



# **Program Review - Overall Report**

Instructional: Biology

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# Data Review

2021 - 2024

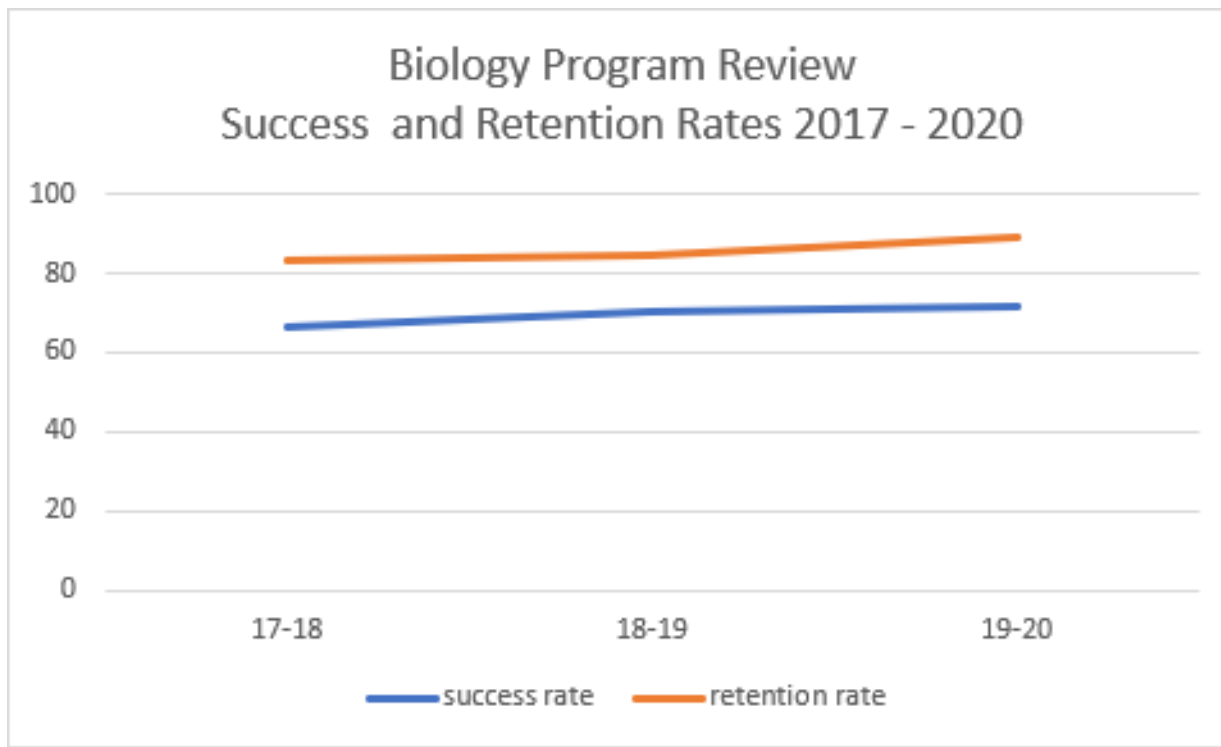
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## Overall Trends

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What overall trends do you see in success, retention, program of study, educational planning, and awards over the past 3 or more years?

*Overall, students in AMY, BIO, HES and MIC courses have been increasing from 66.6 % to 71.6% in success and remaining about the same from 83% to 83.9 % in retention over the past 3 years.*



*The students in AMY, Bio, HES, and Micro courses have decreased in their rate of receiving less than passing (DF) grades during this time.*

*For the following programs of study: Biology and Math & Science the percentage of students developing a comprehensive credit education plan decreased from 12.22% to 10.55% in 3 years and the number of program awards granted over the past 3 years remained the same from 233 awards to 200 awards.*

*The number of students who have completed a degree or certificate in Biology and Math & Science programs went from 233 to 200 in 3 years. This represents no growth for these programs. In the most recent year 2019-2020, 200 students graduated. The*

## Data Review

*expected number of students who should get a degree would be approximately (200/3744) 5.3% of Program of Study in 2019-2020. The gap in the pipeline is approximately 3544 more students to graduate with a degree or certificate. This number is large since the majority of our students transfer to programs or universities without the necessity of the program award.*

### Disaggregated Student Subgroups

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**Look at the disaggregated student subgroups in success, retention, program of study, educational planning, and awards for your area. Are there any equity gaps that you will address in the next 3 years? In terms of student subgroups in AMY, BIO, HES, and MIC courses, only hispanic female and male student groups are showing gaps in success. Only hispanic females are showing equity gaps in retention that are concerning.**

*Equity gaps in program of study, educational planning, and awards are not shown on the tables for these areas.*

*We should take steps to address equity gaps for female and male hispanic success and female hispanic retention.*

**If there are any concerning trends over the past 3 or more years, or if equity gaps exist, what is your action plan to address them?**

*We address equity gaps for females and minorities by hosting STEM Seminar Series where female and/or minority speakers are invited to share their current research and ignite interest in STEM.*

