

# 2020 Instructional Program Reviews



## CAN Program Review (Instructional) - Biological & Health Sciences (Fall 2021)

### STEP 1: Annual Updates

#### 2020-2021

**1. Changes & Updates:** 1. Our program is currently understaffed by 1 FT faculty vacancy due to the retirement of Carol Rhodes. We have requested AS and PBC to initiate a search in spring 2021.  
2. All of our courses have been converted to online modality with approved DE addenda.  
3. Our faculty and lab technicians are devoting massive efforts to create an effective online laboratory learning curricula for all our courses. While many of the labs are online, some still require the use of equipment and supplies located on campus. Faculty are performing labs while broadcasting synchronous Zoom sessions.

**2. Progress Reports:** Progress on any of our prior goals was halted by COVID-19. We are currently undertaking an unprecedented challenge of converting all of our laboratory curricula to an online modality.

**3. Rationale for New Goals:** We have not added new goals. We are only renewing our unfunded resource requests from prior years. While most of our labs are online, some still require the use of equipment and supplies located on campus. Faculty are performing labs while broadcasting synchronous Zoom sessions. We still need to invest in equipment and to prepare for the eventual return to in-person learning.

**Annual Update Status:** Complete

### Goal Description: Improve instructional outcomes by investing in equipment - 2019-20

Purchase instructional equipment for the biology program

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020

**Please select the college goals with which your program goal aligns.:** Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success.

#### Resource Requests

**Glucose monitors** - The glucose meters we use for BIO260 have been phased out by the manufacturer, and it is no longer possible to get test strips that work with our meters. We will need to replace our meters with current versions. For estimating purposes, we can consider the following model:

[https://www.amazon.com/Accu-Chek-Guide-Glucose-Monitoring-System/dp/B0716J6KMD/ref=sr\\_1\\_1\\_a\\_it?ie=UTF8&qid=1540842208&sr=8-1&keywords=Accu-Chek+Guide&dpID=51Kk%252B0TqpL&preST=\\_SY300\\_QL70\\_&dpSrc=srch](https://www.amazon.com/Accu-Chek-Guide-Glucose-Monitoring-System/dp/B0716J6KMD/ref=sr_1_1_a_it?ie=UTF8&qid=1540842208&sr=8-1&keywords=Accu-Chek+Guide&dpID=51Kk%252B0TqpL&preST=_SY300_QL70_&dpSrc=srch)

**Status:** Funded - Inactive

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 360

**One-Time or Recurring Cost?:** One-Time Cost

**Holder for 125 ml flasks, fits shaker** - Adapter flask holders for different sized flasks, for cultures of different volumes. For VWR Shaker 3500I.

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<https://us.vwr.com/store/product/4835149/vwr-incubating-orbital-shaker-model-3500i>

Need 4 at \$29 each

Price quoted is before tax and excluding SH

**Status:** Funded - Inactive

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 116

**One-Time or Recurring Cost?:** One-Time Cost

**Holder for 250 ml flasks; fits shaker** - Adapter flask holders for different sized flasks, for cultures of different volumes. For VWR Shaker 3500I.

<https://us.vwr.com/store/product/4835149/vwr-incubating-orbital-shaker-model-3500i>

Need 4 at \$29 each

Price quoted is before tax and excluding SH

**Status:** Funded - Inactive

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 116

**One-Time or Recurring Cost?:** One-Time Cost

**Incubating Mini-Shaker** - We only have 2 small shaking incubators, and need more to support the 4-5 sections of Microbiology and Cell/Molecular biology, as well as increasing number of student research projects.

<https://us.vwr.com/store/product/4902590/vwr-incubating-mini-shaker>

Price quoted is before tax and excluding SH

Need 2, each at \$3600

**Status:** Funded - Inactive

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 7200

**One-Time or Recurring Cost?:** One-Time Cost

**Incubating Orbital Shaker (VWR 3500I)** - We only have 2 small shaking incubators, and need more to support the 4-5 sections of Microbiology and Cell/Molecular biology, as well as increasing number of student research projects. We need to be able to aerate and incubate larger cultures too.

