What Data Or Evidence Supports Your Request?

Studies of student learning showing that student directed activities with real life applications enhance learning and retention. The requested equipment would be a perfect addition to our labs we as attempt to revise them to enhance student engagement and learning.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

N/A

3.b. How Will Outcomes Be Measured For Future Planning?

The Biology Department has an excellent record of assessing SLOs, with over 60% of our active courses either having officially started or fully completed an assessment cycle. The Human Biology laboratory revision project is also being separately evaluated with pre and post assessments of student attitudes and learning.

3.c. What Evidence Supports Your Requests?

Studies of student learning showing that student directed activities with real life applications enhance learning and retention

BHES Biol Skeletal Structures

(16)

DeAnza College

$5,005

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: BIOLOGY **Request # (as per spreadsheet)**

Dean/Manager's Name: ANITA MUTHYALA-KANDULA **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/2/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.
We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Comparative skeletal structures

1.b. How Will The Equipment Be Used?

Permanent specimens for biology class lab observations.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Possibly by Environmental Sciences.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

None.

1.e. Where Will It Be Located? Is There Sufficient Space?

SC-2108. Yes, space is sufficient.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Primarily the Biology major program and core courses offered every quarter. But will also be used to support and expand activities in the non-major courses.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Accessibility to real specimens of a broad variety of animals greatly increases student enthusiasm for biology topics and strongly enhances comprehension of abstract concepts and unfamiliar life forms. Physical specimens that can be handled and examined from different perspectives are necessary to comprehend and appreciate variations of physical forms and their respective functions.

2.c. What Data Or Evidence Supports Your Request?

Students demonstrate increased attention, discussion and peer communication when provided real specimens.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes. Students will be much better equipped to evaluate the correlation of structure and function in animals; to contrast the structures used in processes of taxonomy, to analyze and compare the common physiological processes across higher taxonomy, and to apply the principles of the scientific method to studies in comparative biology research.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Yes. Lead students in an understanding of life science concepts that will enable them to make informed decisions about global, cultural, social and environmental issues. Provide students through an appropriate array of biological courses opportunities to acquire a solid academic foundation, develop communication and expression skills and critical thinking skills upon which to become successful in their pursuit of further education, career goals and to become life-time learners.

3.b. How Will Outcomes Be Measured For Future Planning?

Increased success rates in biology core courses and increased enrollment in biology special projects.

3.c. What Evidence Supports Your Requests?

Students currently utilize skeletal specimens to successfully examine vertebrate form and function. But many of our decades-old specimens are showing excessive wear and breakage, and students are sometimes frustrated by the lack of sufficient number of specimens and diversity of types.

FY11-12

20 21 22 23 24

BHES ES

DeAnza College

Request for Measure C New Equipment Funding
For the Three-Year Period 2011-2014
Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

20 self record class $ 7,500
21 video on demand server blade $ 2,000
22 computer for energy display $ 1,540
23 Stewardship wall computers $ 13,090
24 LCD Screen $ 5,000

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 2

Dean/Manager's Name: Anita Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

Met with Ed Breault to determine upgrade needs for self-recording classroom KC113 and Stewardship Resource Center (SRC). Ed and Executive Director Pat Cornely established the needs for this classroom in the Kirsch Center for the vital upgrade it needs to perform at optimum levels for Environmental Studies classes in all five certificate and degree programs. After meeting with Ed Breault, we met as a

department to agree on the equipment requirements needed for these two areas of the Kirsch Center.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. One (1) Self-recording classroom upgrade.
2. One (1) Video-On-Demand server additional blade.
3. One (1) District Standard computer for energy display.
4. Ten (10) Wall Computers for Stewardship Resource Center (SRC) area.
5. One (1) LCD screen for KC209 (Wildlife Corridor Technician classroom).

1.b. How Will The Equipment Be Used?

Classroom KC113 requires upgrade of equipment in this self-recording classroom. Due to internet technology changes De Anza students are having significant difficulty in accessing video-streams of recorded lectures. Now, with the additional challenges of changing computer platforms, student success will be affected as students will not be able to view classes or to find successful workaround options for viewing. The problem was first recognized in the Spring 2011 quarter. Many experts (on-campus and off-campus) were consulted for a solution to the problem. The problem started as a change in technology from 32-bit to 64-bit. The workaround solutions are only temporary and students using newer computers will not be successful in finding alternatives. This will significantly affect the mediated and distance learning offered by the ES Dept.

1.c. Can The Equipment Be Shared With More Than One Discipline?

The equipment that will be installed in the KC113 self-recoding classroom will be solely used in this classroom and by instructors and staff of the Environmental Studies program.

The equipment replacements that are for the SRC area will be able to be used by ***any*** student on the De Anza campus who utilizes the SRC services for research and class projects and other educational assignments.

The LCD screen for KC 209 will be permanently mounted to a wall.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

The equipment upgrade in KC 113 will be covered by a maintenance/service agreement that is purchased with the equipment at time of order placement and is included in the cost analysis done by Ed Breault.

The computer equipment and LCD monitor will be maintained through ETS. It is unknown if their process provides for maintenance agreements.

1.e. Where Will It Be Located? Is There Sufficient Space?

Location: KC113 and Stewardship Resource Center.
Space requirements: There is adequate space allocated for all of this equipment. The space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Biodiversity Specialist
2. Environmental Education and Nature-Based Learning
3. Environmental Stewardship & Wildlife Corridor Technician
4. Energy Management and Climate Policy
5. Environmental Compliance and Pollution Prevention
6. GE Transfer Courses

2.b. How Will The Equipment Improve Student Learning Or Student Services?

