LAS POSITAS COLLEGE

Instructional Equipment Request

SECTION 1: SUMMARY INFORMATION

Timeframe for the Request: Fall: 2013 Spring: Year: Fall 2013

Name of Requestor: Adeliza Flores, Michael Ansell, Richard Grow, Gerry Gire Division/ Unit: STEMPS

Brief Title of the Request: Organic Chemistry Equipment Equipment Location: 1805

SECTION 2: DESCRIPTION

Describe the specific equipment or materials requested and a brief explanation of how it will be used. (Please do not include cost data here.)

We are requesting funds to purchase standard organic chemistry glassware and equipment that will be used by students in the Chemistry 12A and 12B classes.

Check one of the following:
The equipment is: x A replacement ☐ An upgrade ☒ New equipment

How does the equipment replace, upgrade or provide new technology to the college? What do you currently have in place?

The Chemistry program was fortunate to have opened a second section of the 12A/12B series. This new set of glassware and equipment will be used by the students in the new section. We currently have a complete set for one section and a partial set for the second section. Some will also be used to replace broken glassware and equipment.

If request is motivated by a mandate, legal requirement or safety concern, please describe it and why it's important. Please provide any relevant documentation.

Our course outline for 12A mandates a minimum of 16 laboratory techniques that students must learn. In 12B, students are expected to be proficient in these techniques to perform higher level analysis and synthesis. The glassware and equipment being requested here are the minimum set required to conduct these standard experiments and learn these techniques.

Some of these will also be used to replace broken glassware and faulty equipment that may have become unsafe to use. Many of these glassware and supplementary equipment are used in pressurized systems so cracked glassware and faulty connectors are important safety concerns.

SECTION 3: EDUCATIONAL ITEMS

Which educational programs or institutional purposes does this equipment support?

The equipment being requested supports both the mission of the College and the Program *to provide educational opportunities and academic support to transfer students.* Students taking Organic Chemistry are transfer students majoring in Biology, Chemistry, some Engineering fields, or pre-med/dental. The equipment will have substantial impact on the program curriculum for students because:

1) Organic Chemistry is required for all biology and chemistry majors and some engineering majors. This course is a requirement for the proposed transfer model curriculum for Chemistry. The course outlines for 12A/12B which are used for course articulation and C-ID approval list a minimum of 16 laboratory techniques that students should learn how to do and be able to apply in these courses. The equipment being requested is required for these experiments. Having this equipment will ensure that students learn these techniques to fulfill the articulated learning outcomes
2) Completing the second set for the new section and replacing broken glassware and equipment will ensure that students receive a quality of training and lab skills acquisition required by transfer institutions. This will allow Organic

Chemistry students to continue to hone their abilities to work independently and assume full responsibility for their equipment. These are minimum requirements for laboratory scientists.

3) The additional and replacement equipment will allow us to sustain two sections of Organic Chemistry. This has always been a high-demand course, especially now that more universities are accepting them for transfer. The demand for these courses will only increase when the TMC for chemistry is finally approved.

Is this in your Program Review? X Yes ☐ No

If yes, please cut and paste the appropriate wording here. If not, explain why.

In our 2010 Program Review, we identified as a specific challenge *increased use of lab equipment* (Page 12) which requires an increased frequency of replacement. On Page 13, we noted that "*To address these challenges, we plan to request an increase in…b) funding to replace stockroom equipment, student locker materials, standard lab instrumentation, and safety equipment…*
And from page 15:
*"Our **Organic Chemistry laboratory** includes both microscale and macroscale glassware so that our students can learn all of the laboratory techniques taught at the sophomore organic level. A second set of microscale glassware will be needed for the second sections Organic Chemistry, Chem 12A and 12B."*

SECTION 4: TEACHING AND LEARNING

Describe in detail the impact this equipment or materials will have on teaching and learning.

We are requesting funding for standard laboratory equipment that fall under the definition: "'Instructional' shall mean equipment purchased for instructional activities involving….***hands-on experience to enhance student learning and skills development.***"

Impact on teaching:
As mentioned above, our course outline mandates a minimum of 16 laboratory techniques that students need to learn in the laboratory. All the glassware and equipment being requested are the minimum necessary to teach students these techniques through various lab experiments. Faulty, missing, and insufficient glassware and equipment are an impediment to teaching because time is wasted on fixing, replacing, or substituting items or not running the experiment at all.

Impact on learning:
Chemistry is a hands-on subject. As stated above, the learning objectives stated in the course outline will not be met if there is not sufficient equipment to conduct the experiments to learn these techniques. See also responses in the SLO section.

Number of classes or sections (per academic year) that will be impacted: 4 (2 each for 12A and 12B)

Will the Tri-Valley benefit from the equipment, and if so how?

