



Instructional Equipment Request (IER) Form

FY 2024-2025

Title of Submission:	Horticulture- IER Request for Greenhouse Fertigation System
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Please review all information carefully to ensure timely processing. More information can be found [here](#).

Deadline	Action
10/09/2024	IER forms due to Division Dean
10/16/2024	Division review of IER forms (Dean & VP signature)
10/23/2024	IER forms due to Executive Assistant of Administrative Services (with Dean & VP signature)

Checklist

- ☒ All IER form fields complete
- ☒ Valid quote attached to submission (must be attached before submitting form)
 - **Shipping, installation, and tax** are required on the quote, whenever applicable. This must be provided by the vendor themselves. **Do not split quotes or submit duplicate quotes.**
 - **IMPORTANT:** To comply with state law, purchases between \$ 30,000.00 and \$ 114,499.99 require 3 quotes from 3 different vendors. We're required to proceed with the cheapest option unless a compelling argument can be provided for a more expensive option. If your request is approved, you will be notified *via email* to obtain an **updated quote, two additional quotes**, and complete a [requisition](#) form. Please monitor your email closely throughout the fiscal year as we **cannot** proceed with your request until these quotes, and any additional requirements, are provided.
 - Purchase requests of \$ 114,500.00 or more must go out for bid* (aka RFP process) and then go to Board for approval. You will be provided further instruction via email after your request is approved.
 - For assistance with quotes, please contact Bill Pagano at bpagano@clpccd.org or (925) 485-5271.
- ☒ IER form, with quote, signed and submitted to Division Dean including:
 - Quote (required)
 - [New Vendor Application](#) (if new vendor)
 - Copy of [W9](#) (if new vendor)

***Bid Process:** Purchasing submits RFP & selects cheapest bid → Requestor submits [Requisition](#) → Business Office enters Requisition in Banner → Requestor submits Board packet with copy of entered Requisition.

IER Process Flow

1. Completed packet signed and submitted to Division Dean
2. Dean reviews and forwards to Vice President
3. Vice President reviews and forwards to Executive Assistant of Administrative Services
4. Executive Assistant logs requests and forwards to M&O and IT for review
5. RAC reviews and scores requests
6. Executive Assistant combines committee scores into final rankings for final RAC review
7. RAC Chair meets with College President to discuss ranked requests
8. College President issues approval memo to RAC
9. RAC notifies requestors via email of approved requests and additional steps (e.g. additional quotes, board, etc.)
10. RAC submits IER forms to Business Office for processing
11. Business Office reviews requests, enters into Banner, and forwards to Purchasing
12. Purchasing will assist with requests that must go out for bid and requires board approval (requestor will be notified)

Instructional Equipment Definitions

Allowable Items

Allowable Items: Instructional equipment expenditures are eligible if the equipment, library material, or technology is for classroom instruction, student instruction or demonstration, or in the preparation of learning materials in an instructional program. There are five categories that will be used to classify instructional support. Please note that requests are not limited to the examples shown below.

1. **Equipment and Furniture:** instructional equipment and furniture for primary use by students in instructional programs:
 - a. Classroom/laboratory equipment including whiteboard, screen, projector, etc.
 - b. Instructional furniture including desks, tables, podium, chairs, etc.
2. **Information Technology:** instructional information technology equipment for student use in classrooms and/or laboratories including desktops, laptops, monitors, printers, servers, network/wireless infrastructure, AV/TV, multimedia.
3. **Software:** software licenses are allowed but only the initial year is permitted. Other software that are permitted are those that are used in excess of one year and software modifications that add capacity or efficiency to the software that defers obsolescence and results in an extension of the useful life of the software, including registration, counseling, student services, learning management systems for student use.
4. **Adaptive Equipment:** adaptive equipment for ADA/OCR students are allowed to assist them in a learning environment.
5. **Library Material:** databases, online subscriptions, books, periodicals, videos, etc.

Non-Allowable Items

Non-Allowable Items: Administrative or non-instructional purposes including equipment being used for administrative or non- instructional purposes is not allowed, including photocopiers, file cabinets, bookcases, computers, networking infrastructure, software licenses.

IE Rubric

RAC evaluates each IE request based on the rubric below. RAC stresses the importance of quality requests. RAC may choose not to rank incomplete IE requests.