The refresh and addition of this equipment will ensure that students continue to be successful as they take mediated and distance learning courses. The lectures and discussions recorded in KC 113 are intended for all students, not just mediated and distance learning students. This update in technology will ensure the students are able to access course information, watch teleclasses in full-length and complete course assignments.

2.c. What Data Or Evidence Supports Your Request?

Student enrollment in mediated and distance learning courses has been steadily increasing. The faculty facilitating the mediated and distance learning courses using Catalyst have worked with many students who are experiencing difficulty in accessing and playing the recorded lectures for their classes. This is due to technology changes in internet-provided applications.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship & Wildlife Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Energy Management and Climate Policy – Investigate and communicate the relationships between energy management/climate policy and ecological principles and evaluate the role of energy management in fostering a sustainable society.

Environmental Compliance and Pollution Prevention – Identify and interact with the key stakeholders in environmental compliance, pollution prevention and environmental health and justice, including the public, environmental and resource agencies, agriculture and industry, and non-profits to enhance global, cultural, social and environmental well-being

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship & Wildlife Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and

statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Energy Management and Climate Policy – Identify and interact with the key stakeholders in environmental compliance, pollution prevention and environmental health and justice, including the public, environmental and resource agencies, agriculture and industry, and non-profits to enhance global, cultural, social and environmental well-being

Environmental Compliance and Pollution Prevention – Students will investigate and communicate the relationships between environmental law, protection, and pollution prevention and apply the knowledge gained to environmental solutions.

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY11-12

BHES ES

25 26 27 28 29 30 31

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

25 GIS Server $ 6,000
26 GPS $ 4,250
27 2-way radios $ 3,200
28 Cyber Trackers $ 4,500
29 field cameras $ 6,250
30 weather Station $ 500 -
31 tracking Stations $ 25,000

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 20-26

Dean/Manager's Name: Anita Kandula **Signature:** AMK

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

Careful analysis by all of the faculty and staff was conducted to determine the minimum critical needs for the Environmental Studies department. Instructors and staff of all five certificate/degree areas provided input to these requirements. The requested goods support one or more of the five certificate/degree programs in the ES department. The requested goods maintain or enhance current student learning objectives of our instructional mandate. Wildlife Corridor Technician and Stewardship programs are two

certificate/degree programs and are field based where observation and data collection are key components of the curriculum. This equipment request enhances the students learning experience and provides an instruction and experience to the student that is unique in a community college environment.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. One GIS Server for Stewardship Data for corridor fieldwork.
2. Ten Garmin GPSMAP 60CSx Handheld GPS Navigator for corridor field work.
3. Eight Garmin Rino 530HCx 2-Way Radio with GPS/FRS/GMRS for corridor fieldwork.
4. Ten Cyber Tracker Handheld Computer for corridor fieldwork.
5. Twenty five Field Cameras for observation and fieldwork.
6. One Weather Station to be mounted on Cheeseman ESA Lab for climate data collection.
7. Ten tracking stations for setup in the Cheeseman ESA to prepare students on fundamentals of tracking, observation and data collection.

These seven items are a combination of replacement and new requests.

1.b. How Will The Equipment Be Used?

The Wildlife Corridor Technician Program was created after the ES Dept moved into the Kirsch Center and was not part of the pre-Kirsch Center program planning process. The student response to the Wildlife Corridor Technician educational opportunities is strong and students see the many different career options available to them as they complete the courses for the certificate and then the Environmental Stewardship degree...All of the equipment is necessary for student success in the program. The GIS server has become a priority as the inventory of field data has grown significantly with the expansion of the ES Dept field study and partner agencies. It has been recommended by GIS experts that a server will provide the most reliable platform for data storage. Also, as students learn to use the GIS software in map creation, a server is critical to classroom study, providing for multiple student access and an optimal learning situation.

The GPS Navigator handheld units are required for student use in collecting field data. The GPS units record longitude and latitude information precisely; this information complements the field camera data, which also records GPS information, photo, and

time of data, data and weather information. The GPS coordinates are critical in the GIS mapping software analysis process for the creation of maps.

Field cameras are needed because the lifetime of the cameras is 1 – 2 years; most of the cameras in current use have exceeded this time period. The manufacturer warranty is 1 year. After the 1 year warranty expires, it is best to replace the cameras as technology has usually been enhanced and the cost to repair broken equipment exceeds the cost of new equipment. The number of field locations has expanded with the growing student and public agency interest in the amount of data that has been determined.

Weather station for the Cheeseman ESA (or the Kirsch Center) is needed. The current weather station has been at the Cheeseman ESA Lab for over 10 years. Students in ESCI 19 and other courses record data from this device. Technology upgrades to Weather Monitoring will provide enhanced learning for students.

Tracking stations to be located in the Cheeseman ESA will provide students with an on-campus experience on the fundamentals of wildlife tracking, observation and data collection. These tracking stations will provide students with learning differences and difficulties with an on-campus option where they are now very limited. Resources to assist wheelchair-bound students or those with mobility issues off campus for field experiences are not available. The Cheeseman ESA is a more accessible location. The tracking stations will also provide an opportunity for the public to connect with wildlife tracking.

1.c. Can The Equipment Be Shared With More Than One Discipline?

This tracking equipment is critical and unique to the Wildlife Corridor Technician program.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

None is anticipated. The server will meet district guidelines for support through ETS. The field cameras will be under manufacturer warranty for 1 year. GPS handheld units and 2-way radios will have limited manufacturer warranties.

1.e. Where Will It Be Located? Is There Sufficient Space?