*We are recruiting local high school students for a Forensics for Women competition which introduces students to the basic methods of science and the scientific method.*

*Dr. Monica Gutierrez shares her personal experience as a hispanic female in STEM to our Puente students.*

*We are increasing offering of Human Biology (BIO-4) as a pre-requisite for Anatomy and Physiology (BIO-50A/B) to address preparation gaps in students from underserved populations.*

**Is there a resource request associated with this Data Review? (If yes, please complete a Resource Request, which you can access from the main menu to the left)**

Yes

# Assessment Review

2021 - 2024

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## Section 1: SLO Assessment Status (Based on Dashboard - Assessment Status)

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**Which Disciplines are included in this Assessment?**

BIO and HES

**What percent of SLOs in the disciplines you identified above have been assessed?**

97.6%

**Which SLOs have not been assessed and why? Identify both the Course and the associated SLO(s).**

Bio-21 (SLO1 and 2) due to this being a new course

## Section 2: Mapping Status (Based on Dashboard - Mapping Status)

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**Are all SLOs mapped to at least one PLO?**

Yes

**If all SLOs are not mapped to at least one PLOs, please explain why.**

All of the SLOs are mapped to at least one PLO

**Are the appropriate SLOs mapped to GELOs? (If you have a course that is listed in any general education area, it should have at least one SLO mapped to at least one GELO)**

Yes

**If the appropriate SLOs are not mapped to GELOs, please explain why.**

Appropriate SLOs are mapped to GELOs

## Section 3: PLO Analysis (Based on Dashboard - Analysis: PLO Direct Assessment)

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**Which Programs are included in this Assessment?**

ADT- Biology, ADT-BIO Environmental Science, ADT-KIN Kinesiology, AOE-MAT: Math and Science

**Please identify the PLO(s) - and name the associated Program(s) - that achieved benchmarks.**

All PLOs for ADT-Biology, ADT-BIO Environmental Science, ADT-KIN Kinesiology achieved benchmarks above 70%. AOE-MAT: Math and Science PLO 3 achieved a benchmark above 70%.

**To what do you attribute this success?**

Hiring of more full-time faculty has supported achieving these benchmarks

**Please identify the PLO(s) - and name the associated Program(s) - that did not achieve benchmarks.**

AOE-MAT: Math and Science PLOs 1 & 2 did not achieve a benchmark of 70%

**If there are PLOs that did not achieve benchmarks, what do you plan on doing to improve benchmark attainment?**

Our unit is not responsible for PLO 1 in AOE-MAT. Our unit intends to improve assessment of PLO 2 in AOE-MAT with the instructional supplies and personnel requests to increase student learning of the scientific method.

## Section 4: Alignment to Career and Transfer

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**Describe the process used in this area to ensure programs (PLOs) align with career and transfer needs.**

ADTs and courses are aligned to the C-ID system to improve transfer to CSUs. All courses are transferable to CSUs and UCs, as well as many other regional colleges and universities.

## Assessment Review

**Describe the activities, projects, and opportunities this program offers to support experiential learning and alignment of programs to career and transfer (e.g. capstone projects, portfolios, service-learning opportunities).**

Our programs provide students with labs and field trips to support experiential learning and laboratory experiences vital for transfer requirements.

**Without looking at your current PLOs, describe some program outcomes which would best help your students continue on the path towards their workforce and transfer goals (e.g. subject matter expertise, hands on experience, partnerships, etc.).**

Laboratory and field skills, critical thinking skills, ability to apply the scientific method

**Review current PLOs. Do the outcomes listed above align with the current program outcomes?**

Yes

## Program Review: Part 1

EMP GOAL 1. Expand college access by increasing both headcount and full-time equivalent students (FTES).

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### **GOALS AND ACTIVITIES**

#### **What are you doing now in support of this goal?**

We have hired two new full time faculty (one is a replacement for a retiree), we have expanded course offerings, and we have maximized our laboratory and lecture spaces.

#### **What are your plans/goals (3-year) regarding this goal?**

We would like to offer more sections of impacted courses. To support this goal, we need more lab and lecture space to offer more sections, we need another full-time faculty member in Biology to teach more sections, and we need another full-time laboratory technician to support current courses offerings in the sciences and support future growth in course offerings.

<i>Rank</i>	<i>Category</i>	<i>Request</i>
3	Faculty	Full-time Biology Instructor
4	Staff	Full-time Lab Technician

In the distant future, we hope that a Science building will be built with a prep room in the middle of all of the laboratory spaces, and with laboratories designated for particular courses, as is done at many colleges and universities around the country. This layout reduces the need to have multiple laboratory technicians in multiple locations at that same time.