Criteria	Strong Evidence	Adequate Evidence	Limited Evidence
LPC Mission & Planning Priorities [Section 2] (5 points) Ranking Scale	Clear and compelling evidence/data that equipment will fully support LPC Mission and Planning Priorities. 4-5	Clear evidence/data that equipment will fully support LPC Mission and Planning Priorities. 2-3	Limited or no evidence/data that equipment will support LPC Mission and Planning Priorities. 0-1
Educational Items: Programmatic Impact and Institutional Support [Section 3] (10 points) Ranking Scale	Clear and compelling evidence/data (as stated in program review) that this equipment will have substantial impact on program curriculum. 8-10	Clear evidence/data (as stated in program review) that this equipment will have substantial impact on program curriculum. 4-7	Limited or no evidence/data (as stated in program review) that this equipment will have an impact on program curriculum. 0-3
Teaching & Learning [Section 4] (10 points) Ranking Scale	Clear and compelling evidence/data that equipment provides much needed or beneficial enhancement to instruction. 8-10	Clear evidence/data that equipment provides enhanced instruction that is not met through current means. 4-7	Limited or no evidence/data that equipment provides enhanced instruction that is not met through current means. 0-3
Outcomes [Section 5] (5 points) Ranking Scale	Clear and compelling evidence/data that equipment will support course and/or program outcomes above and beyond current capability. 4-5	Clear evidence/data that equipment will support course and/or program outcomes beyond current capability. 2-3	Limited or no evidence/data that equipment will support course and/or program outcomes beyond current capability. 0-1

Instructional Equipment Request Form

Name of Requestor: Cornett, Laura

Division: STEM

Discipline: Horticulture

This Equipment Request is: New Equipment or 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:

Equipment Location

Building #: 3300

Room #: Greenhouse

Comments:

Dosatron Fertigation System for greenhouse growing and hydroponics. Fertigation is the method by which fertilizer and other chemicals are delivered via an irrigation system. It is an important tool in both hydroponics and growing potted plants in the greenhouse. Plants potted in a soilless medium eventually run out of the nutrients required for growth and development. Fertilizing an entire greenhouse of different varieties of plants by hand is both time-consuming and inefficient. Plants grown hydroponically have no soilless media and so rely on a regular infusion of nutrients. A fertigation system can also allow for pH to be adjusted to the optimum levels required for each plant or group of plants. Proper pH is critical for the absorption of nutrients by the plant.

If applicable, describe the legal requirement, mandate, or safety concern related to the purchase of this equipment, making specific reference to legal requirements or regulations:

Instruction regarding proper PPE required when working with nutrient formulas will be addressed.

SECTION 2: LPC Mission Statement and LPC Planning Priorities

LPC Mission Statement

Las Positas College is 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 lifelong learning.

LPC Planning Priorities

- 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.

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

Knowledge of nutrients essential to plant growth is the backbone of greenhouse growing. Using new technology such as a fertigation system will enable students to gain experience with determining, mixing and applying plant nutrients. This experience will give students a competitive advantage when seeking employment in a Horticultural field.

SECTION 3: Educational Items | Program Review

Specify the educational programs the equipment supports:

Hort 50- Plant nutrient requirements and fertilizer application
Hort 54- Knowledge of essential nutrients required for plant growth and healthy development
Hort 55- Proper administration of plant nutrients in greenhouse growing
Hort 60- Principles and techniques of water conservation and plant-water-soil relations
Hort 67- Knowledge of specific nutrient requirements of indoor plants
Hort 71- Hydroponic growing

Is the equipment part of an upcoming Program Review? Was it included last year? If not, why? Use language from your Program Review to explain:

Unknown

SECTION 4: Teaching and Learning

Please use evidence and data that describes how the equipment provides enhancements/benefits to the current level of teaching capabilities:

Currently, nutrient delivery to both potted plants and those grown hydroponically is done by hand via a watering can. Automation of this process will greatly reduce time spent on mixing nutrients and adjusting pH. Additionally, plants in the greenhouse have different nutrient requirements depending on their growth stages and whether they are primarily ornamental or edible. Adoption of this fertigation system will allow us to respond to individual plant requirements quickly and efficiently. Nutrients accurately measured by the system and delivered to the plants via drip will also save water and decrease fertilizer runoff.
Fertigation systems are commonly used in large commercial greenhouses that grow hydroponically because it is accurate, fast and labor- saving. Knowledge of fertigation systems is essential to students who are going forward to careers in greenhouse growing, urban farming, irrigation and hydroponics.

Detail the impact the equipment has on learning:

The importance of nutrients to plant growth is discussed in many of our Horticulture classes. The implementation of a fertigation system in the greenhouse will allow students to directly impact plant development by choosing appropriate nutrients for the plant, mixing these nutrients and adjusting pH to facilitate uptake. The system will allow for different nutrient mixtures to be timed and applied depending on the needs of the individual plant or group of plants. This is huge. Instead of mixing a commercial complete fertilizer in a watering can and applying that to groups of plants, students will learn to make their own mixtures based on the needs of the plant. This gives students intimate knowledge of the timing of nutrients applied as well as further knowledge of both ornamental and edible plant species grown in the greenhouse.