The field cameras are mounted and securely locked on public and private lands (with permission) in the Mt. Diablo and Santa Cruz Mountain Ranges where tracking of mammal movement is being studied.

The GIS server will be located in the Kirsch Building's equipment room which is a locked environment and has limited faculty and staff access.

The radios, computers and GPS navigator equipment will be locked in the secured data room in the Kirsch Center and a required sign out/sign in procedure is in place for faculty to take the equipment out to the field.

The weather station will be located on the roof of the Cheeseman ESA lab or on the roof of the Kirsch Center (location to be determined prior to purchase).

The tracking stations will be located in the Cheeseman ESA next to the plant communities in this arboretum. This is a locked environment.

There is sufficient space to store this equipment in the locations explained above and the space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Biodiversity Specialist
2. Environmental Education and Nature-Based Learning
3. Environmental Stewardship
4. Wildlife Corridor Technician

2.b. How Will The Equipment Improve Student Learning Or Student Services?

The refresh of this equipment will provide students an opportunity to observe and understand how the natural world works and the connections in nature and themselves. Students recognize multifaceted career options through using the various field tools in completion of their courses. Some of these different career options are: wildlife tracking, camera trapping techniques, data acquisition and analysis, GIS software analysis techniques for map creation, public advocacy and social justice, working with non-profits and local governments and agencies, etc.

2.c. What Data Or Evidence Supports Your Request?

Environmental Studies Program Review Data reveal that there has been an increase in the number of underrepresented students for the targeted populations. Underrepresented student enrollment has continued to increase for each successive year from 07/08 (444 students), 08/09 (617 students), and 09/10 (675 students). The Coyote Valley is located in south San Jose, an area of potential social justice concern. As the program has grown, so has interest in this special place. Many of ES students live near or travel through the Coyote Valley and thus are especially drawn to the Wildlife Corridor Technician program.

Statewide employment projections for Environmental protection and conservation technicians will be strong, with 570 annual openings in California for the period 2008 through 2018. It is expected that the employment opportunities for individuals with these skill sets will continue to grow as public and private organizations implement environmental protection regulations. Through internship opportunities and field experiences in which students collect, record and analyze field data they will be more successful in the employment process.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes, see SLOs listed below.

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, Ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Wildlife Corridor Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and

ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

Wildlife Corridor Technician – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY11-12

BHES MLT | HTEC mini vidas analyzers

DeAnza College

(32)

Request for Measure C New Equipment Funding
For the Three-Year Period 2011-2014
Furniture, Fixtures & Equipment (FF&E)

$ 39,868 -

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: HTEC **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/17/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments),

determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Mini Vidas chemistry analyzers x 2
http://www.biomerieux-diagnostics.com/servlet/srt/bio/clinical-diagnostics/dynPage?open=CNL_CLN_PRD&doc=CNL_PRD_CPL_G_PRD_CLN_81&pubparams.sform=1&lang=en

1. b. How Will The Equipment Be Used?

The equipment will be used by Medical Laboratory Technology students to better prepare them for the demands of the present and future healthcare workforce.

1.c. Can The Equipment Be Shared With More Than One Discipline?

No

1.d. What Is The Anticipated Annual Cost Of Maintenance?

There is no cost associated with annual maintenance of requested items.

1.e. Where Will It Be Located? Is There Sufficient Space?

2- Mini Vidas chemistry analyzers – S-73

Yes, there is sufficient space for these requested items.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support
Medical Laboratory Technology

2.b. How Will The Equipment Improve Student Learning Or Student Services?
The updated equipment will help prepare students for the present and future healthcare workforce.
The requested analyzers are needed to provide MLT students with the latest laboratory technology.

2.c. What Data Or Evidence Supports Your Request?
Both Health Technology and MLT Advisory groups have indicated that our programs need updated state of the art equipment in order to prepare students for the workforce today and that of the future.
The 2 instruments requested by the MLT program are replacements for instruments donated to the program 8 years ago. The donated instruments are no longer supported by the manufacturer. There is no availability to reagents, controls or calibrators for student testing. They are no longer functional. The new technology requested is currently being used in laboratories today and our students need to be exposed to this technology.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
The 2 instruments requested by the MLT program, will expose students to the latest technology used in laboratory testing. This will help prepare them for the present day and future workforce.

3.a.ii. Administrative Unit Outcomes?
N/A

3.a.iii. Student Services Outcomes?
N/A

3.a.iv. Program Level Outcomes?
The Program Level Outcomes for the MLT program is to adequately prepare the students to pass a national certification examination required to be employed in California. By the addition of these replacement instruments, students will be exposed to the latest technology and develop the skills needed to pass the certification examination.

3.b. How Will Outcomes Be Measured For Future Planning?

Outcomes will continue to be measured by assessment, certification examination results and exam pass rate.

3.c. What Evidence Supports Your Requests?

Santa Clara Labor Market statistics from EDD indicate a strong growth rate for Health Technology and Medical Laboratory Technician positions.

President Obama's healthcare reform will require additional trained healthcare professionals.

FY 11-12

BHES HTEC phlebotomy chairs

(33)

DeAnza College

$1,860

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department: HTEC **Request # (as per spreadsheet)**

Dean/Manager's Name: Anita Muthyala-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/17/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the

unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. Phlebotomy chairs

1. b. How Will The Equipment Be Used?

Phlebotomy chairs are standard equipment needed to properly train students in the collection of blood samples by venipuncture and skin puncture.

1.c. Can The Equipment Be Shared With More Than One Discipline?

No

1.d. What Is The Anticipated Annual Cost Of Maintenance?

There is no cost associated with annual maintenance of requested items.

1.e. Where Will It Be Located? Is There Sufficient Space?