### **EVIDENCE**

#### **Do you have assessment data or other evidence that relates to this goal?**

We have numerous courses in Biology that are impacted with full waitlists, in particular BIO-1, BIO-50A, BIO-50B, and BIO-55. Most of our courses are taught by part-time faculty, for example, in Fall 2021 there are 42 sections in Biology with 28 sections taught by part-time faculty or as overload for full-time faculty. The current arrangement of laboratory spaces in multiple buildings, and lack of laboratories designated for the same course means that our laboratory technicians must completely change the laboratory set-up between courses and must move laboratory supplies and equipment between buildings.

Kevin Eagan, M., & Jaeger, A. (2009). Effects of Exposure to Part-time Faculty on Community College Transfer. *Research in Higher Education*, 50(2), 168–188. Results: The researchers found a strong correlation between students' exposure to part-time faculty instruction and the likelihood that these students would not transfer to four-year institutions. Article attached in the document repository for this submission.

### **RESOURCES**

#### **Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)**

Yes

## Program Review: Part 1

### EMP GOAL 3. Close all student equity gaps.

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#### **GOALS AND ACTIVITIES**

##### **What are you doing now in support of this goal?**

The science department is working to close equity gaps by collaborating with other departments and committees to address equity gaps in our department. One way we are addressing this is by increasing the offering of alternative pre-requisite classes that help prepare student for the upper level coursework. The increase in sections of Human Biology (BIO-4) for allied health pre-professionals is one example.

##### **What are your plans/goals (3-year) regarding this goal?**

We plan on increasing the offering of Human Biology (BIO-4) as a pre-requisite, as an alternative to General Biology (BIO-1), for students pursuing nursing and other allied health fields. BIO-4 is a survey course of the human body that provides a step between high school life science and the Anatomy and Physiology series (BIO-50A and BIO-50B). BIO-4 has demonstrated the ability to close the equity gap by providing students a solid background for Anatomy and Physiology needed by many of our students in underserved populations.

<i>Rank</i>	<i>Category</i>	<i>Request</i>
5	Instructional Supplies	Bio 4 Human Body Models
7	Technology	Replacement laptop computers for IT 128
8	Furniture	Replacement of all lab benches in IT 128
9	Technology	JoVE science education subscription for the library (re annually)
11	Instructional Supplies	Bio 4 Human Organ models
14	Instructional Supplies	Replacement microscope slides
16	Instructional Supplies	Bio 4 Physio Equipment

## Program Review: Part 1

17	Instructional Supplies	Bio 4 Posters
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### **EVIDENCE**

#### **Do you have assessment data or other evidence that relates to this goal?**

We do not have assessment data at this time, due to the fact that BIO-4 has had limited offerings. There is evidence from other districts that support the working hypothesis that Human Biology courses increase success rates and close equity gaps in higher level courses for students pursuing nursing and other allied health fields.

Anderton, R.S., Evans, T., & Chivers, P. (2016). Predicting Academic Success of Health Science Students for First Year Anatomy and Physiology. *The International Journal of Higher Education*, 5, 250-260. Results found that "Previous study of science (*human biology*, chemistry or physics) strongly predicts academic performance in BMS100 (\*\*p < .001)." Article attached to this Program Review as a supporting document.

### **RESOURCES**

#### **Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)**

Yes

EMP GOAL 7. Become the regional college of choice by offering a comprehensive range of programs that prepare students for the future and meet employer workforce needs.

### **GOALS AND ACTIVITIES**

#### **What are you doing now in support of this goal?**

1. Anatomy and Physiology laboratory exercises that have not significantly changed in many years.
2. Offering of a variety Gen Ed course offerings for life science courses, including lecture only courses, lecture and lab courses, and lecture and field biology courses, all of which are transferable to CSUs and UCs. Many of these courses are using equipment and supplies that are out-of-date, broken, or non-functional.

#### **What are your plans/goals (3-year) regarding this goal?**

1. Add real-time physiology labs that mimic clinical tests such as ECG, EEG, respirometry, muscle contraction, etc. using Bio-Pac technology.
2. Increase offerings of Human Biology (BIO-4) as a prerequisite for Anatomy and Physiology courses and offering of a new field course: California Naturalist (BIO-21). To provide these increased offerings, as well as maintaining current course offerings requires instructional supplies for labs. The increased offerings of BIO-4, the new course of BIO-21, and maintaining current laboratory courses all require resource requests to provide students with a comprehensive education that prepares them for transfer to 4-year universities and colleges.
3. The Biology Discipline has approved and submitted DE forms for several Biology courses, so that we can increase our offerings to become a regional college of choice. An ongoing subscription to JoVE Science Education by the library is needed to support these DE courses. This subscription will also support face-to-face classes, by providing animations of difficult content in biology.



