Science and Engineering Department
AUP for Academic Year 2025-2026
October 2024

Describe Department/Unit

Connection to College Mission

The mission of the Science Department is to provide the rigorous science foundation necessary for students to achieve the skills, knowledge, intellectual curiosity, and scientific literacy essential for a wide range of professional, technical, and academic careers. For students pursuing careers outside of science, an understanding of the processes and an appreciation for science is provided. The department mission supports the mission of the district and college by striving to provide excellent educational programs, services, and opportunities for transfer and CTE students.

Report on Improvements Made and Gaps Identified in the Prior Year

Student Equity

In certain chemistry courses, more equitable grading systems were implemented, such as specifications grading.

In science courses, students were given an oral survey to learn their career goals or education goals to help students feel seen and to build connections with both each other and their instructors.

In all courses, students had at least one quiz or assignment graded in the first two weeks of the course to better inform how well they would perform in the class based on their current study habits.

In physics and physical science courses, students are completing and succeeding at higher rates than the college at large across the board, including when disaggregated by gender, economic disadvantage, first generation, and financial aid awarded students.

In biology courses, students are completing and succeeding at lower rates than the college at large, though this was not significant. Students succeed the least at the East Kern and Ridgecrest campuses. The only disaggregated category to perform worse than the college were "not a financial aid" students. These students were also underrepresented in biology courses. Men were underrepresented, but were not disproportionately impacted.

In chemistry courses, students are completing courses at significantly lower rates than the college but succeeding at equivalent rates to the college at large. Financial aid students were disproportionately impacted. African American students and first generation students were underrepresented in chemistry courses.

Geology courses did not have enough students (11 enrolled; 2 FTES) to draw any meaningful conclusions.

Outcomes Assessment: Loop-Back Improvements Made

Actions taken in the prior academic year

SLOs were not discretely assessed in the previous year.

However, success rates for subjects overall indicate that improvements to curricula and instructional methods are warranted. Accordingly, chemistry curricula were revised and updated to include additional prerequisites to improve success rates.

Outcomes Assessment: Results of Last Year's Assessments

Outcomes Assessment: Missed Targets

Outcomes Assessment: Schedule of This Year's Assessments

None were scheduled for this year.

Program Review

General Sciences

Year of Last Program Review:

2023

Actions Taken in the Prior Year to Address Strategies:

The program review only went through one read through the PRC in April 2023. The current department chair will follow up with the Program Review Committee chair to complete the program review to ensure it meets standards. These actions and still-to-be-addressed strategies follow the actions alluded to in the 2024-2025 AUP. A hybrid chemistry C111 course with lecture online and lab in-person will be attempted in Spring 2025.

A chemistry course (Chem C111) will be offered for the first time at ESCC Bishop.

Our IWV Lab Technician I position was successfully reclassified to a Lab Safety Coordinator.

Strategies Still to be Addressed:

1. Assess SLOs for course offerings. Upload data to CAMS. (2-year)

2. Attempt to map ADTs for the general sciences program. (5-year)

3. Determine course offerings and facilities requirements for biology offerings at East Kern. (5-year)

4. Obtain lab support staff for ESCC to increase offerings and support current faculty. (2- and 5-year)

Last Year's Initiatives

Feasibility Discussion: Physical Science Faculty Position for the Incarcerated Student Education Program

Feasibility Discussion: Reclassify the Science department's current "Lab Tech I" position to a "Lab & Safety Coordinator"

The lab tech submitted a JAQ, which was denied. However, upon discussions with the College President, a reclassification was conducted and approved by the Board of Trustees.

Reminder of Initiatives for the Current Year

Reminder of Initiatives for the Current Year

Reclassify or Replace the Science department's current "Lab Tech I" position

Help Transition a New Department Chair

Help the Library Build an Online Reserve of Science Textbooks

Plan Initiatives for Next Year

Initiatives for Next Academic Year

Lab support for ESCC

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Hiring one person to assist with biology, chemistry, and physical science labs at ESCC at both campuses.

Early Observational Data, or "Lead" Measure(s):

There is currently no dedicated lab support at either campus.

Does the department request help developing these instruments?

No

Institutional Performance Data, or "Lag" Measure(s):

Casual interview with instructors at ESCC who teach labs.

Person Responsible:

Michael Chiang

Unit gap or institutional goals addressed:

It addresses a Strategic Plan goal or objective (reminder to the right), Other. Explain below

Support of site faculty.

Chemistry Preparedness

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Many students entering chemistry C111 are not adequately prepared in algebra and/or fundamental chemistry skills. Accordingly, chem C101 has been made a prerequisite for the course, a suggestion echoed by C-ID.