Many of our students come from the Tri-Valley and end up using their skills in the Tri-Valley workforce and are therefore direct beneficiaries of this equipment.

SECTION 5: SUSTAINABILITY

What is the potential life span of the requested equipment?: Many of the glassware and equipment, if used and maintained with care, can potentially last 5-10 years.

How does this equipment meet or exceed basic sustainability efforts and/or provide renewable resources to the college? Please explain

Their long life span means that they don't need to be replaced often which saves resources. Many of the equipment and glassware being requested are required to run experiments at the microscale level reducing the amount of chemicals used and waste generated. This fulfills one of the 12 principles of green chemistry.

What will be required to maintain the equipment, such as regular servicing or upkeep? Who will perform the maintenance and are the costs included in the Finance Section?

Students will be instructed on how to take responsibility for the maintenance and care of equipment and glassware in their lockers after every use.

Where will the equipment be used or housed? If new storage is needed, describe the storage, location and costs to provide for it. Are these costs included in the financial section?

No new storage is needed because many of these will go inside student lockers.

SECTION 6: OUTCOMES

How will equipment enable student learning outcomes to be achieved? What are the consequences related to learning outcomes if request is not funded?

Most chemistry is best learned by doing. The laboratory equipment being requested here will enable achievement of SLO's because our labs are designed for students to:

1) learn general experimental methods and techniques,
2) improve their analytical skills,
3) relate actual observations and experimental conclusions through the various activities that reinforce and enhance the learning of conceptual material.

Laboratory activities are directly tied to the Chem 12A/12B SLO's:

SLO outcomes for the 12A course require that students be able to predict products of an SN_2 reaction. The learning of this concept is reinforced when they actually conduct and observe the reaction in the laboratory.

The SLO for the 12B is assessed using the American Chemical Society National Exam where students are asked various questions regarding laboratory techniques in synthesis, characterization, and analysis of compounds.

The equipment requested is the minimum required to fulfill these SLO's and those prescribed by the course outlines. It is also required for the program to fulfill its mission of supporting transfer students. Without this equipment:

1) We will not be able to sustain offering two sections of Chemistry 12A and 12B which reduces access for this high demand course for transfer students. Not being able to take these courses has delayed the transfer process for some students in the past.
2) The quality of learning may go down if students do not have the necessary equipment to focus on learning in the lab. Students will have to share equipment which will affect the number of experiments conducted and techniques learned. Organic Chemistry is where the ability to work independently is reinforced and further developed. It is therefore imperative that every student has his or her own set of glassware and equipment to use and assume responsibility for.

SECTION 7: FINANCIAL

Part 1

Total amount requested:6601.9

Explain the details behind the amount requested above.

Equipment or Materials:	6056.8
Delivery:	0
Installation:	0
Facilities Modification:	0
Sales Tax:	545.1 at 9%
Other:	
Vendor Discount (if applicable):	0
Total amount:	6601.9 (Attach copies of quotes or estimates)

NOTE: Requests for computer related equipment must be reviewed by LPC IT Department

IT Department Authorized Signature: N/A

In addition to the amount requested above, what ongoing costs will be incurred per year? This is trying to determine the total cost of ownership.

COSTS	
Upkeep and Maintenance:	0
Storage:	0
Other :	0

How will these ongoing costs be paid for?

N/A

Part 2

How long will this equipment last and when will it need to be replaced? When replacement is needed, how will it be paid for? (such as another IER, grant, etc.)

As mentioned above, with proper care and maintenance, these can last from 5-10 years. However, many of these are glassware that may break or crack. Replacements will be done either through another IER or through the chemistry supplies budget if we are able to restore it to the previous higher levels.

What outside sources of funding, discounts or help have you explored and what is the outcome? (items such as CTE and grants)

Many of the glassware and equipment were purchased through FF&E funds for the new science building and the renovation. The funds being requested will supplement glassware and equipment that were not purchased through the FF&E purchase.

Signatures:

Requestor

Dean

Vice President 9/27/13

Request Approved: ☐ Yes ☐ No

Approved by: **<Approver>**

Date Approved: **<mm/dd/yyyy>**

LAS POSITAS COLLEGE Equipment, Apparatus and Service Requisition

#R

#P

Track #

FOR REIMBURSEMENT: List payee name & ssn. TAX ID#

SUGGESTED VENDOR: **VWR**

FOR OFFICE USE ONLY

NAME OF STAFF MEMBER	DATE WRITTEN	DATE REQUIRED	DIVISION/ DEPARTMENT	For inventory purposes include Room # where equipment will reside:	RETURN COPY of REQUISITION TO:
M. Ansell	**20-Sep-13**	**Fall 2013**	Chemistry		K.Rose