## Program Review: Part 1

<i>Rank</i>	<i>Category</i>	<i>Request</i>
1	Technology	Surface Pros to replace laptop computers for ST 207 to run PACs
2	Technology	BIO-PACs (basic + respirometer) - BIO-50A/B
5	Instructional Supplies	Bio 4 Human Body Models
6	Instructional Supplies	Field tools and supplies - Bio 21
7	Technology	Replacement laptop computers for IT 128
8	Furniture	Replacement of all lab benches in IT 128
9	Technology	JoVE science education subscription for the library (renewed annually)
10	Instructional Supplies	Field Guides - Bio 21
11	Instructional Supplies	Bio 4 Human Organ models
12	Instructional Supplies	Anatomy models for ST 207
13	Equipment	Replacement oxygen meters for IT 128
14	Instructional Supplies	Replacement microscope slides
15	Instructional Supplies	Analytical instruments and supplies - Bio 21

## Program Review: Part 1

16	Instructional Supplies	Bio 4 Physio Equipment
17	Instructional Supplies	Bio 4 Posters
18	Technology	PCR Machine Thermo Fisher (1) - BIO-60
19	Technology	BIO-RAD UV-Visible spectrophotometers (8) - BIO-60
20	Instructional Supplies	TK6 Tissue Culture Supplies and Cell Line - BIO-60
21	Equipment	3-tiered seed sprouter - BIO-3,5,8
22	Safety	Autoclave maintenance contract (renewed annually)

### **EVIDENCE**

#### **Do you have assessment data or other evidence that relates to this goal?**

To become the regional college of choice by offering a comprehensive range of programs that prepare students for the future, we need up-to-date equipment and supplies to attract students to our college.

1. Published data is available of the success of using the Bio-Pac systems to support real-time physiology labs: BIOPAC SYSTEMS HELPS STARK INDUSTRIES LAUNCH VITAL VENTILATOR FOR NASA JPL [Here.](#)
2. Assessment data for all life science courses is available. These courses are regularly assessed with overall good student success. Once we increase the availability of Human Biology (BIO-4), we intend to compare the success of students in Anatomy and Physiology courses based on whether they took General Biology (BIO-1) as a pre-requisite or Human Biology (BIO-4) as a pre-requisite. Our working hypothesis is that students with the BIO-4 pre-requisite will have higher success and retention than students with the BIO-1 pre-requisite in Anatomy and Physiology (BIO-50A and 50B) courses. Anatomy and Physiology courses, along with Microbiology (BIO-55), are the primary courses taken by students to pursue nursing and other allied health careers. According to ***The Inland Empire Regional Collaborative Health Industry Workforce Report 2017*** (support documentation in this program review) there will be an increased demand for at least 55 healthcare occupations in the next 5 years. Many of these allied health occupations require the above listed courses as pre-requisites. Increasing these BIO course offerings with up to date equipment and supplies gives our students the opportunity to pursue these regionally in demand careers.

### **RESOURCES**

**Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)**

Yes

## Program Review: Part 1

EMP GOAL 9. Expand workforce to support comprehensive college and develop/sustain excellent workplace culture.

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### **GOALS AND ACTIVITIES**

#### **What are you doing now in support of this goal?**

We currently have 6 full-time faculty and 17 part-time faculty in Biology, as well as 3 full-time laboratory technicians and 1 part-time laboratory technician for Biology, Chemistry, and Physics.

#### **What are your plans/goals (3-year) regarding this goal?**

We would like to hire a new full-time faculty member in Biology and a new full-time laboratory technician to support Biology, Chemistry, and Physics laboratories.

<i>Rank</i>	<i>Category</i>	<i>Request</i>
3	Faculty	Full-time Biology Instructor
4	Staff	Full-time Lab Technician

### **EVIDENCE**

#### **Do you have assessment data or other evidence that relates to this goal?**

Most of our courses are taught by part-time faculty, for example, in Fall 2021 there are 42 sections in Biology with 28 sections taught by part-time faculty or as overload for full-time faculty. We have expanded course offerings in Biology to maximize lecture and laboratory space, and we need full-time faculty and another laboratory technician to support these courses. The current layout of laboratories on campus and lack of labs designated for single courses, means that laboratory preparation requires more work than colleges that have designated labs around a central prep room.

Kevin Eagan, M., & Jaeger, A. (2009). Effects of Exposure to Part-time Faculty on Community College Transfer. *Research in Higher Education*, 50(2), 168–188. Results: The researchers found a strong correlation between students' exposure to part-time faculty instruction and the likelihood that these students would not transfer to four-year institutions. Article attached in the document repository for this submission.

### **RESOURCES**

#### **Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)**

Yes

EMP GOAL 12. Develop innovative and diversified resources to build and sustain a comprehensive college and achieve its visionary goals.

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### **GOALS AND ACTIVITIES**

#### **What are you doing now in support of this goal?**

We have resources to offer many diverse courses in biology, but many of the equipment and supplies are old, broken, and non-functional.

