

INSTRUCTIONAL EQUIPMENT REQUEST

Due in Dean/Unit Head's Office on September 19, 2011 (FALL) and March 1, 2011 (SPRING)

The Definition of Instructional Equipment can be found in the California Community College's Budget and Accounting Manual. A copy of these definitions is on the PBC webpage:
<http://grapevine/pbc/InstructionalEquipment.php>

Name of Requestor: Barbara Zingg
Division/Unit MSEPS

Brief title of request (equipment or materials being requested must be similar, related or part of a system.) UNICO Petri Dish Racks

Request amount (unit cost and total cost including tax and shipping. Please include all costs including installation, modification to existing facilities to accommodate new equipment, etc.): This should come from the vendor quote.

| | |
|-------------------------|--------------------|
| Item(s) Cost | \$ 1,012.58 |
| Tax (0.0875) | \$ 88.57 |
| Shipping | \$ 0.0 |
| Installation | \$ 0.0 |
| Facilities Modification | \$ 0.0 |
| Other | \$ 0.0 |
| | \$ |
| Total Cost | \$ 1,100.85 |

Attach copy of quote(s), estimate(s) and requisition(s):
(Must attach quote & requisition; absence of either will delay processing)

Brief description of specific equipment or materials requested and what they will be used for: (include the # pieces being requested; i.e.: 10 crayola crayons, sky blue, etc. in 250 words or less)

25 UNICO Petri Dish Racks

We are requesting 25 stackable Petri dish racks to contain and organize the Petri dishes used regularly in Microbiology 1, Biology 1, and frequently by other Biology classes, including multiple sections of Biology 31. Petri dishes are shallow plates containing solid agar media used to grow and test numerous types of bacteria that we demonstrate for students, who need to transport, organize, and store the plates in a safe and efficient manner.

Is this in your Program Review? Yes No

Our request clearly supports three aspects of the Biology Program Review. One objective is to repair, replace, or update broken or outdated equipment, teaching materials, furniture, and technology. Another goal is to "Purchase equipment and supplies as needed to meet high program teaching standards and lab prep efficiency." The Biology Program Mission is to provide excellence in teaching and opportunities in learning for a wide variety of course and career goals in biology. All of our students in career technical transfer, majors, and general education pathways need to use Petri dishes to complete many of their lab assignments. Doing so in a safe and organized manner is commensurate with this mission.

Is it a replacement? Yes

Upgrade? Yes

New technology? Yes

Please explain?

The LPC Microbiology program has doubled since its inception, and many other sections of Biology have been added since the opening of the science building, increasing the burden on the racks that are in use. In addition, many of the old racks are visibly covered with rust, making them a hazard to touch; these cannot be trusted to safely hold or carry the Petri dishes. Small flecks of rust easily make their way into open Petri plates, contaminating and sometimes negatively affecting a student's work. Therefore, we not only have unserviceable racks – we also have too few. Replacing 15 of the old racks is the most urgent, and ten more will be added to reduce the burden.

Following is the evaluation criteria; please see corresponding Instructional Equipment Rubric.

Instructional and Service Impact

How will this item have a positive impact on instruction and/or teaching and learning in the classroom? Is this for use by the Instructor or students, or both?

New Petri dish racks definitely will have a positive impact in the Biology and Microbiology classrooms because students, technicians, and instructors will have more access to essential equipment needed for the growth and maintenance of bacterial cultures. Live bacterial culture plates are needed by more than 100 Biology students on a regular basis, and by another 1,100 students occasionally. Students in Microbiology and Cell Biology (Biol 1) have to grow live bacterial cultures regularly in order to fulfill the requirements for their courses. These students represent career technical and majors pathways, and to a lesser degree the general education pathway. The safety of the students and laboratory personnel should be our chief concern and has been addressed in depth in our program review. The current racks pose a safety hazard especially when students are working with potential pathogenic microorganisms required in the course.

Impact on Enrollment

Will the equipment impact enrollment, attract or increase the number of students participating in a course or program?

By creating a maximally effective learning environment that is safe for both students and support personnel, all biology courses, and in particular the Microbiology and Cell Biology courses, will continue to be attractive. Many students are required to take these courses, so year after year they are filled to capacity, usually with many more students wanting to add. Well equipped laboratories that provide safe hands-on learning to all students bring recognition to our programs and therefore enhance the image of the College in the community.

Access

How does this item promote the principles of universal design, by providing opportunities for under-represented populations & accommodate students with diverse learning styles?

Petri dish racks are consistent with universal design because they are easy to load and use in dispensing the plates. Since they are stackable, the limited storage space available in our science building is more efficiently organized. Because of an ergonomic handle on the Petri dish racks, and straightforward loading and dispensing access, any member of the classroom will be able to easily use and carry them.

In order to encourage visual and kinesthetic learning, growing bacterial cultures in a laboratory setting is a core component of any Microbiology or Cell Biology course. If safe transport and storage racks are not available, the appropriate laboratory procedures cannot be followed and students will have limited hands-on learning.

Outcomes

How will this equipment enable or enhance SLOs? What are the consequences related to learning outcomes if request is not funded?

The Student Learning Outcome for all Biology courses with a laboratory component is "Gain hands-on experience with and demonstrate proficiency in standard biological techniques, using industry-level biology laboratory equipment and/or discipline-specific computer hardware and software."

Although Petri dish racks are not high tech equipment, they are an essential and basic component of any biology laboratory setting. Students need to gain hands-on experience in growing live microbial cultures and they should be allowed to do so in a safe environment.