DESCRIPTION (PRODUCT, TYPE, SIZE, COLOR, STOCK NUMBER)		UNIT	QTY	UNIT PRICE	Air
Head Claisen Threaded	Item #: 89075-184	ea	10	$ 40.23	$ 402.30
Dist Adap 14/10-14/10	Item #: 89075-144	ea	10	$ 36.44	$ 364.40
14/10 Adapter Conn Hose	Item #: 89064-824	ea	10	$ 28.05	$ 280.50
14/10 Drip Tip Adapter	Item #: 89051-102	ea	30	$ 20.24	$ 607.20
Adaptor W/HC 14/10-14/10	Item #: 89075-148	ea	10	$ 38.87	$ 388.70
Air Reflux Cond 14/10 JTS	Item #: 89075-160	ea	30	$ 23.04	$ 691.20
Cond Jkt Reflux	Item #: 89075-168	ea	10	$ 48.68	$ 486.80
2ml Glass Outer Craig	Item #: 89075-200	ea	20	$ 8.80	$ 176.00
VWR Dish Crystlzng 80X40mm pk6	Item #: 89000-286	pk	10	$ 61.48	$ 614.80
Tube, drying 14/10	Item #: 89075-216	ea	10	$ 17.93	$ 179.30
25ml 50mm id flask	Item #: 89057-424	ea	20	$ 11.53	$ 230.60
Flask Erlenmeyer 10 ml	Item #: 89057-422	ea	20	$ 4.57	$ 91.40
25ml 14/10 rb flask	Item #: 89075-284	ea	10	$ 18.11	$ 181.10
	Sub-total from p.2	ea			$ 1,362.50
		Subtotal			$ 6,056.80
		Tax		$ 0.0900	$ 545.11
		Shipping (if available):			

Comments:

INSTRUCTIONAL EQUIPMENT - FALL 2013

Vendor's quote attached

PAGE 1 of 2

BT#

Original invoices and receipts must be attached for payment. Include current taxes unless incorporated in price.

TOTAL COST $ 6,601.91

ACCOUNT # _____

FUND ORG ACCT PROGRAM

Business Office

APPROVALS Lisa Wyatt 9/20/13

Dean Date

VP / President

LAS POSITAS COLLEGE Equipment, Apparatus and Service Requisition

#R

#P

Track #

FOR REIMBURSEMENT: List payee name & ssn. **TAX ID#**

SUGGESTED VENDOR: **VWR**

FOR OFFICE USE ONLY

NAME OF STAFF MEMBER	DATE WRITTEN	DATE REQUIRED	DIVISION/ DEPARTMENT	For inventory purposes include Room # where equipment will reside:	RETURN COPY of REQUISITION TO:
M. Ansell	**20-Sep-13**	**Fall 2013**	Chemistry		K.Rose

DESCRIPTION (PRODUCT, TYPE, SIZE, COLOR, STOCK NUMBER)		UNIT	QTY	UNIT PRICE	Air
10ml 14/10 rb flask	Item #: 89075-282	ea	10	$ 18.11	$ 181.10
VWR funnel Hirsch 55mm	Item #: 89038-138	ea	10	$ 22.44	$ 224.40
Heat Transfer Block, Micro	Item #: 89075-294	ea	5	$ 41.63	$ 208.15
Heat Transfer Block, Micro	Item #: 89075-292	ea	5	$ 16.68	$ 83.40
Aux Heat Transfer Block	Item #: 89075-290	ea	5	$ 15.55	$ 77.75
14/10 Adapter conn hose	Item #: 89051-484	ea	5	$ 14.67	$ 73.35
Vial Conical React 3.0 ml	Item #: 89075-238	ea	5	$ 17.43	$ 87.15
Spinvane Tef for 14/10	Item #: 89078-008	ea	40	$ 10.68	$ 427.20
					$ -
					$ -
					$ -
					$ -
					$ -

Comments:

INSTRUCTIONAL EQUIPMENT - FALL 2013

Vendor's quote attached

PAGE 2 of 2

BT#

Subtotal		$ 1,362.50
Tax	$ 0.0900	
Shipping (if available):		

Original invoices and receipts must be attached for payment. Include current taxes unless incorporated in price.

TOTAL COST

ACCOUNT # _____

FUND ORG ACCT PROGRAM

Business Office

APPROVALS

Dean Date VP / President

VWR®
100 Matsonford Road
Radnor, PA 19087
Tel: 1-800-932-5000
Fax: 1-866-329-2897

Quotation

Sold-To-Party
LAS POSITAS COLLEGE
WSCA NASPO SP 04 0430
3033 COLLIER CANYON RD
LIVERMORE CA 94551-9797

Ship-To-Party
LAS POSITAS COLLEGE
3033 COLLIER CANYON RD
LIVERMORE CA 94551-9797

Information

Quote	8002370900
Date	09/13/2013
Sold To Customer No.	80084039
Ship To Customer No.	80157177
Contact Name	GERRY GIRE
Telephone	925-424-1331
Email	ggire@laspositascollege.edu
Currency	USD
Sales Rep	SCI ED NCAL OPEN
Valid	09/13/2013
Expires	09/13/2013
Cust ref	

Information

Term: Transport fees as per standard terms and conditions unless indicated otherwise in this quotation. Taxes not included.