## Program Review: Part 1

### What are your plans/goals (3-year) regarding this goal?

We would like the following resources to continue to offer innovative and diversified laboratories:

<i>Rank</i>	<i>Category</i>	<i>Request</i>
1	Technology	Surface Pros to replace laptop computers for ST 207 t PACs
2	Technology	BIO-PACs (basic + respirometer) - BIO-50A/B
5	Instructional Supplies	Bio 4 Human Body Models
6	Instructional Supplies	Field tools and supplies - Bio 21
7	Technology	Replacement laptop computers for IT 128
8	Furniture	Replacement of all lab benches in IT 128
9	Technology	JoVE science education subscription for the library (re annually)
10	Instructional Supplies	Field Guides - Bio 21
11	Instructional Supplies	Bio 4 Human Organ models
12	Instructional Supplies	Anatomy models for ST 207
13	Equipment	Replacement oxygen meters for IT 128
14	Instructional Supplies	Replacement microscope slides

## Program Review: Part 1

15	Instructional Supplies	Analytical instruments and supplies - Bio 21
16	Instructional Supplies	Bio 4 Physio Equipment
17	Instructional Supplies	Bio 4 Posters
18	Technology	PCR Machine Thermo Fisher (1) - BIO-60
19	Technology	BIO-RAD UV-Visible spectrophotometers (8) - BIO-60
20	Instructional Supplies	TK6 Tissue Culture Supplies and Cell Line - BIO-60
21	Equipment	3-tiered seed sprouter - BIO-3,5,8
22	Safety	Autoclave maintenance contract (renewed annually)

### EVIDENCE

#### Do you have assessment data or other evidence that relates to this goal?

To build and sustain a comprehensive college and achieve its visionary goals, we need to offer biology laboratories with up-to-date equipment and supplies. The addition of innovative resources such as these will help make the college competitive in the region.

1. Published data is available of the success of using the Bio-Pac systems to support real-time physiology labs: BIOPAC SYSTEMS HELPS STARK INDUSTRIES LAUNCH VITAL VENTILATOR FOR NASA JPL [Here.](#)
2. Assessment data for all life science courses is available. These courses are regularly assessed with overall good student success. Once we increase the availability of Human Biology (BIO-4), we intend to compare the success of students in Anatomy and Physiology courses based on whether they took General Biology (BIO-1) as a pre-requisite or Human Biology (BIO-4) as a pre-requisite. Our working hypothesis is that students with the BIO-4 pre-requisite will have higher success and retention than students with the BIO-1 pre-requisite in Anatomy and Physiology (BIO-50A and 50B) courses. Anatomy and Physiology courses, along with Microbiology (BIO-55), are the primary courses taken by students to pursue nursing and other allied health careers. According to ***The Inland Empire Regional Collaborative Health Industry Workforce Report 2017*** (support documentation in this program review) there will be an increased demand for at least 55 healthcare occupations in the next 5 years. Many of these allied health occupations require the above listed courses as pre-requisites. Increasing these BIO course offerings with innovative and diversified resources gives our students the opportunity to pursue these regionally in demand careers.

## Program Review: Part 1

### RESOURCES

Is there a resource request associated with this EMP Goal? (If yes, please complete a Resource Request, which you can access from the main menu to the left)

Yes

## Program Review Part 2

2021 - 2024

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### Curriculum

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**Are all your courses current (within four years)?**

No

**What percentage of your courses are out of date?**

10% or less

**If you have courses that are not current, are they in the curriculum process?**

Yes

**For out of date courses that are not already in progress of updating, what is your plan?**

N/A

**Do you have proposals in progress for all the DE courses you intend to file?**

Yes

**Do you require help to get your courses up to date?**

No

### Program Review Reflections

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**What would make program review meaningful and relevant for your unit?**

The most meaningful and relevant component of program review is that it provides an avenue to make resource and personnel requests for Biology and Health. It is also helpful to see which courses need assessing and updating. It would be helpful if aggregated data graphs of success and retention were available, in addition to the disaggregated data graphs.

**What questions do we need to ask to understand your program plans, goals, needs?**

Please continue to ask what resources we need to continue to improve and grow the programs associated with our unit, and to improve student success and retention. Please provide an option to give justification for our resource requests. It would be helpful if the resources were listed by resource for review.

**What types of data do you need to support your program plans, goals, needs?**

As mentioned previously, it would be helpful if aggregated data graphs of success and retention were available, in addition to the disaggregated data graphs. We would like to see data that follows particular cohorts of students who take BIO-4 to see if they have higher success and retention with fewer equity gaps as students continue through Anatomy and Physiology courses, as compared with students who took BIO-1 to fulfill the pre-requisite for these courses.

**If there are any supporting documents you would like to attach, please attach them here.**

[Program Review Requests 2021.xlsx](#)

[Inland Empire Regional Collaborative Health Industry Workforce Report.pdf](#)

[Predicting Academic Success of Health Science Students for First Year Anatomy and Physiology.pdf](#)

[Effects of Exposure to Part-time Faculty on Community College Transfer.pdf](#)

# Resource Requests

2022 - 2023 Update

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## Resource Request

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### What resources do we already have?