The Student Learning Outcome for growing live bacterial cultures is "proficiency in growing and maintaining live bacterial cultures in a safe manner". The Petri dish racks are mandatory to support this SLO.

By not funding this request, the safety of the students and the lab personnel will be compromised, as plates containing live cultures will not be transported and stored in the safe containment of racks. Abandoning the use of Petri plates in microbiology and cell biology is not an option, as they are the academic and industry standard, and are needed to fulfill the necessary SLO.

Total Cost of Ownership (This is an attempt to identify what the ongoing costs of purchasing this equipment will be to the institution)

- a) What is the lifespan of the equipment? 5 years? 10 years? 20 years?
- b) Is there sufficient current/planned space available for the storage and use of this equipment? If so, where will it be housed? If not, is there a proposed location and are there any costs associated with installation or modifications to the space?
- c) Are there operating costs and how will they be covered by the department?
- d) What will be required to maintain the equipment, such as regular servicing or upkeep? Who will perform maintenance, and what will the estimated costs be?

a) Current models of racks, with no exposed metal surfaces, should withstand a 10-year lifespan. The only reason why they might not make the 20 year mark is if they are not regularly cleaned and disinfected.

b) There is sufficient current space for the racks. Although the total number of racks will be greater than the current number, some space is expected to be freed because the new racks are stackable.

c) There are no operating costs

d) The only maintenance involves – as mentioned above – cleaning and disinfecting the racks. This is standard operating procedure both in the course and in the prep room, involving students and technicians for no additional cost.

Visibility/Profile within Community

Is this a “flagship” item that will bring recognition/notoriety to the College or raise the stature of the program? Will it attract students and/or enhance the image of the College in the community because of its rare, one-of-a-kind status?

This is not a flagship item; however, clean and adequate numbers of Petri dish racks are a basic necessity in every laboratory that cultivates life microorganisms. In this respect, it is worth reiterating that well equipped, safe laboratories that provide hands-on learning to all students bring recognition to our programs and therefore enhance the image of the College in the community as well as attract students.

Commitment to Sustainability

How does this equipment exceed basic sustainability goals and encourage renewable resources at the College? Is the design/operation of this item in keeping with the College's commitment to sustainable practices?

I could not find the exact specifications of the materials used for the proposed racks, so cannot speak to the potential use of recycled materials in the construction of the racks.

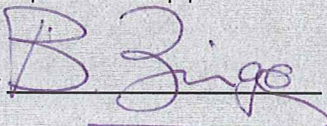
Health, Safety & Security

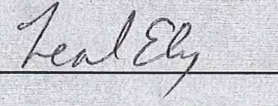
Does this equipment address any health, safety & security concerns? If so, please explain below.

As mentioned throughout this request, these Petri plate racks address serious health, safety & security concerns. Petri plates – the industry standard for growing live microbial cultures – are plastic dishes with loose fitting lids that are not usually safely secured. The Petri plates are used when isolation of bacteria is needed which is the case in most standard microbiology and cell biology experiment when working with bacteria. Many of the bacteria grown are classified as potential pathogens. The racks serve to securely position the Petri plates for transport and storage. In the absence of racks, tape can be used to hold the plates together. This is risky because it is not easy to wrap tape around a stack of plates and it is even more problematic to remove the tape later when the plates need to be accessed again. Falling plates with opening lids are a serious health and safety concern, as bacteria are invisible and can be dispersed into the air as well as adhere to surfaces without being noticed. The current racks are not only insufficient in numbers now, but they are also completely covered with rust and are unstable. Continuing to use them presents a safety hazard to any member of the classroom.

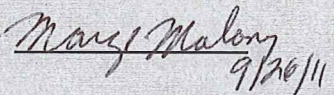
Signatures (required)

(If requesting computer-related equipment/software, LPC IT Department Review is **required**.)

Requested by 

Dean/
Unit Head 

IT Department Signature _____

Vice President  9/26/11

LPC VP Business/President _____

LPC Business Office Use (Account Number) _____



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 Fax: (847) 919-9409
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Quotation

| QUOTATION # | DATE | CUSTOMER ID | REFERENCE # |
|-------------|-----------|-------------|-------------|
| 33445 | 9/15/2011 | 1545395 | |

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| SELL TO |
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| Barbara Zingg Lospositas College 300 Campus Hill Drive Cindy Black Livermore CA 94550 United States |

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|-----------------------|---------------|-------------------------------|---------|----------------|--|
| Shipping Method: | | Payment Method: | | Last 4 digits: | |
| Freight Terms: | FOB origin | Payment Terms: | | PO Number: | |
| Delivery Information: | 1-2 Weeks ARO | Offer Valid for: | 30 days | | |
| Sales Person: | Sonja Davis | All prices are in US dollars. | | | |

| SKU | DESCRIPTION | QUANTIT | UNIT PRICE | TOTAL |
|------------------|--|---------|------------|-------------------|
| UI-BE-44510 | UNICO Petri Dish Rack, Stackable 44510 | 25 | \$44.99 | \$1,124.75 |
| SUBTOTAL | | | | \$1,124.75 |
| DISCOUNT | | | | (\$112.47) |
| SHIPPING | | | | \$0.00 |
| SALES TAX | | | | \$0.00 |
| TOTAL | | | | \$1,012.28 |

If you have any questions concerning this quotation, contact our Sales Team via e-mail to Sales@OpticsPlanet.com or via phone (800) 504-5897, 8AM-9PM CST Mon-Fri, 9AM-5PM CST Sat-Sun. Please see <http://www.opticsplanet.net/our-policy.html> for our Return & Exchange Policy.

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