1. Phlebotomy chairs – S-74

Yes, there is sufficient space for these requested items.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support
Health Technology (Phlebotomy)

2.b. How Will The Equipment Improve Student Learning Or Student Services?
The updated equipment will help prepare students adequately for the present and future healthcare workforce.
Additional phlebotomy chairs are needed to more efficiently accommodate students enrolled in De Anza College's phlebotomy program. The number of students performing phlebotomy is limited by the number of phlebotomy chairs currently available. Additional phlebotomy chairs will mean students will have more opportunity to practice venipuncture and skin punctures. This will lead to improved student learning.

2.c. What Data Or Evidence Supports Your Request?
Phlebotomy chairs are a safety and ergonomic must when properly training a student in the technique of venipuncture.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?
The phlebotomy chairs are needed for students to master the correct procedure/technique for venipuncture and skin puncture.

3.a.ii. Administrative Unit Outcomes?
N/A

3.a.iii. Student Services Outcomes?
N/A

3.a.iv. Program Level Outcomes?
The Program Level Outcomes for the phlebotomy program is to adequately prepare the students to pass a national certification examination required to be employed in California.

3.b. How Will Outcomes Be Measured For Future Planning?
Outcomes will continue to be measured by assessment, certification examination results and exam pass rate.

3.c. What Evidence Supports Your Requests?

Santa Clara Labor Market statistics from EDD indicate a strong growth rate for Health phlebotomy positions.

President Obama's healthcare reform will require additional trained healthcare professionals.

FY11-12

BHES ES

DeAnza College

34
35
36

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

34 Solar pathfinders $ 825 -

35 SunEye PV class $ 2,500

36 PV lab equip $ 15,000

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 4

Dean/Manager's Name: Anita Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

Careful analysis by all of the faculty and staff was conducted to determine the minimum critical needs for the Environmental Studies department. Instructors and staff of all five certificate/degree areas provided input to these requirements. The requested goods support one or more of the five certificate/degree programs in the ES department. The requested goods maintains or enhances current student learning objectives of our instructional mandate.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. Three (3) Solar Pathfinders for our indoor/outdoor Energy labs (KC239).
2. One (1) SunEye for Photovoltaic classes.
3. One (1) Miscellaneous purchases of PV (Photovoltaic) equipment: demonstration inverters, lighting displays, and other software and hardware identified by the Energy Management faculty.

These items will be used for the Energy Management program which now has an additional outdoor lab (west end of the Kirsch Center), as well as the use of KC 239 as the Statewide Energy Management Lab.

Lab classes have been added to the curriculum and will commence in Winter 2012. Students will be using the entire De Anza campus for training and will need hands-on equipment, as well as classroom software and equipment. This equipment needs to be added in order for our students to be gain a marketable skill that has a high current and future demand in the field of clean energy and energy analysis.

1.b. How Will The Equipment Be Used?

Energy Management faculty are currently developing the class training processes and are including equipment that needs to be purchased so that students will be able to complete their data collection and analysis processes. The Energy Management program has been awarded a small grant through the Silicon Valley Energy Watch Program what will allow for the purchase of some minor equipment needs but not for capital equipment, in particular, such as the SunEye photovoltaic equipment. Students will use the Kirsch Center and the De Anza campus as "living" labs in assessing energy usage data and developing skills for developing energy management reports and recommendations for transitioning to the Silicon Valley workforce.

1.c. Can The Equipment Be Shared With More Than One Discipline?

The equipment needed for the Energy Management program will not be used by other disciplines as it is specific to determining energy usage data, photovoltaic sun angles and other energy specific measurements. It is possible that some areas in PSME might have an interest in developing a lab class in the future that would periodically request the use of some equipment.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

There is no anticipated annual cost of maintenance.

1.e. Where Will It Be Located? Is There Sufficient Space?

The equipment will be located in KC 239, Statewide Energy Management Lab or in KC 241, Lab Prep room.

The space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Energy Management and Climate Policy

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Students who complete the Energy Management course work will be able to investigate and communicate the relationships between energy management/climate policy and ecological principles and evaluate the role of energy management in fostering a sustainable society. They will also be able to demonstrate their understanding of energy management principles, laws of thermodynamics, effective design of energy systems and sustainable society utilizing energy management systems. By incorporating the new curriculum for Lab courses in Energy Management, students will be using the tools of the industry, thus providing them the ability to be immediately of value to hiring companies and not require additional training.

2.c. What Data Or Evidence Supports Your Request?

Currently, Energy Management faculty need to borrow equipment for demonstration purposes from Acterra, a non-profit organization that provides home energy audits, or from the Pacific Energy Center (PG&E) in San Francisco, which has a Tool Lending Library. In both cases, the ability to borrow in time to coincide with class activities and lecture is critical and sometimes cannot be met. With the addition of new curriculum for Energy Management Lab courses commencing in Winter 2012, we now need to purchase items that will enable our students to have on-going access to the tools required for the lab classes and which will significantly enhance student ability to qualify for work in the Energy Management field, as employers will want to hire from those people who are already familiar with the equipment of the Energy Management field.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Students who complete the Energy Management course work will be able to demonstrate:

- an understanding of energy efficiency principles, economic analysis, auditing techniques and a sustainable society utilizing energy efficiency practices
- knowledge of energy efficiency principles, properties of building materials, basic principles of solar orientation, sustainable building practices and sustainable society utilizing energy efficient building practices
- an understanding of the principles of renewable energy generation, economic analysis and a sustainable society utilizing renewable energy generation
- an understanding of energy efficiency principles, laws of thermodynamics, effective design of HVAC systems and a sustainable society utilizing energy efficient HVAC systems

With the new curriculum for Lab courses in Energy Management, students will be using the tools of the industry, thus providing them the ability to be immediately of value to hiring companies and not require additional training.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Students who complete the Energy Management course work will be able to investigate and communicate the relationships between energy management/climate policy and ecological principles and evaluate the role of energy management in fostering a sustainable society. They will also be able to demonstrate their understanding of energy management principles, laws of thermodynamics, effective design of energy systems and sustainable society utilizing energy management systems. By incorporating the new curriculum for Lab courses in Energy Management, students will be using the tools of the industry, thus providing them the ability to be immediately of value to hiring companies and not require additional training.