<https://us.vwr.com/store/product/4835149/vwr-incubating-orbital-shaker-model-3500i>

Need 1, at \$5921

Price quoted is before tax and excluding SH

**Status:** Funded - Inactive

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 5921

**One-Time or Recurring Cost?:** One-Time Cost

**Micropipettors P-1000 size (4 pack)** - We need a few complete sets (4 each of P-1000) of micropipettors to support independent student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.

1-4 pack

<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>

Price quoted is before tax and excluding SH

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 619

**Micropipettors P-20 size, (4 pack)** - We need a few complete sets (4 each of P-20) of micropipettors to support independent

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student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.  
<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>  
1-4 pack  
Price quoted is before tax and excluding SH

**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 619

**Micropipettors P-200 size (4 pack)** - We need a few complete sets (4 each of P-200) of micropipettors to support independent student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.  
<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>  
1-4 pack  
Price quoted with before tax and excluding SH

**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 619

**Pulse transducer** - Students use these devices with our computerized data acquisition systems to measure blood flow through the finger. Two of these transducers are broken and in need of replacement.  
<https://www.biopac.com/product/photoplethysmogram-for-pulse-waveform-bsl/>  
Need 4, each at \$245.

**Status:** Funded - Inactive  
**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 980  
**One-Time or Recurring Cost?:** One-Time Cost

**Reaction Timers** - Students use these hand-held timers to test their reaction time to visual and auditory stimuli. Several of our timers are broken and need replacement.  
<https://www.amazon.com/American-Educational-Products-6027-Reaction/dp/B00658AXCQ>  
Need 6, each at \$173

**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 1038

**Shaker Platform** - Adapter platform for different sized flasks, for cultures of different volumes. For VWR Shaker 3500I.  
<https://us.vwr.com/store/product/4835149/vwr-incubating-orbital-shaker-model-3500i>  
Price quoted is before tax and excluding SH

**Status:** Funded - Inactive  
**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 225  
**One-Time or Recurring Cost?:** One-Time Cost

## Goal Description: Anatomy Student Success Initiative

The mission of the Anatomy Student Success Initiative is to provide necessary additional support to BIOL 250 Human Anatomy students on the Cañada College campus, with the specific goal of increasing the retention and success of these students.

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020, 2020-2021

**Please select the college goals with which your program goal aligns.:** Student Completion/Success - Provide educational and

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student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success., Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

## Action Plans

**2018-2019** - Submit proposal for reassigned time for a faculty researcher to conduct focus groups and and to investigate possible models and strategies for improving student success. (Active)

**Who's Responsible for Completing this Action Plan?:** Dani Behonick

**Estimated Completion Date:** October 2018

## Goal Description: Revise laboratory curriculum for BIOL 110 and 132

Replace existing manuals with content that is pedagogically sound, engaging students, encourages the use of critical thinking and problem solving skills, and cost-effective.

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020

**Please select the college goals with which your program goal aligns.:** Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

## Goal Description: Future of Health Science discipline

Reassess role of Health Science discipline at Cañada College

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020, 2021-2022

**Please select the college goals with which your program goal aligns.:** Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

## Goal Description: Institutionalization of EPIC tutoring program

Obtain college funding for a permanent EPIC tutor coordinator to institutionalize the program and make it available to a wider variety of courses, within biology and beyond.

