

# INSTRUCTIONAL EQUIPMENT REQUEST

## FALL 2019-2020

Internal Use  
IE #: Fall 19-31  
Total \$: 10,050.50

RECEIVED

Requester Name: Darcy Ernst

SEP 19  
Division Name: STEM

### SUMMARY INFORMATION

Title of Item: NanoDrop 2000 Spectrophotometer

Equipment Location Building: 1850

Room: 1854

#### Location and Delivery Comments:

Would be delivered to Gary Wilkes, laboratory manager of biology and chemistry

### SECTION 1: EQUIPMENT DESCRIPTION

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

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:

A NanoDrop spectrophotometer analyzes DNA, RNA, and protein quantity and purity, and thus is an important component of high-level molecular biology. A machine of this type is commonly used in academic and industry biology laboratories and, here at Las Positas, would allow for students to gain experience with a number of industry-standard protocols. These protocols include molecular cloning of individual genes, assessment of signaling proteins on a molecular level, and microbiology applications such as quantification of bacterial protein products (a major step in drug development). This machine would complement the molecular biology machinery currently used at LPC (such as the thermocycler and the real-time PCR machine) to make possible a great number of protocols used in scientific industry.

There is currently no way to measure concentration and purity of DNA, RNA, or protein accurately in our labs here at LPC. Labs that assess DNA or protein do so with very rough measures (ie color change of products) that are far below industry standards or anything students would encounter in industry or academic laboratories.

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SEP 20 2019

Administrative Services  
Office of the Vice President

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VP ACADEMIC SERVICES  
LAS POSITAS COLLEGE

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

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

Use of this machine is regulated in a similar fashion as our other molecular biology machinery. At LPC, our labs are at the biosafety level 1 (BSL-1), meaning we work with nonpathogenic strains of bacteria. This equipment would be under the regulations of a BSL-1 lab and the occupational safety and health administration (OSHA), but would not pose a safety concern beyond the equipment we currently have in the lab.

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

### **LPC MISSION STATEMENT:**

LPC is an inclusive learning-centered institution providing educational opportunities and support for completion of students' transfer, degree, basic skills, career-technical, and retraining goals.

### **LPC PLANNING PRIORITIES:**

- ❖ **Accreditation:** Establish regular and ongoing processes to implement best practices to meet ACCJC standards.
- ❖ **Curriculum:** Provide necessary institutional support for curriculum development and maintenance.
- ❖ **Tutoring Services:** Expand tutoring services to meet demand and support student success in Basic Skills, CTE, and Transfer courses.
- ❖ **Professional Development:** Coordinate available resources to address current and future professional development needs of faculty, classified professionals, and administrators in support of educational master plan goals.

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

Mission: Our program has a high transfer rate to CSU and UC. Our biology major prepares students to transfer and complete a 4-year biology degree. Our allied health courses prepare students for transfer for a 4-year degree and/or to attend nursing school and become a registered nurse. Biology and Allied Health training programs need access to current technology. We are in the midst of a genomic revolution, where DNA measurement is affecting healthcare and the innovations made possible by biotechnology. As a program we try to stay abreast of rapidly moving technology. Proper equipment is needed for students to learn molecular skills for use in academic, industry, and healthcare lab environments. 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. Students would be able to use this industry-standard equipment to learn first-hand how to measure concentrations of proteins and nucleic acids (DNA and RNA).

(2) This would support the growth and service of our biology majors pathway (Bio 1C) and our Allied Health pathway (Bio 7C). These pathways are both growing, with additional sections being added each year.



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

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

This equipment would directly support the biology majors series (mostly Bio 1C, but could also be used in Bio 1A and 1B) and the Allied Health series (mostly Bio 7C, Microbiology). A machine of this type would allow for innovation in curricula of other courses as well, such as physiology and biology 30 (introduction to college biology).

The Nanodrop 2000 would also be a great support for student honors projects and independent study. Students could test a variety of hypotheses and do really cutting-edge work with a machine of this type.

Finally, the biology department will begin to offer a course in BioInformatics starting next year, as part of a Computation Biology degree pathway. Data gleaned from the Nanodrop 2000 could be used and processed in the BioInformatics course.