The library has a 1-year subscription to JoVE Science Education to support distance education in the sciences

### What resources do you need?

Ongoing annual subscription to JoVE Science Education to support DE courses in the sciences - amount requested is per year

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

15,000

### Resource Type

ITEM: Equipment, Services, Software, Furniture

### Potential Funding Source(s)

General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

9

### Is this request:

New

## For Administrative Use Only

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### Funding Status

### Notes

2022 - 2023 Update

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## Resource Request

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### What resources do we already have?

None

### What resources do you need?

Funding for Jesus Reyes to attend the Society for Integrative and Comparative Biology annual meeting (\$150 registration, \$270 airfare, \$690 hotel)

### Request related to EMP goal or Assessment?

EMP Goal 4



## Resource Requests

### \$ Amount Requested

1,010

### Resource Type

BUDGET: Request Ongoing Funding (Professional Development, Department or Program Support, Outreach, Marketing)

### Potential Funding Source(s)

Other/None

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

10

### Is this request:

New

### For Administrative Use Only

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### Funding Status

### Notes

## 2022 - 2023 Update

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### Resource Request

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### What resources do we already have?

Old laptops

### What resources do you need?

BIO-PACs (basic + respirometer) to offer physiology labs in BIO-50A/B

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

70,000

### Resource Type

ITEM: Equipment, Services, Software, Furniture

### Potential Funding Source(s)

Instructional Equipment Allocation, Lottery Instructional Supplies, General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

2

### Is this request:

Revised

### For Administrative Use Only

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### Funding Status

No Action-Insufficient funding

## Resource Requests

### Notes

Forwarded to VPAA for funding consideration

2021 - 2024

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### Resource Request

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#### What resources do we already have?

Old laptops that no longer charge, many do not work, and none are adequate to run BIO-PACs for physiology labs.

#### What resources do you need?

Surface Pros to replace laptop computers in ST 207 to run BIO-PACs for physiology labs

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

93,000

#### Resource Type

ITEM: Technology

#### Potential Funding Source(s)

General Fund,Lottery Instructional Supplies,Instructional Equipment Allocation

#### The evidence to support this request can be found in:

Program Review: Part 1

#### This request for my area is Priority #:

1

### For Administrative Use Only

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#### Funding Status

No Action-Insufficient funding

#### Notes

Forwarded to VPAA for funding consideration

2021 - 2024

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### Resource Request

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#### What resources do we already have?

Old laptops

#### What resources do you need?

BIO-PACs (basic + respirometer) to offer physiology labs in BIO-50A/B

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

28,000

#### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

## Resource Requests

### Potential Funding Source(s)

Instructional Equipment Allocation, Lottery Instructional Supplies, General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

2

### For Administrative Use Only

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### Funding Status

No Action-Insufficient funding

### Notes

Forwarded to VPAA for funding consideration

2021 - 2024

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### Resource Request

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### What resources do we already have?

6 Full-Time Faculty and 17 Part-Time Faculty in Biology

### What resources do you need?

Full-Time Biology Instructor

### Request related to EMP goal or Assessment?

EMP Goal 1, EMP Goal 9, EMP Goal 7

### \$ Amount Requested

150,000

### Resource Type

FACULTY: New Full time Faculty (Associate faculty requested through Dept. Chair and Dean)

### Potential Funding Source(s)

General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

4

### For Administrative Use Only

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### Funding Status

No Action-Insufficient funding

### Notes

NA

## Resource Requests

2021 - 2024

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### Resource Request

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**What resources do we already have?**

3 Full-Time Laboratory Technicians and 1 Part-Time Laboratory Technician

**What resources do you need?**

1 Full-Time Laboratory Technician

**Request related to EMP goal or Assessment?**

EMP Goal 1,EMP Goal 9,EMP Goal 7

**\$ Amount Requested**

85,000

**Resource Type**

STAFF: Classified Professional, Confidential, Manager

**Potential Funding Source(s)**

General Fund

**The evidence to support this request can be found in:**

Program Review: Part 1

**This request for my area is Priority #:**

5

### For Administrative Use Only

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**Funding Status**

No Action-Insufficient funding

**Notes**

Forwarded to Executive Cabinet for funding Consideration

2021 - 2024

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### Resource Request

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**What resources do we already have?**

Histology slides shared with BIO-61, models borrowed from anatomy labs if not in use by anatomy labs

**What resources do you need?**

Human Body Models for Human Biology BIO-4 in IT 128

**Request related to EMP goal or Assessment?**

EMP Goal 3,EMP Goal 7,Achievement Data,EMP Goal 12

**\$ Amount Requested**

6,700

**Resource Type**

ITEM: Instructional supplies

**Potential Funding Source(s)**

Instructional Equipment Allocation,Lottery Instructional Supplies,Equity,General Fund,Guided Pathways

**The evidence to support this request can be found in:**

Data Review,Program Review: Part 1

## Resource Requests

This request for my area is Priority #:

6

### For Administrative Use Only

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#### Funding Status

In Progress

#### Notes

Approved

2021 - 2024

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### Resource Request

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#### What resources do we already have?