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020

**Please select the college goals with which your program goal aligns.:** Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success., Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

## Action Plans

**2018-2019** - The biology program will help author and support a New Position Proposal requesting that the college fund a permanent position for an EPIC tutor coordinator. (Active)

**Who's Responsible for Completing this Action Plan?:** Carol Rhodes and interim Dean Windham

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## Goal Description: Increase department budget

Increase the annual department budget to include ongoing annual instructional equipment needs

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2019-2020

**Please select the college goals with which your program goal aligns.:** Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success., Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

### Resource Requests

**Human cadaver** - BIOL 250 Human Anatomy requires the dissection of human cadavers in order for the course to articulate with four-year institutions and to satisfy prerequisites of allied health programs such as nursing, radiologic technology, surgical technology, occupational therapy and others. The Willd Body Program (WBP) at UCSF provides us these cadavers. In the past we usually purchased one cadaver on a yearly basis, but some (recent) years we opted out. WBP has changed their requirements for how long we may keep a cadaver necessitating us to adopt a regular/annual replacement rate. We are requesting that this cost be allocated to our annual department budget rather than a special allocation through the resource request process - it is an ongoing expense and not discretionary.

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 2800

## Goal Description: Improve instructional outcomes by investing in equipment - 2020-21, 2021-22

Purchase instructional equipment for the biology program

**Goal Status:** 1 - New (PR)

**Relevant Program Review Cycle:** 2020-2021, 2021-2022

**Who's Responsible for this Goal?:** Biology Faculty, Dean of Science and Technology

**Please select the college goals with which your program goal aligns.:** Student Completion/Success - Provide educational and student services programs that highlight inclusivity, diversity, and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success., Organizational Development - Focus institutional resources on the structures, processes, and practices that invest in a diverse student population and prioritize and promote equitable, inclusive, and transformative learning.

**Please select the college strategic initiatives with which your program goal aligns.:** Improve Student Completion

### Resource Requests

**Automated Agar/Media Filler** - Biology Support

Our lab tech pours 8 liters of agar any given day into Petri dishes creating substantial repetitive strain on her shoulders over time. An automated filler will significantly reduce the potential for workplace injury and, more importantly, will reduce the chance of plate contamination and wasting of supplies.

<https://www.neutecgroup.com/products/agar-media-fillers-preparators/agar-media-filler-ps200-400-detail>

**Status:** New Request - Active

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 29412

**One-Time or Recurring Cost?:** One-Time Cost

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**Critical Question: How does this resource request support closing the equity gap?:** This equipment is needed for our Lab Technicians to adequately support our faculty and students and prevent potential workplace injury.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** This equipment is needed for our Lab Technicians to adequately support our students. In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Balance/Scale - BIOL 110 and 230

We currently have to carry balances between the two labs which risks damage and loss of calibration.

$\$1912 \times 2 = \$3824$  total

<https://www.fishersci.com/shop/products/pioneer-px-balance-26/01922170?searchHijack=true&searchTerm=01922170&searchType=RAPID&matchedCatNo=01922170>

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 3824

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment for each lab, we are forced to transport sensitive equipment between labs. This risks damaging and loss of calibration which adds extra expense and loss of use while repair and replacement occur. All of this compromises our ability to offer students the learning experience they need to succeed.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Brain model - BIOL 250

We no longer are able to maintain multiple actual human brain specimens and so need to augment our existing models. We need two additional brain models to distribute among student groups.

[https://www.a3bs.com/classic-human-brain-model-5-part-3b-smart-anatomy-1000226-c18-3b-scientific,p\\_13\\_243.html](https://www.a3bs.com/classic-human-brain-model-5-part-3b-smart-anatomy-1000226-c18-3b-scientific,p_13_243.html)

$\$234 \times 2 = \$468$

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 468

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate numbers of models to distribute among the class, we have to limit the time each student has to use them for their learning. This is unfair for all students but especially for those who are kinesthetic and visual learners. Limiting access to student learning materials is counter to the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Compact centrifuge - BIOL 230

This is my most major need -- we process dozens of tissue/cell samples (2-3 cycles each!) per lab period every week of the academic year. Currently we can only process 6 samples in our centrifuge at a time. With 30 students and 8 groups of them, this causes serious additional wait times, delays, and labs to run over/late when things don't go perfectly -- which is the case most of the time. We need at least 1 lower-cost centrifuge that can process 50ml Centrifuge at at least 4,000xg. This is the least expensive centrifuge and rotor I can find that meets these requirements.