Please state the number of classes and students the equipment will impact:

Classes/Sections: 6	Students: 150
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SECTION 5: Student Learning Outcomes (SLOs)

Document how the equipment will enable you to surpass your current Student Learning Outcomes:

Student Learning Outcomes in six classes include knowledge of plant nutrients, fertilizers and the role of pH. A fertigation system will allow students to research specific plant nutrient needs, calculate dosing of nutrient mixtures and program administration of those nutrients to plants grown in the greenhouse. This will allow students to take a deeper dive into plant nutrition.

SECTION 6: Total Cost of Ownership | *Maintenance and Sustainability*

Does the new equipment replace older equipment? If so, will you retire/surplus the old equipment? If not, where will you store the older equipment and what are the associated storage costs?

No

Detail how the equipment meets or exceeds [LPC's Sustainability Efforts](#):

For potted plants, the fertigation system utilizes drip irrigation to administer plant nutrients. Both water and nutrients go directly to the root ball of the plant, minimizing runoff and optimizing application. Less water will be used to irrigate plants in the greenhouse which are now irrigated by sprinklers which is an inefficient delivery method. Using the fertigation system for hydroponics will allow for accurate nutrient dosing and will result in no runoff as the hydroponic units are closed systems.

How does the equipment provide renewal resources to the college?

The valves in the system are powered by water pressure. The monitor will require an electric outlet.

Operator

Primary operator:	Cornett, Laura		
Does the work align with current position duties?	Yes		
Cost to train primary operator:	0.00		
Approx. # of hours equipment will be used per month:	4		
Comments:	the until will be used during class lab times and also during the day be the Lab Tech.		

Maintenance and Repairs

Who will perform maintenance and repairs?	Laura Cornett with input from Dosatron Customer Service		
Estimated hours per month:	1		
Does the work align with current position duties?	Yes		
Cost to train for maintenance and repairs:	0.00		

SECTION 6: Total Cost of Ownership | *Maintenance and Sustainability (cont'd)*

Lifespan of Equipment: unknown but probably 5 to 10 years with regular maintenance

FOAP (Budget) for Recurring Costs: 103001 34960 4320 010900

Vendor Name: Fund Org Acct Program

Dosatron

Part A: Initial Start-Up Costs

Type	Cost	Comments
Equipment or Materials	4,439.95	
Shipping & Delivery Fees	0.00	
Installation Costs	0.00	
Miscellaneous Costs	0.00	
Modification to Facilities	0.00	
Operator Training	0.00	
Maintenance/Repair Training	0.00	
Other	0.00	
(Enter as Positive) Discounts	0.00	Prices reflect discount given for educational institution by Ingersoll Rand
Start-Up Total	4,439.95	