6 field reel tape measures, 4 binoculars, 4 butterfly nets

#### What resources do you need?

Field tools and supplies to offer California Naturalist (BIO-21), a new field course

#### Request related to EMP goal or Assessment?

Assessment,EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

1,400

#### Resource Type

ITEM: Instructional supplies

#### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

#### The evidence to support this request can be found in:

Program Review: Part 1,Assessment Review

This request for my area is Priority #:

7

### For Administrative Use Only

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#### Funding Status

In Progress

#### Notes

already purchased. Approved

2021 - 2024

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### Resource Request

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#### What resources do we already have?

Old laptops that no longer charge, and many of which no longer work

#### What resources do you need?

Replacement laptop computers for IT 128

## Resource Requests

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

38,400

### Resource Type

ITEM: Technology

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

3

### For Administrative Use Only

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### Funding Status

No Action-Insufficient funding

### Notes

Updated to Priority #3, . These laptops have stopped working and can no longer be updated, so they are more urgently needed. Per Teresa FriedrichFinnern 3-18-2022, Forwarded to Technology Committee

2021 - 2024

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## Resource Request

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### What resources do we already have?

Lab benches with the benchtop separated from the legs, dangerous to use

### What resources do you need?

Replacement laboratory benches in IT 128

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

18,560

### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

8

### For Administrative Use Only

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### Funding Status

No Action-Insufficient funding

## Resource Requests

### Notes

Forwarded to VPAA for funding consideration

2021 - 2024

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### Resource Request

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#### What resources do we already have?

The library has a 1-year subscription to JoVE Science Education to support distance education in the sciences

#### What resources do you need?

Ongoing annual subscription to JoVE Science Education to support DE courses in the sciences - amount requested is per year

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

15,000

#### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

#### Potential Funding Source(s)

General Fund

#### The evidence to support this request can be found in:

Program Review: Part 1

#### This request for my area is Priority #:

9

### For Administrative Use Only

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#### Funding Status

Completed/Funded

#### Notes

Completed

2021 - 2024

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### Resource Request

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#### What resources do we already have?

A dozen out-of-date field guides from 30 years ago

#### What resources do you need?

Field guides for students to use in California Naturalist BIO-21 (a new course). These guides may also be used during field trips in other courses.

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

900

## Resource Requests

### Resource Type

ITEM: Instructional supplies

### Potential Funding Source(s)

Instructional Equipment Allocation, Lottery Instructional Supplies, General Fund

### The evidence to support this request can be found in:

Assessment Review, Program Review: Part 1

### This request for my area is Priority #:

10

### For Administrative Use Only

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### Funding Status

In Progress

### Notes

Approved

2021 - 2024

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## Resource Request

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### What resources do we already have?

Borrowed models from anatomy if Anatomy and Physiology courses are not using them

### What resources do you need?

Human organ models for Human Biology (BIO-4).

### Request related to EMP goal or Assessment?

EMP Goal 3, EMP Goal 7, Achievement Data, EMP Goal 12

### \$ Amount Requested

6,700

### Resource Type

ITEM: Instructional supplies

### Potential Funding Source(s)

Instructional Equipment Allocation, Lottery Instructional Supplies, General Fund, Equity

### The evidence to support this request can be found in:

Data Review, Program Review: Part 1

### This request for my area is Priority #:

11

### For Administrative Use Only

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### Funding Status

In Progress

### Notes

Approved



## Resource Requests

2021 - 2024

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### Resource Request

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**What resources do we already have?**

Old anatomy models, many of which are damaged, shared between multiple anatomy labs

**What resources do you need?**

Anatomy models for ST 207.

**Request related to EMP goal or Assessment?**

EMP Goal 7,EMP Goal 12

**\$ Amount Requested**

4,000

**Resource Type**

ITEM: Instructional supplies

**Potential Funding Source(s)**

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

**The evidence to support this request can be found in:**

Program Review: Part 1

**This request for my area is Priority #:**

12

### For Administrative Use Only

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**Funding Status**

In Progress

**Notes**

Approved

2021 - 2024

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### Resource Request

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**What resources do we already have?**

Old oxygen meters, several of which are broken

**What resources do you need?**

Replacement oxygen meters for IT 128.

**Request related to EMP goal or Assessment?**

EMP Goal 7,EMP Goal 12

**\$ Amount Requested**

1,300

**Resource Type**

ITEM: Instructional supplies

**Potential Funding Source(s)**

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

**The evidence to support this request can be found in:**

Program Review: Part 1

## Resource Requests

This request for my area is Priority #:

13

### For Administrative Use Only

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#### Funding Status

In Progress

#### Notes

Approved

2021 - 2024

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### Resource Request

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#### What resources do we already have?

Microscope slides, many of which are damaged or broken

#### What resources do you need?

Replacement microscope slides.

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

700

#### Resource Type

ITEM: Instructional supplies

#### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,Department Regular Funding,General Fund

#### The evidence to support this request can be found in:

Program Review: Part 1

This request for my area is Priority #:

14

### For Administrative Use Only

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#### Funding Status

In Progress

#### Notes

Approved

2021 - 2024

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### Resource Request

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#### What resources do we already have?