#### **If this equipment is included in your Program Review, please include the exact wording. If equipment is not included, explain why:**

The Nanodrop 2000 is not named in our 2018 Program Review, but it falls under biotechnology needs and industry-standard equipment.

Our 2018 program review reads:

"The general budget for biology laboratory supplies does not match the growth of our course offerings or the industry-level technology used in our curriculum. Many of our course-level and program-level SLOs reflect student's competency in lab skills and using industry-level equipment. For example one of our PSLOs is:

"Students are able to demonstrate proficiency in standard biology lab techniques and lab safety procedures."

We need to institutionalize reliable funding versus stop-gap measures to accomplish goals each semester. Faculty spend a lot of time seeking funding each semester to fulfill curriculum goals. Our department is currently exploring adding a biotechnology course(s), degree, or certificate to the program, however it will not manifest without sufficient and sustainable funding for our current programs. For example, we still do not have a budget for Honors and Independent Study Projects. Faculty or students are currently using left over supplies and/or paying out of their own pockets for these projects. This is not equitable for students who don't have the resources to fund their own projects."

The Nanodrop is industry-standard equipment, used in biotechnology industry, healthcare, and academic laboratories worldwide. Purchase of this equipment would facilitate the addition of biotechnology skills into our Biology majors curriculum and Allied Health Curriculum.

## SECTION 4: TEACHING AND LEARNING

Describe in detail the impact this equipment will have on teaching:

This new piece of equipment will allow accurate measurement of proteins and nucleic acids. It would allow instructors to show students exactly how to measure these biological products and how measurement of those is used in research and healthcare. Instructors could develop exciting new labs, experiments, and curricula that use the machine and train students to use industry-standard equipment. Teaching complex concepts like the need for pure protein and DNA would be made easier with this equipment.

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

Students would be able to learn first-hand how to measure protein and nucleic acid purity, analyze it themselves, and learn in a more applied way why this purity and measurement is important. By using industry-standard equipment that a student may encounter in the workplace, students will connect their learning to a career path more easily.

Each academic year, this equipment will impact: 10 # of classes/sections 240 # of students

## SECTION 5: OUTCOMES (SLOs)

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

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.

What are the consequences related to learning outcomes if request is not funded?

If the request is not funded we will be unable to update Bio 1C and Bio 7C to include industry standard measurement of purity and quantity of nucleic acids and proteins. This equipment would allow students to learn a standard biology lab technique on industry-standard equipment. The learning outcome is directly impacted if we are unable to buy this equipment, with students not being trained on industry-standard equipment.



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

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

The Nanodrop 2000, while sensitive, is a sturdy machine and could be used for the next 15-20 years at least.

**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 Nanodrop 2000 is a small benchtop model. It would fit nicely on the benchtop in 1854 next to the real-time PCR machine. No specific storage or other costs are associated with this new equipment.

**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.**

Not applicable.

**If your proposed equipment will require assembly or installation, please explain what is required, who will perform it, and what the cost will be**

I will install the machine once it is delivered, so there will be no associated costs for installation.

**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.)**

There will not be an annual cost associated. The machine may need to be serviced in the future - ThermoFisher does provide some warranty and service on the lifetime of their machines, but it is minimal and major repairs would need to be separately funded in the future. Having used this type of machine in the past, I can do small calibrations and potentially repairs on it, and would contact the company if major repairs are required.

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

This equipment can be used by many courses, students, and instructors, for many years. This machine, while high-level instrumentation, is sturdy and can handle a lot of student use. It does not provide renewable resources to the college beyond the capacity for students to learn industry-standard techniques and gain experience with high-level equipment.

**SECTION 6: TOTAL COST OF OWNERSHIP (contd)**

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

<u>Item</u>	<u>Cost</u>	<u>Comments</u>
Equipment or Materials	9,700.00	
Taxes (9.5%)	921.50	
Shipping or Delivery Charge	35.00	
Installation Costs *	0.00	
Miscellaneous Costs:		
Facilities Modifications	0.00	
Operator Training	0.00	
Maintenance & Repair Training	0.00	
Storage	0.00	
Other: _____	0.00	
Vendor Discount		
<b>Grand Total:</b>		<b>\$ 10,656.50</b>

\*For items requiring installation, requesters are required to check with District Purchasing (Victoria Lamica) regarding District policies.

