

# INSTRUCTIONAL EQUIPMENT REQUEST 2021-2022



LPC ADMINISTRATIVE SERVICES - REQUISITION INFORMATION PAGE

Internal Use
IE #: 2021-11 _____
Total \$: 2188.52 _____

**Requester Name:** Michal Shuldman, Jason Maxwell **Division Name:** STEM

**The equipment is:**     A Replacement     An Upgrade     New Equipment/Technology

## SECTION 1: EQUIPMENT DESCRIPTION

**Describe the specific equipment requested and how it will be used to replace, upgrade or provide new technology to LPC from what is currently in place:**

The VWR Advanced 3500 Orbital Shaker.

This is new technology to LPC. The orbital shaker will be used for growing algae cultures to support biology labs that require accurate and repeatable results. This is standard equipment that will be used in growing algae and microbiology cultures for biology labs.

**Equipment Location Building:** 1850

**Room:** 1856

**Location Comments:**

## **SECTION 1: EQUIPMENT DESCRIPTION (continued)**

**If applicable, describe the legal requirement, mandate, or safety concern for purchase of this equipment, making specific reference to the legal requirement or regulation:**

Not applicable.

## **SECTION 2: LPC MISSION STATEMENT AND LPC PLANNING PRIORITIES**

### **LPC MISSION STATEMENT:**

**Las Positas College provides an inclusive, learning-centered, equity-focused environment that offers educational opportunities and support for completion of students' transfer, degree, and career-technical goals while promoting life-long learning.**

### **LPC PLANNING PRIORITIES:**

- ❖ **Implement the integration of all ACCJC standards throughout campus structure and processes.**
- ❖ **Establish a knowledge base and an appreciation for equity; create a sense of urgency about moving toward equity; institutionalize equity in decision-making, assessment, and accountability; and build capacity to resolve inequities.**
- ❖ **Increase student success and completion through change in college practices and processes: coordinating needed academic support, removing barriers, and supporting focused professional development across the campus.**

**Specify how the equipment supports *LPC's Mission Statement and Planning Priorities*:**

**Mission:** Our program has a high transfer rate to CSU and UC. We have inclusive class offerings of a wide variety of courses in biology that draw on different student populations. These courses support biology majors and other pre-professional transfer students. The courses also satisfy specific degree and certificate requirements, fulfill general education requirements, and provide intellectual enrichment. As a program we try to stay abreast of rapidly moving technology. Proper equipment is needed for students to learn laboratory skills. This new equipment will provide the students with state of the art learning opportunities and skills, which will help them to get internships and jobs locally and at their transfer institutions.

**Planning Priorities:** (1) Best practices for science classes involves active learning with hands-on experience. The main way we accomplish this is with experiments and independent research projects. This equipment is needed to ensure we can build up our program's biotechnology skills. We are developing new curriculum and course content that involves biotechnology skills. These skills (e.g. culturing organisms) have been identified by our Bioscience Advisory Board as being important skills for careers in the biotechnology and related industry in the Tri-Valley.

### **SECTION 3: EDUCATIONAL ITEMS – PROGRAM REVIEW**

#### **Specify the educational programs this equipment supports:**

This equipment would directly support the Biology Program. It will be used in our major's Biology sequence, in Biology 1A, 1B and Biology 1C. The algae cultures used in Biology 1A require continued agitation to promote best growth and prolong lifespan and survival of algal cultures. We will also use the equipment in Biology 7C (Microbiology), Honors projects, and Independent Study projects.

#### **Will this equipment be a part of your upcoming Program Review or was it included last year? Please explain using the exact words from your Program Review. If not, explain why.**

This exact equipment is not included in our previous program review because we are developing new labs for Biology 1A that incorporate biotechnology skills. We are piloting these new labs this fall in Biology 1A. This piece of equipment is especially critical for the new biotechnology labs we are adding to Bio 1A, however, it will benefit the biology program more broadly and improve our ability to culture organisms used in many classes. It will be included in our program review for this year because it is also needed in other classes.

## SECTION 4: TEACHING AND LEARNING

**In detail describe evidence and data that equipment provides much needed benefit and enhancement to teaching beyond current capabilities.**

- Biology 1A, growing algae
- Biology 1B, growing bacteria and microscopic organisms
- Biology 7C, growing bacteria cultures
- Biology 1C, agitation of reagents, solutions

This equipment will allow instructors to accomplish two main goals. The first is to introduce students to current technology and techniques. For example, growing algae and bacteria cultures. It will also be used for agitation of reagents and solutions. These are all important skill used in biotechnology, microbiology, and molecular biology laboratories.

This directly relates to one of our PSLOs: Upon successful completion of an AS-T in Biology, students are proficient in standard biology lab techniques and lab safety procedures.

The second goal is to increase the student's ability to be actively engaged in hand-on learning. In order to accomplish this PSLO we need to have adequate equipment so that students can learn to grow cultures and use the organisms for various experiments and projects.