None - need new equipment to offer California Naturalist (BIO-21), a new course

#### What resources do you need?

Analytical instruments to offer California Naturalist (BIO-21), a new course.

## Resource Requests

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

1,400

### Resource Type

ITEM: Instructional supplies

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

15

### For Administrative Use Only

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### Funding Status

In Progress

### Notes

Approved

2021 - 2024

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### Resource Request

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### What resources do we already have?

Equipment borrowed from anatomy labs if they are not in use

### What resources do you need?

Physiology equipment for Human Biology (BIO-4).

### Request related to EMP goal or Assessment?

EMP Goal 3,Achievement Data,EMP Goal 7,EMP Goal 12

### \$ Amount Requested

540

### Resource Type

ITEM: Instructional supplies

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,Department Regular Funding,Equity,General Fund,Guided Pathways

### The evidence to support this request can be found in:

Data Review,Program Review: Part 1

### This request for my area is Priority #:

16

### For Administrative Use Only

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### Funding Status

In Progress

### Notes

Approved

## Resource Requests

2021 - 2024

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### Resource Request

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**What resources do we already have?**

Posters borrowed from anatomy labs if not in use

**What resources do you need?**

Anatomy posters for Human Biology (BIO-4).

**Request related to EMP goal or Assessment?**

EMP Goal 3,Achievement Data,EMP Goal 7,EMP Goal 12

**\$ Amount Requested**

65

**Resource Type**

ITEM: Instructional supplies

**Potential Funding Source(s)**

Instructional Equipment Allocation,Lottery Instructional Supplies,Department Regular Funding,Equity,General Fund,Guided Pathways

**The evidence to support this request can be found in:**

Data Review,Program Review: Part 1

**This request for my area is Priority #:**

17

### For Administrative Use Only

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**Funding Status**

In Progress

**Notes**

Approved

2021 - 2024

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### Resource Request

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**What resources do we already have?**

Old PCR machine that needs replacing

**What resources do you need?**

PCR Machine Thermo Fisher (1) for majors' course BIO-60.

**Request related to EMP goal or Assessment?**

EMP Goal 7,EMP Goal 12

**\$ Amount Requested**

5,200

**Resource Type**

ITEM: Equipment, Technology, Services, Software, Furniture

**Potential Funding Source(s)**

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund,Guided Pathways

## Resource Requests

**The evidence to support this request can be found in:**

Program Review: Part 1

**This request for my area is Priority #:**

18

### For Administrative Use Only

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#### Funding Status

In Progress

#### Notes

Approved

2021 - 2024

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### Resource Request

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#### What resources do we already have?

Old spectrophotometers

#### What resources do you need?

Replacement BIO-RAD UV-Visible spectrophotometers (8) for majors' course BIO-60.

#### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

#### \$ Amount Requested

25,600

#### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

#### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

#### The evidence to support this request can be found in:

Program Review: Part 1

**This request for my area is Priority #:**

19

### For Administrative Use Only

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#### Funding Status

No Action-Insufficient funding

#### Notes

Forwarded to VPAA for funding consideration

2021 - 2024

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### Resource Request

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#### What resources do we already have?

None - previous cell line died

## Resource Requests

### What resources do you need?

TK6 Tissue Culture Supplies and Cell Line for majors' course BIO-60.

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

2,500

### Resource Type

ITEM: Instructional supplies

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

20

### For Administrative Use Only

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### Funding Status

In Progress

### Notes

Faculty would like to to defer this item to another year. They would like to do more research on what specific items they need for new experiments.

2021 - 2024

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### Resource Request

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### What resources do we already have?

Manual seed sprouters

### What resources do you need?

3-tiered seed sprouter for BIO-3, BIO-5, and BIO-8.

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

640

### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

### Potential Funding Source(s)

Instructional Equipment Allocation,Lottery Instructional Supplies,General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

21

### For Administrative Use Only

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### Funding Status

In Progress

# Resource Requests

## Notes

Approved

2021 - 2024

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## Resource Request

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### What resources do we already have?

Warranty on autoclave expires in January 2022

### What resources do you need?

Autoclave maintenance contract (renewed annually or other regular cycle).

### Request related to EMP goal or Assessment?

EMP Goal 7,EMP Goal 12

### \$ Amount Requested

8,000

### Resource Type

ITEM: Equipment, Technology, Services, Software, Furniture

### Potential Funding Source(s)

Instructional Equipment Allocation, Lottery Instructional Supplies, General Fund

### The evidence to support this request can be found in:

Program Review: Part 1

### This request for my area is Priority #:

22

## For Administrative Use Only

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### Funding Status

In Progress

### Notes

APPROVED

## Submission

2021 - 2024

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**All parts of my Program Review have been completed and it is ready for review**

Yes

2022 - 2023 Update

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**I would like to submit this update**

Yes

**The additions or updates to my Program Review can be found in:**

Resource Requests