3.b. How Will Outcomes Be Measured For Future Planning?

The Energy Management faculty will meet to discuss student academic success and student learning outcomes. The Energy Management Advisory Board will assist in developing specific employment criteria and providing input on skill needs to help our students to remain vital and employable.

3.c. What Evidence Supports Your Requests?

Communication on campus with OTI and off-campus with EDD (unemployment office) and non-profit entities in the Energy and Clean Tech industries provides on-going input to career paths and training needs. News articles are currently trending that returning military veterans will be highly employable due to their extensive training in high-tech tools and energy efficiency awareness.

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY11-12

BHES ES

37
38
39
40

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

37 printer - SEC $ 1,361
38 printer - WC241 $ 1,361
39 high volume printer $ 4,000
40 scanner $ 2,000

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 32-35

Dean/Manager's Name: Anita Kandula **Signature:** AMK

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

Careful analysis by all of the faculty and staff was conducted to determine the minimum critical needs for the Environmental Studies department. Instructors and staff of all five certificate/degree areas provided input to these requirements. The requested goods support one or more of the five certificate/degree programs in the ES department. The requested goods maintains or enhances current student learning objectives of our instructional mandate.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. One (1) HP 4105N Printer for the Stewardship Resource Center (SRC).
2. One (1) HP 4105N Printer for the Data Room (KC241).
3. One (1) HP 9040N Hi-Volume Printer for the ES Department Office (KC217).
4. One (1) Scanner (District recommended style) for full department use.

The printers are old in the Environmental Studies department and impact faculty and staff ability to function efficiently. The printer in the Stewardship Resource Center is a refurbished printer provided by ETS; the printer is in excess of 5 years old and is in need of more repair.

1.b. How Will The Equipment Be Used?

1. One (1) HP 4105N Printer for the Stewardship Resource Center (SRC) is used for students each quarter doing research, research papers, presentations, completing class assignments to turn in and lab and lecture make up work. Students from the entire campus come to the Stewardship Resource Center and request use of the printer for their assignments – we honor all requests for student access to the printer, when the printer is working.
2. One (1) HP 4105N Printer for the Data Room (KC241) is used for printing out weekly, monthly and quarterly reports from the field data.
3. One (1) HP 9040N Hi-Volume Printer for the ES Department Office (KC217) is used daily by all faculty and staff for all department printing needs.
4. One (1) Scanner (District recommended style) for full department use, used for creating soft copy files from hard copy versions and for storage of ESA and Kirsch historic documents. It is often more efficient to scan and email documents than to print and fax (and is environmentally preferable).

1.c. Can The Equipment Be Shared With More Than One Discipline?

This equipment would be resident (hard-wired) in the Kirsch Center. Networked systems can be used by more than one area on campus.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

District standard equipment is maintained by ETS; if there is a cost of maintenance, ETS would need to determine that at time of purchase.

1.e. Where Will It Be Located? Is There Sufficient Space?

There are designated spaces for the requested equipment and the space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

The programs that will be directly supported are the degree and certificate programs available in Environmental Studies:

Biodiversity Specialist
Energy Management & Climate Policy
Environmental Compliance & Pollution Prevention
Environmental Stewardship
Environmental Education & Nature-Based Learning (certificates)
Wildlife Corridor Technician (certificates)

Additionally, the Stewardship Resource Center and the Kirsch Center are utilized by students from all disciplines as a study and group interaction area. All students are provided computer and printing support, as needed and when the equipment is available.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Students often do not have the office tools necessary to meet instructor and course requirements. By providing a place for researching and writing their assignments and then printing them out, we are assisting students in completing their courses successfully. Providing tools, resources and student mentors for the diverse De Anza student population assists in student success in attaining course completion, transfer and career technical degrees and certificates.

2.c. What Data Or Evidence Supports Your Request?

The Stewardship Resource Center has been providing computer access and printing ability since it opened in Fall 2005. The equipment was old and well-used at that time it was given to the Kirsch Center and needs to be replaced in order to continue to meet student needs and ensure student success.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes, student learning outcomes for all disciplines on campus will be met because students will have the tools necessary for completion of assignments, whether printed or

emailed to instructors. The software that is needed is also resident on the computers (Word, Excel, Powerpoint, pdf, etc.)

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Yes, program level outcomes for all disciplines on campus will be met because students will have the tools necessary for completion of assignments, whether printed or emailed to instructors. The software that is needed is also resident on the computers (Word, Excel, Powerpoint, pdf, etc.)

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured for students in the ES and ESCI courses. We do not have a means to measure student success for those from other disciplines such as Language Arts, PSME, Intercultural Studies and Biology.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

We do not have a means to measure student success for those from other disciplines such as Language Arts, PSME, Intercultural Studies and Biology.