Centrifuge \$2031

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<https://ecatalog.corning.com/life-sciences/b2c/US/en/Equipment/Centrifuges/Compact-Centrifuges/Corning®-LSE™-Compact-Centrifuge/p/6756?clear=true>

Rotor \$1014

<https://ecatalog.corning.com/life-sciences/b2c/US/en/Equipment/Centrifuges/Centrifuge-Accessories/Corning%C2%AE-LSE%E2%84%A2-Compact-Centrifuge-Rotors/p/480143>

Total \$3045

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 3045

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment, we end up delaying students' progress through the learning activities and often labs run over class time. This is unfair to all students especially those that have other classes and outside responsibilities. It adds an extra barrier to success that could be eliminated by simply investing in sufficient equipment. This is consistent with the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Gas Analysis System - BIOL 260

The Gas Analysis System will allow us to measure oxygen and carbon dioxide in students' breath. This allows us to measure their metabolism during rest and exercise, measure VO<sub>2</sub>, and perform Wingate tests which assess student's physical fitness. These types of measurements are used to enhance the training of athletes and so could be relevant not only to our physiology students but also our college coaches.

One complete Gas Analysis System with all necessary couplers, costs \$7900. We have 6 Biopac workstations that connect to this system to do the data acquisition; we are requesting at least 3 complete systems now which is the minimum needed to run a lab with 30 students. We will request 3 additional systems in the future to finish equipping the lab.

We will need to purchase one (1) set of equipment to calibrate each of the systems; the calibration equipment costs \$2,510.

Grand total for 3 systems and calibration equipment = \$26,235.

Grand total for 6 systems plus calibration equipment = \$50,000.

<https://www.biopac.com/product/co2-and-o2-analysis/>

**Status:** New Request - Active

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 26300

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Investing in new equipment will allow us to enrich our curriculum with labs in exercise physiology. These are of particular interest to students as they are obviously relevant to their personal experiences and career goals. Research shows that when students' interest is piqued and they can draw upon prior knowledge, they are more likely to engage and learn.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Head musculature model - BIOL 250

We have 5 existing head models and need one additional model to distribute among the 30 students in lab.

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[https://www.a3bs.com/head-and-neck-musculature-model-5-part-3b-smart-anatomy-1000214-c05-3b-scientific,p\\_32\\_226.html](https://www.a3bs.com/head-and-neck-musculature-model-5-part-3b-smart-anatomy-1000214-c05-3b-scientific,p_32_226.html)

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 1161

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate numbers of models to distribute among the class, we have to limit the time each student has to use them for their learning. This is unfair for all students but especially for those who are kinesthetic and visual learners. Limiting access to student learning materials is counter to the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

**Incubator - BIOL 240**

We need 2 incubators, one at 37C and one at 55C. We only have one in the prep room and it is beginning to fail (25-30 years old). We need to replace it and purchase a second.

\$1764 x 2 = \$3528 total

<https://www.fishersci.com/shop/products/basic-microbiological-incubators-3/150152634?searchHijack=true&searchTerm=150152634&searchType=RAPID&matchedCatNo=150152634>

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 3528

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment for each lab and aging equipment, we are at risk of not being able to support the existing curriculum. Equity gaps will only be worse if students are not able to perform the learning activities due to equipment failure. Inadequate and aging equipment creates a barrier to access which is counter to the District's Strategic plan.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

**Leica DM500 compound microscopes with pointers - BIOL 250 and the Upward Bound/UCB extension lab (16-204)**

15 scopes will be used in BIOL 250, 15 in the UCB Extension lab

approximately \$1500 x 30 = \$45000 (will submit updated pricing information when quote arrives)

JH Technologies: 402 890 8249

**Status:** New Request - Active

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 45000

**One-Time or Recurring Cost?:** One-Time Cost

**Leica E24 dissecting scopes - Upward Bound/UCB Extension lab (16-204)**

Need 30 new dissecting scopes

approximately \$1065 x 30 = 32,000 (will update pricing when quote arrives)

**Status:** New Request - Active

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 32000

**One-Time or Recurring Cost?:** One-Time Cost

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## **Micro Balances** - BIOL 110 and 240 and Biology Support

These balances provide very precise measurements of tiny amounts of chemicals needed to perform experiments.