**Describe in detail the impact this equipment will have on learning:**

Lectures can be effective at disseminating information, but they often are not effective for students learning, retaining, and being able to apply that content. For students to learn, they need to be actively engaged in an authentic context. Lab courses are an effective way to engage students in an authentic context, where students learn and use the equipment and techniques used by professionals in the field. The skills students learned impact students future employment in science settings. The biotechnology skills we are working on infusing throughout our program are all at the recommendation of the Bioscience Advisory Board.

21

504

**Each academic year, this equipment will impact: \_\_\_\_\_ # of classes/sections \_\_\_\_\_ # of students**

## **SECTION 5: OUTCOMES (SLOs)**

**Using your documented SLOs, specify how the equipment will enable student learning outcomes to be achieved beyond current capability.**

This directly relates to one of our PSLOs: Upon successful completion of an AS-T in Biology OR the AA in Biology:Allied Health, students are proficient in standard biology lab techniques and lab safety procedures. The second goal is to increase the student's ability to be actively engaged in hand-on learning.

The ability to use appropriate lab equipment is also a critical component of our course level SLOs. For Bio 1A- Botany, Bio 1B - Zoology, and Bio 1C - Molecular Biology :

- Students should be able to conduct a research project, take measurements, keep accurate records, analyze and draw conclusions, and communicate experimental results in a standard format for scientific research
- Students will have attained hands-on experience with and demonstrated proficiency in standard biological techniques, using industry-level biology laboratory equipment and/or discipline-specific computer hardware and software.

For Bio 7C - Microbiology:

- Upon completion of BIO 7C, students will acquire and demonstrate competency in laboratory safety and in routine and specialized microbiological laboratory skills applicable to microbiological research or clinical methods, including accurately reporting observations and analysis.

**SECTION 6: TOTAL COST OF OWNERSHIP (FINANCIAL & SUSTAINABILITY)**

**What is the potential life span of the requested equipment?**

10 to 20 years.

**If new storage is needed what are the storage requirements, location requirements, and costs associated with the new equipment: (NOTE: Specific storage costs should be detailed in the “*Part A: Initial Start-up Costs*” section below.)**

The orbital shaker will be stored, maintained in the biology prep room. No additional storage costs are associated with this purchase.

**If this equipment replaces old equipment but the old equipment will not be retired, are there on-going storage requirements, location requirements, and costs associated with the old equipment? If so, provide details.**

N/A

**What will be required to maintain the equipment, such as regular servicing or upkeep? (Specific on-going costs should be detailed in the “*Part B: On-Going Annual Operating Costs*” sections below as applicable.)**

The orbital shaker does not have an annual cost to regularly service or upkeep it.

**Explain how this equipment meets or exceeds basic sustainability efforts and/or provides renewable resources to the college:**

The orbital shaker has a relatively long functional life span, which reduces resource use. It can be used for many years. Additionally, it can maintain proper shaking conditions for cultures that require consistent uniform shaking for best growth and survival.

**Part A: Initial Start-up Costs**

<u>Item</u>	<u>Cost</u>	<u>Comments</u>
Equipment or Materials	\$1985.05	
Taxes (9.5%)	\$203.47	
Shipping or Delivery Charge	\$0	
Installation Costs *	\$0	
Miscellaneous Costs:	\$0	
Facilities Modifications	\$0	
Operator Training	\$0	
Maintenance & Repair Training	\$0	
Storage	\$0	
Other: \$0	\$0	
Vendor Discount	\$0	
<b>Grand Total:</b>	\$2188.52	

**Part B: On-Going Annual Operating Costs**

<u>Item</u>	<u>Cost</u>	<u>Comments</u>
Annual Service or Maintenance	\$0	
Estimated Parts Replacement Per Year	\$0	
Outside Standardization or Calibration Costs	\$0	
Storage Costs	\$0	
New Supply Costs	\$0	
Maintenance & Repair Labor	\$0	
Licensing or Software	\$0	
Other: _____	\$0	
<b>Annual Operating Costs:</b>	\$0	



**Indicate the source of funding for on-going annual operating costs:**

**Part C: Incremental Labor Costs**

**OPERATOR:**

**Indicate the key operator:** Lab Technicians

**Is this in their current scope of duties?** Yes

**Indicate cost to train key operator (include in Initial Start-up Costs above):** \$0

**Indicate amount of time per month key operator will use equipment:** 100%

**MAINTENANCE & REPAIRS:**

**Indicate the person performing maintenance and repairs:** Lab Technicians

**Is this in their current scope of duties?** Yes

**Indicate cost to train for maintenance and repairs:** \$0

**Indicate amount of time per month maintenance will be required:** 0-1 hours

**SIGNATURE APPROVALS**

**Funded requesters will be expected to respond to a brief RAC feedback survey by a requested deadline.**

- *Requests for computer-related equipment and printers will be reviewed by the LPC IT Department.*