FY 11-12

BHES ES

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DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

41 video cameras $5,000

42 microphons $1,000

43 Digital cameras $1,500

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 6

Dean/Manager's Name: Anita Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.
The faculty and staff of three of our certificate and degree programs (Stewardship, Biodiversity and Pollution Prevention) determined the equipment necessary to achieve the critical needs for the students in these three programs. A second meeting was held with the faculty and staff of all five certificate/degree programs to meet consensus of the recommendations for equipment listed in this document (see 1.a.) A thorough discussion of the current and future growth of these programs was conducted to determine equipment needs for the next 3-5 years.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. Two Video Cameras.
2. Two external microphones for video cameras
3. Three digital cameras.

These three items are a combination of replacement (2) and new (1) requests.

1.b. How Will The Equipment Be Used?

Hands on equipment for energy management, wildlife corridor technician, and pollution prevention programs will help in the training of our students. With the addition of Energy Management labs and Wildlife Corridor Technician field clinicals the need to record field data becomes more important. Students will become familiar with recording data and also reviewing filmed student and field experiences.

1.c. Can The Equipment Be Shared With More Than One Discipline?

They will be shared within the three Environmental Studies programs: Stewardship, Biodiversity and Pollution Prevention. They can also be used internally for the Environmental Studies Environmental Education and Nature-Based Learning and Energy Management disciplines.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

~$1,000.00 There may be extended warranties available at the time of purchase. If these are appropriate to the equipment and advised by experts on the De Anza campus, they would be purchased.

1.e. Where Will It Be Located? Is There Sufficient Space?

All equipment will be locked in a metal cabinet in KC221 (office); sufficient space is available and an authorized sign out procedure is in place.

The space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Biodiversity Specialist
2. Environmental Education and Nature-Based Learning
3. Environmental Stewardship
4. Wildlife Corridor Technician
5. Pollution Prevention
6. GE Transfer Courses

2.b. How Will The Equipment Improve Student Learning Or Student Services?

The refresh and addition of this equipment will provide students with technology to obtain a digital record of observations and experiences within their discipline. Hands on equipment for new energy management, wildlife corridor technician, and pollution prevention programs will help in the training of our students. Overall, in Program Review, it is anticipated that the cost of this equipment will be $325,000.

Students need to be able to record field activities and data acquisition and to be able to review and critique individual and team interaction in field settings. Archived film data will be invaluable to completing the student learning process because this will enhance the number of learning settings.

2.c. What Data Or Evidence Supports Your Request?

Faculty and students explore the use of technology in all aspects of the ES and ESCI courses and programs. With the rapid growth of technology tools has come a need to adapt and change. For example, the field data processes and Rapid Assessment Method of the Wildlife Corridor Technician program have resulted in changes in data acquisition and assessment processes in the wildlife field (consultant and agencies data protocols). With the addition of 2 new faculty to the ES Dept and the creation of new lab classes in the Energy Management program and the Wildlife Corridor Technician program, it is anticipated that there will be additional need for these technology tools. . These supplies are needed for student success of the SLO's and goals set for the students in our Environmental Studies department.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning,

ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Wildlife Corridor Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Environmental Compliance and Pollution Prevention – Identify and interact with the key stakeholders in environmental compliance, pollution prevention and environmental health and justice, including the public, environmental and resource agencies, agriculture and industry, and non-profits to enhance global, cultural, social and environmental well-being

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

Wildlife Corridor Technician – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape

ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

Environmental Compliance and Pollution Prevention – Students will investigate and communicate the relationships between environmental law, protection, and pollution prevention and apply the knowledge gained to environmental solutions.

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY11-12

BHES ES

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DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

44 speakers $400
45 microphone $1000
46 mic. parts $600
47 projector $2000

REQUIRED SIGNATURES

Division: BHES

Department: Environmental Studies **Request # (as per spreadsheet)** 39-42

Dean/Manager's Name: Anita Kandula **Signature:** AMK

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

The ES Dept has expanded the teaching spaces utilized in the Kirsch Center and the Cheeseman ESA to include all indoor and outdoor spaces. From an evening slideshow presentation of Tule Elk to guest speakers in the Stewardship Resource Center, there has been a need for equipment to support these types of activities. Speakers, microphone and projectors would support the needs of faculty, staff, students and guest lecturers such as government officials, agency representatives, non-profits, authors,

researchers and the public. We have two microphone systems for KC 115, but the equipment is old and some of it needs to have replacement parts in order to prolong lifetime.

Careful analysis by all of the faculty and staff was conducted to determine the minimum critical needs for the Environmental Studies department. Instructors and staff of all five certificate/degree areas provided input to these requirements. The requested goods support one or more of the five certificate/degree programs in the ES department. The requested goods maintain or enhance current student learning objectives of our instructional mandate.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

1. Two speakers, portable, indoor/outdoor.
2. Two portable microphones.
3. One set of microphone parts.
4. Two projectors; either portable or fixed.

1.b. How Will The Equipment Be Used?

Equipment will be used to facilitate lectures and presentations in non-classroom spaces in the Kirsch Center and outside of it and in the Cheeseman ESA and in the new PV lab which is at the west end of the Kirsch Center. The Kirsch Center and the Cheeseman ESA are routinely sought as a focus of K-12 student tours. The equipment requested will meet increasing De Anza student needs and also community / student tour needs. The outreach efforts encourage future students to consider De Anza as their college of first choice. A minimum of 1,500 outreach / K-12 students visit the Kirsch Center and Cheeseman ESA each year.

1.c. Can The Equipment Be Shared With More Than One Discipline?

They will be shared within all five Environmental Studies programs: Stewardship, Biodiversity and Pollution Prevention, Environmental Education and Nature-Based Learning and Energy Management disciplines. This equipment could be shared with other areas on campus.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

N/A

1.e. Where Will It Be Located? Is There Sufficient Space?