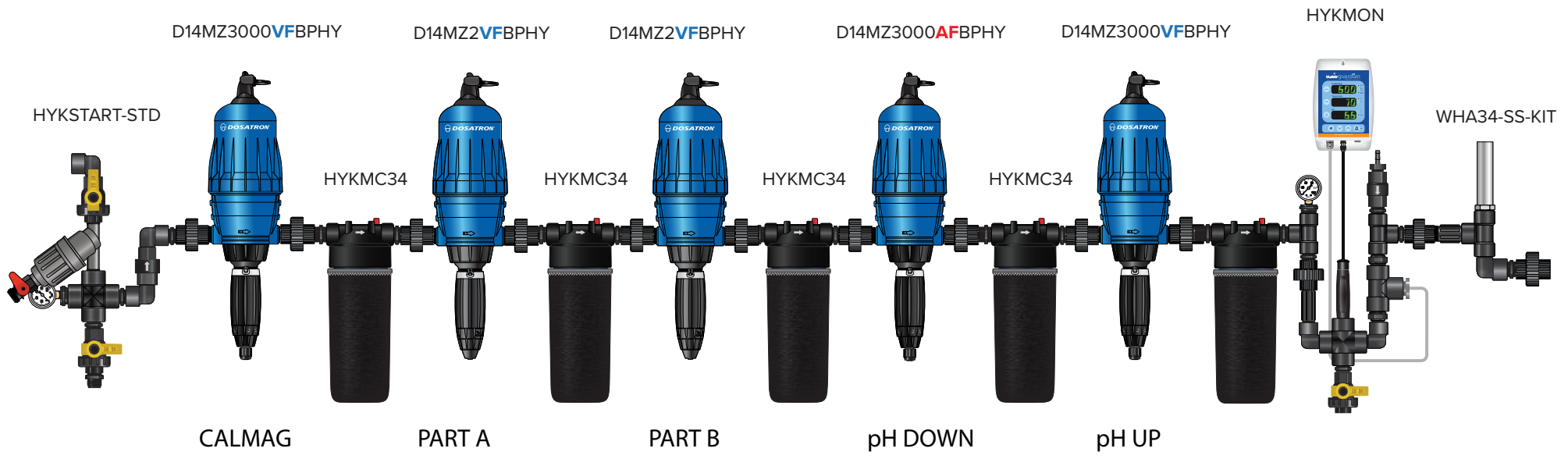
Part B: Annual Operating Costs

Type	Cost	Comments
Service/Maintenance	0.00	
Part Replacement	0.00	
Vendor Calibration or Standardization	0.00	
Storage	0.00	
Supplies	0.00	
Maintenance/Repair Labor	0.00	
Software Licensing	0.00	
Other	0.00	
Annual Total	0.00	
Overall Cost:	4,439.95	

Approvals and Signature Routing

Before signing below, please confirm all fields are filled out and all information provided is correct. Requests must be fully complete, signed, and submitted to your Division Dean by the deadline (see page 1). **Quote must be attached to this form before submitting.**

Title	Signature	Date
Requestor:	<i>Laura Cornett</i>	10/09/2024
Division Dean:	<i>Paula M Checchi</i>	10/11/2024
Vice President:	<i>Nan Ho</i>	10/11/2024
College Technology Services Manager:		
M&O Director:	<i>John Seybert</i>	10/14/2024
Vice President, Administrative Services:	<i>Sean Brooks</i>	10/16/2024





An Ingersoll Rand Business

PAYMENT REMITTANCE OPTIONS

DOMESTIC (USA) PAYMENTS ONLY

CREDIT CARD

Order limits may apply, please contact your sales representative regarding our credit card policy. Signed authorization form required prior to processing payment, a 2% credit card convenience fee will apply except for orders shipped to CT, MA, and PR.

CASH AND MONEY ORDERS

Walk-in payments to any Chase Bank, daily limit may apply.

JP Morgan Chase
c/o Dosatron International, LLC
Routing: 021000021
Account: 531113630

CHECKS

Mail Payments To:

Dosatron International, LLC
PO Box 738588
Dallas, TX 75373-8588

ACH DELIVERY

Routing: 021000021
Account: 531113630
Account Name: Dosatron International, LLC

INTERNATIONAL AND DOMESTIC PAYMENTS

INTERNATIONAL AND DOMESTIC WIRE TRANSFERS

Bank Routing: 021000021
SWIFT Code: CHASUS33
Bank Reference: JPMorganChase New York, NY 10017
Account Number: 531113630
Account Name: Dosatron International, LLC

SHIPPING ADDRESS

Pre-Authorized Returns Only

Dosatron International, LLC
2090 Sunnydale Blvd
Clearwater, FL 33765

Dosatron International, LLC

Quote QT208585

2090 Sunnydale Boulevard
Clearwater FL 33765

Date 10/4/2024

Bill To:
LAS POSITAS COLLEGE
3000 CAMPUS HILL DR

Ship To:
LAS POSITAS COLLEGE
3000 CAMPUS HILL DR

LIVERMORE CA 94551

LIVERMORE CA 94551

Purchase Order No. Customer ID
VERBAL LAURA 1 2741355

Shipping Method
UPS GROUND

Payment Terms
CREDIT CARD

Master No.
418,492

Quantity	Item Number	Description	Unit Price	Extended Price
1	HYKSTART-STD	HYDROPONIC STANDARD STA	\$150.00	\$150.00
4	HYKMC34	MIXING CHAMBER FOR HYDR	\$62.29	\$249.16
5	MC34-SHADE	SUNSHADE FOR 3/4 MIXING CI	\$17.45	\$87.25
1	HYKMON	KIT FOR HYDROPONIC PLUMB	\$699.26	\$699.26
1	WHA34-SS-KIT	INSTALL KIT FOR WATER HAM	\$190.99	\$190.99
2	D14MZ2VFBPHY	INJECTOR 0.2 TO 2% 7.5 to 75n	\$429.73	\$859.46
2	D14MZ3000VFBPHY	INJECTOR 14GPM MAX 0.03 to	\$734.61	\$1,469.22
1	D14MZ3000AFBPHY	D14 INJECTOR 0.03 to 0.3% 1.2	\$734.61	\$734.61

All purchases are subject to Dosatron's standard terms & conditions located at <http://www.dosatronusa.com/terms-conditions>

F.O.B Clearwater, FL USA Legal & Collection Fees Paid By The Customer

Subtotal	\$4,439.95
Convenience Fee	\$0.00
Tax	\$0.00
Freight	\$0.00
Total	\$4,439.95