**REQUESTOR**

Michal Shuldman  
Digitally signed by Michal Shuldman  
Date: 2021.09.14 16:15:09 -07'00'

Date

**DIVISION DEAN/MANAGER**

*Nan Ho*

Date 9/14/21

**ADMIN SERVICES, VP**

Date

**Admin Services will route as needed**

**IT MANAGER**

Date

**M&O DIRECTOR**

Date



Office of Administrative Services

(Wait 5-10s)

Reset

Submit

Requisition Request Form

R \_\_\_\_\_ - \_\_\_\_\_

Fiscal Year		Vendor ID #		Vendor Name		Date Required	
21-22		1371		VWR		1/3/2022	
Deliver To			Room #		Return Copy of Requisition To		
Gary Wilkes			1856		Gary Wilkes		
Seq	Item #	Description			Qty	Unit Price	Extended Cost
1	89032-096	VWR® Advanced 3500 Orbital Shaker			1	\$ 1,985.05	\$ 1,985.05
2							\$ 0.00
3							\$ 0.00
4							\$ 0.00
5							\$ 0.00
6							\$ 0.00
7							\$ 0.00
8							\$ 0.00
9							\$ 0.00
10							\$ 0.00
11							\$ 0.00
12							\$ 0.00
13							\$ 0.00
14							\$ 0.00
15							\$ 0.00
Comments					Subtotal	\$ 1,985.05	
					10.25% Tax	\$ 203.47	
					Shipping	\$ 0.00	
					<b>Total Cost</b>	<b>\$ 2,188.52</b>	
FOAP to be Charged					%	Amount	
					100		
FUND	ORG	ACCOUNT	PROGRAM				
-	-	-	-				
FUND	ORG	ACCOUNT	PROGRAM				
-	-	-	-				

Jason M. Maxwell                      9/3/21  
 Requestor (print name)                      Date

Nan Ho                      9/14/21  
 Digitally signed by Nan Ho  
 Date: 2021.09.14 16:26:04 -07'00'  
 Dean (signature)                      Date

Coordinator/Manager (signature)                      Date

Kristina Whalen                      9/22/21  
 Vice President (signature)                      Date

**OFFICE OF ADMINISTRATIVE SERVICES USE ONLY**

Reviewed: \_\_\_\_\_ Verified: \_\_\_\_\_ Approved: \_\_\_\_\_  
 Administrative Services                      Administrative Services Officer                      VP, Administrative Services

PO Number: \_\_\_\_\_ Budget Transfer #: \_\_\_\_\_ Entered: \_\_\_\_\_

TR 4/6/20

QUOTATION			
Quote Number	Valid From	Valid To	Page
8031662384	09/02/2021	10/02/2021	1 of 2
Currency	Sales Representative	Customer Reference	
USD	Tammy Tribble		


To Place an Order	
Phone :	1-800-932-5000
Fax :	1-866-329-2897
Web :	www.vwr.com

Quote Prepared For	Contact Phone / Fax / E-Mail
Jason Maxwell	(415) 834-8392  jmmaxwell0001@zonemail.clpccd.edu
Ship To : 80220864	Sold To : 80066388
LAS POSITAS COLLEGE OF 3000 CAMPUS HILL DR LIVERMORE CA 94551-7623	CHABOT LAS POSITAS COMMUNITY COLLEGE 7600 DUBLIN BLVD FL 3 DUBLIN CA 94568-2909

When placing your order, please include your quotation number and account number to ensure you receive the correct price.

**THANK YOU FOR THE OPPORTUNITY TO EARN YOUR BUSINESS.**

Additional Information :
NASPO

Row	VWR Catalog Number	Product Description	Qty	UOM	Unit Price	Extended Price
10	89032-096	VWR SHAKER 3500 ADVANCED, 120V	1	EA	1,985.05	1,985.05
		VWR® Advanced 3500 Orbital Shaker Product Link : <a href="https://us.vwr.com/store/catalog/product.jsp?catalog_number=89032-096">https://us.vwr.com/store/catalog/product.jsp?catalog_number=89032-096</a> Shipping Dimensions Weight / Size (L*W*H) per UOM : 50.000 LB / 22.000*19.500*10.000 IN UOM Component Info : EA(1items) Availability : Product on Order. Estimated delivery date will be provided after order is placed				

**Item Total : 1,985.05**  
**Estimated Tax : 203.47**  
**Quote Total : 2,188.52**



<b>QUOTATION</b>			
<b>Quote Number</b>	<b>Valid From</b>	<b>Valid To</b>	<b>Page</b>
<b>8031662384</b>	<b>09/02/2021</b>	<b>10/02/2021</b>	<b>2 of 2</b>
<b>Currency</b>	<b>Sales Representative</b>	<b>Customer Reference</b>	
<b>USD</b>	<b>Tammy Tribble</b>		

Financing Available. Contact your VWR Representative for details about flexible financing programs.

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