All equipment will be locked in a metal cabinet in KC221 (office); sufficient space is available and an authorized sign out procedure is in place. The space for this equipment has been agreed upon by our entire department.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

1. Biodiversity Specialist
2. Environmental Education and Nature-Based Learning
3. Environmental Stewardship
4. Wildlife Corridor Technician
5. Pollution Prevention
6. GE Transfer Courses

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Students learn in many different settings. The ability to accommodate lectures and presentations in non-classroom spaces in the Kirsch Center, the outdoor areas surrounding the Kirsch Center and the Cheeseman ESA will enhance and enlarge the student experience. When Julie Phillips gave a lecture and a slide show presentation on Tule Elk as free-roaming herds, students were particularly engaged because this was done on a warm summer night in the outdoor classroom between the Kirsch Center and the Cheeseman ESA. The outdoor experience enhanced the connection with the wildlife discussion.

2.c. What Data Or Evidence Supports Your Request?

Hands on equipment for energy management, wildlife corridor technician, and pollution prevention programs will help in the training of our students. This lecture / presentation equipment will be utilized by faculty and students and result in more sharing of information in group settings. The growth of students taking classes in the Environmental Studies department has grown steadily year after year and is why we have to expand our learning spaces beyond the classrooms at Kirsch and the Cheeseman ESA.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Biodiversity Specialist – Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning – Students will investigate and communicate the relationship between environmental education, nature-based learning, Ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Wildlife Corridor Technician – Examine the data analysis equipment and processes used in wildlife corridor technology in the field. Apply the corridor ecology and connectivity concepts and techniques (including the rapid assessment methodology) to local and statewide corridor case studies to develop strategies in creating and implementing community based, collaborative efforts to preserve, protect, and restore native species, ecosystems, and the landscape.

Environmental Compliance and Pollution Prevention: Students will investigate and communicate the relationships between energy management / climate policy and ethic justice principles, ecological principles and evaluate the role of energy management in fostering a sustainable society. Students will demonstrate an understanding of energy management principles, laws of thermodynamics, effective design of energy systems and a sustainable society utilizing energy management systems.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Biodiversity Specialist - Students will utilize scientific and ecological principles to evaluate genetic, species, and ecosystem biodiversity, and causes of biodiversity loss, and ways to conserve biodiversity.

Environmental Education and Nature-Based Learning - Students will investigate and communicate the relationship between environmental education, nature-based learning, ecosystems thinking, ecological literacy, stewardship, leadership and team building and environmental protection and stewardship of the Earth's natural resources.

Environmental Stewardship – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science

and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

Environmental Compliance and Pollution Prevention: – Students will investigate and communicate the relationships between environmental law, protection, and pollution prevention and apply the knowledge gained to environmental solutions.

Wildlife Corridor Technician – Students will investigate the practice and technology of wildlife corridors (connectivity or linking landscapes). Students will utilize the environmental science and ecological terminology concepts and principles of corridor ecology, landscape ecology, and ecosystem (adaptive) management as branches of the science and the rapid assessment methodology (RAM) developed at De Anza College.

3.b. How Will Outcomes Be Measured For Future Planning?

Based on student team or individual assessments (presentations and/or projects) student success will be measured.

3.c. What Evidence Supports Your Requests?

Quarterly SLOs measure student completion and success. Based on past student performance and future measurements, it is anticipated that the need for the specialized equipment will continue. Since Fall 2010, the ES Dept has maintained documentation demonstrating student success to SLOs.

FY 11-12 BHES BIOL Otoscopes

DeAnza College $880 -

(43)

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 10, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES

Department: Biology **Request #**

Dean/Manager's Name: Anita Muthyal-Kandula **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**:

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Eight (8) combination otoscopes/ophthalmoscopes for examining the ears and eyes during laboratory activities.

1.b. How Will The Equipment Be Used?

The oto/ophthalmoscopes will be used by students in Biology laboratory classes to examine each other's ears and eyes. This will assist students in learning the anatomy of the ears and eyes, and will give students experience with a "real world" medical examination technique.

1.c. Can The Equipment Be Shared With More Than One Discipline?

The equipment will be shared between instructors within the Biology department.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

N/A

1.e. Where Will It Be Located? Is There Sufficient Space?

The instruments will be stored in the Biology stockroom in Building SC2. The instruments are relatively small and can fit in a drawer.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

The equipment will support students in many of the high-enrollment Biology courses. The devices will be implemented most immediately in our Human Biology and Anatomy and Physiology courses, which predominantly serve students interested in health science careers. The devices are also highly relevant to the content in our General Biology courses for majors and non-majors, which typically include coverage of sensory organs.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Students in our Biology classes presently learn about the anatomy of the ear and eye using plastic models and diagrams from the book. Oto/ophthalmoscopes would allow students to safely observe many ear and eye parts on their own bodies, and see those parts in their living/working forms. This would create a more engaging and authentic way to learn anatomical parts. Using the devices would also give students experience with a real world medical examination technique that some of them might have to apply in their future careers.

2.c. What Data Or Evidence Supports Your Request?

In preparation to revise our Human Biology laboratory curriculum, students in Human Biology classes took an anonymous survey regarding their lab experiences in Winter 2011. When asked what aspects of labs were most helpful in advancing their learning of Human Biology, the top responses included "hands on" labs where "teamwork" was specifically incorporated to better "understand health careers." This largely backs up studies of student learning showing that student directed activities with real life applications enhance learning and retention. The requested devices would be a perfect addition to our labs we as attempt to revise them to enhance student engagement and learning.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

The following course-level SLOs could be addressed using this equipment:

BIOL 10
Outcome 1:
Evaluate the correlation of structure and function in plants and animals.