\$6185 x 2 = \$12370 total cost

<https://www.fishersci.com/shop/products/mettler-toledo-newclassic-ms-semi-micro-balances-3/01911371#?keyword=01-911-371>

**Status:** New Request - Active

**Type of Resource:** Equipment (Items Over \$5000)

**Cost:** 12370

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment, we end up delaying students' progress through the learning activities and often labs run over class time. This is unfair to all students especially those that have other classes and outside responsibilities. It adds an extra barrier to success that could be eliminated by simply investing in sufficient equipment. This is consistent with the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

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**Micropipettors P-1000 size (4 pack)** - We need a few complete sets (4 each of P-1000) of micropipettors to support independent student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.

1-4 pack

<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>

Price quoted is before tax and excluding SH

**Status:** Continued Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 650

**One-Time or Recurring Cost?:** One-Time Cost

**Micropipettors P-20 size, (4 pack)** - We need a few complete sets (4 each of P-20) of micropipettors to support independent student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.

<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>

1-4 pack

Price quoted is before tax and excluding SH

**Status:** Continued Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 650

**One-Time or Recurring Cost?:** One-Time Cost

**Micropipettors P-200 size (4 pack)** - We need a few complete sets (4 each of P-200) of micropipettors to support independent student projects outside of regular class time, especially with the new student Independent Projects lab space in Building 23.

<https://www.pipette.com/P3940-4P-Labnet-Biopette-Plus-4-Pack-Mix-and-Match-Please-specify-sizes-at-checkout-1-Carousel-Stand-and-2-Racks-of-Tips>

1-4 pack

Price quoted with before tax and excluding SH

**Status:** Continued Request - Active

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**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 650

**One-Time or Recurring Cost?:** One-Time Cost

## Mini Microcentrifuges - BIOL 230 and 110

WE need mini-microcentrifuges for the BIOL 230 lab (at least 2) and BIOL 110 labs (at least 1). Ones we've had were old donations, and some are no longer working. We desperately need more.

\$283 each x 3 = \$850

Green lid:

[https://www.sigmaaldrich.com/catalog/product/sigma/z763896?lang=en&region=US&cm\\_sp=Insite-\\_-prodRecCold\\_xviews-\\_-prodRecCold10-3](https://www.sigmaaldrich.com/catalog/product/sigma/z763896?lang=en&region=US&cm_sp=Insite-_-prodRecCold_xviews-_-prodRecCold10-3)

Purple lid:

[https://www.sigmaaldrich.com/catalog/product/sigma/z763926?lang=en&region=US&cm\\_sp=Insite-\\_-prodRecCold\\_xviews-\\_-prodRecCold10-1](https://www.sigmaaldrich.com/catalog/product/sigma/z763926?lang=en&region=US&cm_sp=Insite-_-prodRecCold_xviews-_-prodRecCold10-1)

Blue lid:

[https://www.sigmaaldrich.com/catalog/product/sigma/z763853?lang=en&region=US&cm\\_sp=Insite-\\_-prodRecCold\\_xviews-\\_-prodRecCold10-8](https://www.sigmaaldrich.com/catalog/product/sigma/z763853?lang=en&region=US&cm_sp=Insite-_-prodRecCold_xviews-_-prodRecCold10-8)

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 850

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment, we end up delaying students' progress through the learning activities and often labs run over class time. This is unfair to all students especially those that have other classes and outside responsibilities. It adds an extra barrier to success that could be eliminated by simply investing in sufficient equipment. This is consistent with the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## Muscle models of upper and lower limbs - BIOL 250

We currently have 2 upper limb models and 2 lower limb models. Adding a third model of each will make it easier to distribute these among a class of 30 students.