**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	0.00	
Outside Standardization or Calibration Costs	0.00	
Storage Costs	0.00	
New Supply Costs	0.00	
Miscellaneous Costs:	0.00	
Maintenance & Repair Labor		
Other: _____		
<b>Annual Operating Costs:</b>		<b>0</b>

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

There are no on-going annual operating costs.



**SECTION 6: TOTAL COST OF OWNERSHIP (contd)**

**Part C: Incremental Labor Costs**

**OPERATOR:**

Indicate the key operator: Darcy Ernst

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: 3 hours per month

**MAINTENANCE & REPAIRS:**

Indicate the person performing maintenance and repairs: Thermofisher, Darcy Ernst

Is this in their current scope of duties? Yes

Indicate cost to train for maintenance and repairs: 0

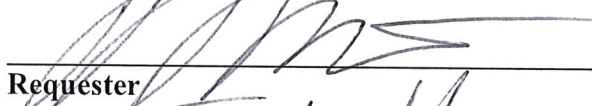
Indicate amount of time per month maintenance will be required: 0-1 hours per month

**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 must be reviewed and signed off by the LPC IT Department.
- ❖ Requests that require M&O assistance with assembly or installation must be signed off by M&O.

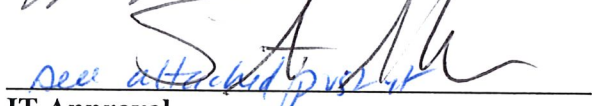
**SIGNATURES:**



Requester

9/13/19

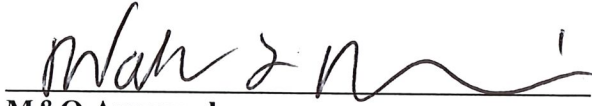
Date

*see attached page 4* 

IT Approval

9/24/19 M/A

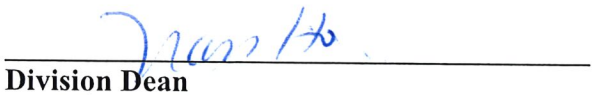
Date



M&O Approval

9/24/19 M/A

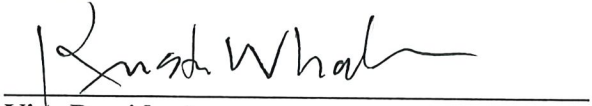
Date

*Trans Ho* 

Division Dean

9-17-19

Date



Vice President

9/20/19

Date





## Request for Taxpayer Identification Number and Certification

Give Form to the  
 requester. Do not  
 send to the IRS.

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p>1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.  <b>Thermo Electron North America, LLC</b></p> <p>2 Business name/disregarded entity name, if different from above</p> <p>3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC    <input type="checkbox"/> C Corporation    <input type="checkbox"/> S Corporation    <input type="checkbox"/> Partnership    <input type="checkbox"/> Trust/estate</p> <p><input checked="" type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ <b>C</b></p> <p><small>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</small></p> <p><input type="checkbox"/> Other (see instructions) ▶</p>	<p>4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) <u>5</u></p> <p>Exemption from FATCA reporting code (if any) <u>E</u></p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p>5 Address (number, street, and apt. or suite no.) See instructions.  <b>5225 Verona Road</b></p> <p>6 City, state, and ZIP code  <b>Madison WI 53711</b></p> <p>7 List account number(s) here (optional)</p>	<p>Requester's name and address (optional)</p>

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

<b>Social security number</b>									
or									
<b>Employer identification number</b>									
4	3	-	1	9	9	2	2	0	1

### Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	Signature of U.S. person ▶ <i>Patrick Brown</i>	Date ▶ <i>12/7/18</i>
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### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
  - Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
  - Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
  - Form 1099-S (proceeds from real estate transactions)
  - Form 1099-K (merchant card and third party network transactions)
  - Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
  - Form 1099-C (canceled debt)
  - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*