BIOL 11
Outcome 1:

Investigate the forms and functions of selected human organ systems from the molecular/cellular level to homeostasis at the organismal level.

Outcome 2:
Use scientific reasoning to evaluate the biological principles underlying current human health dilemmas, such as the causes of disease, use of biotechnologies, management of epidemics and public health, ecological/environmental health, and social health inequities.

BIOL 40B
Outcome 3:
Apply the structural organization of the nervous system to how it processes information.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

The Biology Department's PLOs ask students to contrast the forms and functions of biological systems, and to demonstrate the ability to use scientific reasoning. Obtaining oto/ophthalmoscopes would allow students to contrast form and function of ear and eye parts, and would require students to demonstrate scientific reasoning by using evidence from readings and lectures to identify parts observed.

3.b. How Will Outcomes Be Measured For Future Planning?

The Biology Department has an excellent record of assessing SLOs, with over 60% of our active courses either having officially started or fully completed an assessment cycle. The Human Biology laboratory revision project is also being separately evaluated with pre and post assessments of student attitudes and learning.

3.c. What Evidence Supports Your Requests?

When asked in an anonymous survey what aspects of labs were most helpful in advancing their learning of Human Biology, De Anza students' top responses included "hands on" labs where "teamwork" was specifically incorporated to better "understand health careers." This largely backs up studies of student learning showing that student directed activities with real life applications enhance learning and retention.

FY 11-12 BHES BIOL carolina sides $1,056

(49)

DeAnza College

Request for Measure C New Equipment Funding For the Three-Year Period 2011-2014 Furniture, Fixtures & Equipment (FF&E)

Please read the *Measure C FF& E Spending Guidelines* to determine what can be purchased with these funds.

The request comprises of three parts. All three parts must be completed:

Part 1 – Division Process for Preparing Request for Measure C Funding

Part 2 – Narrative Supporting Request (See questions below.)

Part 3 – Measure C – Budget & Item Detail (See separate Excel Spreadsheet)

IMPORTANT DATES:

Due Date: **November 22, 2011**
Allocation Date: **February 2012**

REQUIRED SIGNATURES

Division: BHES-WE

Department:BIOLOGY **Request # (as per spreadsheet)**

Dean/Manager's Name: ANITA MUTHYALA-KANDULA **Signature:**_____

E-mail: kandulaanita@fhda.edu **Date**: 11/3/11

PART 1 – DIVISION PROCESS

1. Please Describe Your Division Process For Preparing Your Request.

We work as a consensus group. The coordinators are all Dept Chairs or Program Coordinators for the Divisions programs and departments. They work together to reach a consensus on which of their own areas priorities/needs is most important for the Division as a whole at a particular point in time. When circumstances change, so do needs. Plus, the unexpected does happen. Working as a group, we can respond to those issues if and when they arise. The criteria is to have those most familiar with their

program/department needs (and all the other assessments), determine what is important. Then, as a group, we come to consensus when resources are restricted.

PART 2 –NARRATIVE

Please answer all questions. Put N/A if questions don't apply.

1. Please Describe Your Measure C Project

1.a. Summarize What Is Being Requested

Prepared biological microscope slide collection

1.b. How Will The Equipment Be Used?

Permanent specimens for biology class lab observations.

1.c. Can The Equipment Be Shared With More Than One Discipline?

Possibly by Health and Environmental Sciences.

1.d. What Is The Anticipated Annual Cost Of Maintenance?

None.

1.e. Where Will It Be Located? Is There Sufficient Space?

SC-2108. Yes, space is sufficient.

2. What Programs And Disciplines Will The Project Support?

2.a. List The Programs/Disciplines That The Equipment Will Support

Primarily the Biology major program and core courses offered every quarter. But will also be used to support and expand activities in the non-major courses.

2.b. How Will The Equipment Improve Student Learning Or Student Services?

Accessibility to real specimens of a broad variety of plants, animals, and fungi greatly increases student enthusiasm for biology topics and strongly enhances comprehension of abstract concepts and unfamiliar life forms. Microscopy slides of real organisms that can be examined at different magnifications are necessary to comprehend and appreciate variations of physical forms and their respective functions.

2.c. What Data Or Evidence Supports Your Request?

Students demonstrate increased attention, discussion and peer communication when provided real specimens.

3. Will The Project Support Student Learning Outcomes Or Other Outcomes?

3.a.i Student Learning Outcomes?

Yes. Students will be much better equipped to evaluate the correlation of structure and function in living organisms; to contrast the structures used in processes of taxonomy, to analyze and compare the common physiological processes across higher taxonomy, and to apply the principles of the scientific method to studies in comparative biology research.

3.a.ii. Administrative Unit Outcomes?

N/A

3.a.iii. Student Services Outcomes?

N/A

3.a.iv. Program Level Outcomes?

Yes. Lead students in an understanding of life science concepts that will enable them to make informed decisions about global, cultural, social and environmental issues. Provide students through an appropriate array of biological courses opportunities to acquire a solid academic foundation, develop communication and expression skills and critical thinking skills upon which to become successful in their pursuit of further education, career goals and to become life-time learners.

3.b. How Will Outcomes Be Measured For Future Planning?

Increased success rates in biology core courses and increased enrollment in biology special projects.

3.c. What Evidence Supports Your Requests?

Students currently utilize microscope slides to successfully examine biological form and function. But many of our decades-old specimens are showing excessive wear and breakage, and students are sometimes frustrated by the lack of sufficient number of specimens and diversity of types.