[https://www.a3bs.com/anatomy-set-muscled-limbs-8000841-3b-scientific,p\\_46\\_30677.html](https://www.a3bs.com/anatomy-set-muscled-limbs-8000841-3b-scientific,p_46_30677.html)

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 1371

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate numbers of models to distribute among the class, we have to limit the time each student has to use them for their learning. This is unfair for all students but especially for those who are kinesthetic and visual learners. Limiting access to student learning materials is counter to the District's strategic plan to increase access by investing in resources to eliminate barriers to learning.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

## pH meters - BIOL 110, 132, 230, 240

# CAN Program Review (Instructional) - Biological & Health Sciences (Fall 2021)

We only have 1 pH meter in the prep room and need to carry it to each lab for use during class. We need one meter in each lab.  
\$1132 x 3 = \$3396

<https://www.fishersci.com/shop/products/mettler-toledo-s220-sevencompact-ph-ion-benchtop-meter-4/01915101#?keyword=01-915-101>

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 3396

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** Despite the consistently high success rate (70%) of students in biology courses, we do have an equity gap of nearly 8% for our Hispanic students. Without adequate equipment for each lab, we are forced to transport sensitive equipment between labs. This risks damaging and loss of calibration which adds extra expense and loss of use while repair and replacement occur. All of this compromises our ability to offer students the learning experience they need to succeed.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

**Portable vacuum station** - Lower priority

Biology Support and various labs

Need 1

<https://www.fishersci.com/shop/products/air-cadet-portable-vacuum-pressure-station/13875239?searchHijack=true&searchTerm=13875239&searchType=RAPID&matchedCatNo=13875239>

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 460

**One-Time or Recurring Cost?:** One-Time Cost

**Critical Question: How does this resource request support closing the equity gap?:** This equipment is needed for our Lab Technicians to adequately support our faculty and students.

**Critical Question: How does this resource request support Latinx and AANAPISI students?:** This equipment is needed for our Lab Technicians to adequately support our students. In 2019-20 over 900 of our biology students (47.8%) identify as Hispanic which is 7% higher in the college as a whole. Since our classes have higher percentages of Latinx students than the overall college population, an investment here will have additional positive impact on the target population.

**Utility carts (2)** - Biology Support

We need two (2) additional mobile carts for transporting lab supplies and equipment to the classrooms. All equipment setups are delivered and left in the classroom labs for use that day and then returned to the stockroom.

\$756 x 2 = \$1512

<https://www.fishersci.com/shop/products/rubbermaid-heavy-duty-utility-cart-aluminum-uprights/1192671?searchHijack=true&searchTerm=1192671&searchType=RAPID&matchedCatNo=1192671>

**Status:** New Request - Active

**Type of Resource:** Supplies (Items less than \$5000)

**Cost:** 1512

**One-Time or Recurring Cost?:** One-Time Cost

**Water bath - 10L** - Lower priority

# CAN Program Review (Instructional) - Biological & Health Sciences (Fall 2021)

Various biology labs  
2 needed  
\$676 x 2 = \$1352 total  
<https://us.vwr.com/store/product?keyword=76308-896>

**Status:** New Request - Active  
**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 1352  
**One-Time or Recurring Cost?:** One-Time Cost

**Water baths - 20L - Lower priority**  
Various biology labs  
1 needed  
<https://us.vwr.com/store/product?keyword=76308-900>

**Status:** New Request - Active  
**Type of Resource:** Supplies (Items less than \$5000)  
**Cost:** 842  
**One-Time or Recurring Cost?:** One-Time Cost