Do you supply recycled Products? NA  Yes  No

### Part B: Address Questionnaire

1. General Mailing Address:

Address 5225 Verona Road  
City Madison State WI Zip 53711  
Contact Name \_\_\_\_\_ Title \_\_\_\_\_  
Phone ( 800 ) 532 - 4752 Ext \_\_\_\_\_ Fax ( 412 ) 532 - 6542

2. Remittance Address:

Address PO Box 742775  
City Atlanta State GA Zip 30374  
Contact Name \_\_\_\_\_ Title \_\_\_\_\_  
Phone ( 800 ) 532 - 4752 Ext \_\_\_\_\_ Fax ( 412 ) 532 - 6542

### Part C: Commodity and Service Codes

Type of commodities or services that your business provides

PM and maintenance service to NanoDrop UV-Vis spectrophotometer products

### Part D: Completing and Returning Application

1. Name of Person Completing Form

Name Jessica Lagonell Title Technical Support Specialist  
Phone ( 877 ) 724 - 7690 Ext \_\_\_\_\_ Fax ( 302 ) 792 - 7155  
Signature Jessica Lagonell Date September 16, 2019

2. Return Completed Application to:

Purchasing Department  
Chabot – Las Positas CCD  
7600 Dublin Blvd, 3<sup>rd</sup> Floor  
Dublin, CA 94568  
Fax: (925) 485-5271

### DO NOT COMPLETE – FOR INTERNAL USE ONLY

Received \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Input \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Vendor No. \_\_\_\_\_

Received \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Input \_\_\_\_\_

New  Updated

# Sales Quotation

Quote No.	Create Date	Currency Quoted	Origin
ND82014	13-Sep-2019	US Dollars	USA
Contact Info	Phone No.	Payment Terms	Valid for
Customer Service	(800) 532 - 4752	Net 30 Days	30 Days
Inco 1	Inco 2	Shipping Method	
EXW	Madison, WI, USA	FedEx	
To place an order: Call : (800) 532 - 4752 Fax: (412) 200 - 6542 email: usmadorderprocessing@thermofisher.com Additional instructions, terms & conditions on last page			

## Thermo Electron North America LLC

5225 Verona Road  
 Madison, WI 53711 USA  
 OR  
 1400 Northpoint Pkwy Ste 50  
 West Palm Beach, FL 33407 USA  
 OR  
 PO Box 742775  
 Atlanta, GA 30374-2775 USA  
 US Tax ID: 43-1992201  
 Duns #: 138388090

**NOTE:** Please make purchase orders payable to the entity and one of the addresses listed above.

### Submitted To:

Darcy Ernst  
 Las Positas College  
 3000 Campus Hill Drive  
 Livermore, CA 94551 United States  
 9254241397  
 dernst@laspositascollege.edu

Qty	Item	Description	Unit Price	Total
1	ND-2000-US-CAN	NanoDrop 2000 Spectrophotometer US-CAN.	\$9,700.00	\$9,700.00
1	Shipping-Std-Inst	Shipping and handling charges for Standard Instrument, U.S.	\$35.00	\$35.00
<b>Total</b>				<b>\$9,735.00</b>

Available extended warranty plans listed below include one preventative maintenance per year and must be purchased at time of instrument purchase:

	1 year	2 year	3 year
<u>ND-2000 &amp; ND-2000c Plans</u>	\$1410	\$2681	\$3810
<u>ND-8000 Plans</u>	\$2793	\$5309	\$7544
<u>ND-3300 Plans</u>	\$1341	\$2546	\$3620
<u>ND-Lite Plans</u>	\$745	\$1414	\$2010
<u>ND-One &amp; ND-One<sup>C</sup> Plans</u>	\$1396	\$2655	\$3772

Your quoted price will be honored for 30 days from create date.  
 Shipping terms are EXW Madison, WI, USA (incoterms 2000). Shipping charges to customer location are prepaid and added.  
 Shipping charges not applicable to PM and Extended Warranty plans.  
 Sales terms are subject to credit approval.  
 Duties and taxes are not included in this quote.  
 Units returned within 30 days of receipt will receive full credit.

A part of: **ThermoFisher**  
 S C I E N T I F I C