Item	Ref.	Catalog Number	Quantity	Unit Price	Ext. Amount
10		89075-184 HEAD CLAISEN THREADED	10 EA	40.23 USD	402.30
20		89075-144 DIST ADAP 14/10-14/10	10 EA	36.44 USD	364.40
30		89064-824 14/10 ADAPTER CONN HOSE	10 EA	28.05 USD	280.50
40		89051-102 14/10 DRIP TIP ADAPTER	30 EA	20.24 USD	607.20
50		89075-148 ADAPTER W/HC 14/10-14/10	10 EA	38.87 USD	388.70
60		89075-160 AIR REFLUX COND 14/10 JTS	30 EA	23.04 USD	691.20
70		89075-168 COND JKT REFLUX	10 EA	48.68 USD	486.80
80		89075-200 2ML GLASS OUTER CRAIG	20 EA	8.80 USD	176.00
90		89000-286 VWR DISH CRYSTLZNG 80X40MM PK6	10 PAK	61.48 USD	614.80
100		89075-216 TUBE, DRYING 14/10	10 EA	17.93 USD	179.30

100 Matsonford Road
Radnor, PA 19087
Tel: 1-800-932-5000
Fax: 1-866-329-2897

Quotation

Quote : 8002370900

Item	Ref.	Catalog Number	Quantity	Unit Price	Ext. Amount
110		89057-424 25ML 50MM ID FLASK	20 EA	11.53 USD	230.60
120		89057-422 FLASK ERLENMEYER 10 ML	20 EA	4.57 USD	91.40
130		89075-284 25ML 14/10 RB FLASK	10 EA	18.11 USD	181.10
140		89075-282 10ML 14/10 RB FLASK	10 EA	18.11 USD	181.10
150		89038-138 VWR FUNNEL HIRSCH 55MM	10 EA	22.44 USD	224.40
160		89075-294 HEAT TRANSFER BLOCK,MICRO	5 EA	41.63 USD	208.15
170		89075-292 HEAT TRANSFER BLOCK,MICRO	5 EA	16.68 USD	83.40
180		89075-290 AUX HEAT TRANSFER BLOCK	5 EA	15.55 USD	77.75
190		89051-484 14/10 ADAPTER CONN HOSE	5 EA	14.67 USD	73.35
200		89075-238 VIAL CONICAL REACT 3.0ML	5 EA	17.43 USD	87.15
210		89078-008 SPINVANE TEF FOR 14/10	40 EA	10.68 USD	427.20
		Item Total			6,056.80

TO PLACE YOUR ORDER, PLEASE CALL
CONTACT TEL: 1-800-932-5000
FAX: 1-866-329-2897
WWW.VWR.COM

THANK YOU FOR THE OPPORTUNITY TO
EARN YOUR BUSINESS

Installation not included unless otherwise noted.

100 Matsonford Road
Radnor, PA 19087
Tel: 1-800-932-5000
Fax: 1-866-329-2897

Quotation

Quote : 8002370900

Customer is responsible for unloading and providing standard receiving facilities for large and/or heavy shipments. Special unloading or delivery can be arranged provided VWR International is notified at the time of order placement. Please note that additional charges may apply to the above. For such arrangements please contact VWR International for a quotation.

It is the customer's responsibility to inspect the shipment upon receipt. If any external damage is noticed, the customer must accept the shipment only after the driver has noted the damage on the customer's delivery receipt and requested an inspection by the carrier. If the shipment arrives with internal/concealed damage, the customer must contact VWR within 24 hours to initiate the right to claim for "concealed damage". VWR reserves the right to repair a damaged product, where applicable, before replacement or credit is determined.

All quotes for installations assume that services related to the equipment are in place at the customer site (including, but not limited to, gas, plumbing, electrical, and ventilation) as per the equipment manufacturer's specifications prior to installation of the equipment. VWR's quote does not include the installation of the aforementioned services.

Items prefixed with "MISC-" are subject to regulatory approval once VWR International receives acceptance from the customer. They are special order, and as such may not be returnable. Please allow 6-8 weeks delivery from the time of your first order or acceptance of this quotation.

VWR#s terms and conditions of sale apply. All orders are subject to shipping and handling charges and fuel surcharges. Freight terms may vary. Hazardous items are subject to additional transportation charges. Please visit our website at www.vwr.com for additional information regarding our return policy, product warranty information and other details of our terms and conditions.