In the 2024-2025 year, students do not need to complete the prerequisite course to take Chem C111; instead, a standard exam is administered on the first day of class to help students gauge their own readiness for the course. These preparedness scores can be correlated with completion and success rates at the end of the year.

Early Observational Data, or "Lead" Measure(s):

Student completion rates are significantly lower than the college at large.

Does the department request help developing these instruments?

No

Institutional Performance Data, or "Lag" Measure(s):

Student completion and success rates for Chem C111 shall be examined once students complete Chem C101 before C111.

Person Responsible:

Alex Gilewski

Unit gap or institutional goals addressed:

It addresses a Strategic Plan goal or objective (reminder to the right)

Individual subject ADTs

Is this part of a multiyear initiative?

No

Specific Action Steps to be Taken:

Programs can be attempted to be mapped to fulfill CalGETC requirements for transfer while completing degrees in discrete sciences instead of a general sciences degree. Four programs are to be considered: biology, chemistry, physics, and geology.

Early Observational Data, or "Lead" Measure(s):

Discussions with counselors, articulation officers, and consultants will inform whether or not it is feasible to construct individual degree programs within reasonable unit caps.

Does the department request help developing these instruments?

No

Institutional Performance Data, or "Lag" Measure(s):

Successful completion of program pathways.

Person Responsible:

Alex Gilewski

Unit gap or institutional goals addressed:

It addresses a Strategic Plan goal or objective (reminder to the right), It addresses a Guided Pathways practice, Other. Explain below

Expand geology offerings

Is this part of a multiyear initiative?

Yes

Specific Action Steps to be Taken:

Revise geology CORs.

Revise the long-term schedule to expand geology offerings.

Develop new geology courses based on comparable lower-division pre-major courses offered at four-year universities.

Early Observational Data, or "Lead" Measure(s):

Does the department request help developing these instruments?

No

Institutional Performance Data, or "Lag" Measure(s):

Person Responsible:

Alex Gilewski

Unit gap or institutional goals addressed:

It addresses a Strategic Plan goal or objective (reminder to the right), It addresses an Educational Master Plan direction

Evaluate Resource Needs

Facilities

Lab chairs. Our current lab chairs are falling apart after decades of use at the IWV campus. These funds would provide physical seats for students to use while in the laboratory. These chairs are resistant to corrosion, fire, and other laboratory hazards. The chairs would be utilized for chemistry, physics, and biology laboratory rooms. Without replacing our defunct chairs, we will not be able to fill our classrooms to capacity and would need to reduce class sizes to compensate. These funds include 90 standard laboratory chairs and 6 ADA-compliant chairs. We currently have 0 ADA-compliant chairs, making these a legal necessity.

Light switch for MB 330. There is currently only one light switch in this room, located on the northwest side of the room. The lights are not connected to motion sensors. So anyone entering this room from the main hallway (i.e., the south entrance) must walk through complete darkness to reach the light switches on the far side of the room. They will encounter chairs, tables, a pillar, and a safety shower along the shortest path to the lights. This is a clear safety hazard and a potential liability for the college.

Accessories for dishwasher. We have a lab glassware dishwasher, but it can't currently wash small pieces of glass, like test tubes. These funds would be used to purchase accessories to allow the dishwasher to clean a greater variety of glassware. This is necessary because brushes, soap, and cleaning solutions sometimes are insufficient for cleaning lab glass; only a machine is powerful enough and can use hot enough water to effectively clean everything. Chemistry demands impeccably clean glassware, and proper cleaning is necessary for maintaining our glassware in working order.

Ice machine. We currently do not have any ice supply within the main building, aside from the Coyote kitchen. Per food safety regulations, our lab tech cannot enter the kitchen to procure ice. Many chemistry experiments and a few biology experiments require ice, and thus a consistent and constant supply is required. Additionally, the ice used in experiments should be crushed or in as small pieces as possible. We used to have access to the ice machine next to the community room, but that machine is no longer in commission.

Chemical and biological waste disposal. With courses increasing in enrollment and offerings being expanded, there is a need to have our hazardous waste removed twice a year instead of annually. These funds would be used to remove hazardous waste from all sites before it is allowed to pile up in freezers or waste containers.

Shed for garden. Both the garden club and biology courses make use of our garden to learn about plant biology. However, we have no current storage for protecting tools against weather and corrosion. These funds would be used to purchase a sturdy-yet-inexpensive shed to house tools from intense wind, sun, and rain, and thereby extend their lifespan. Additionally, the shed shall be locked to provide a measure of security against theft of college property.

Information Technology

There are no IT needs this year.

Marketing

The department requests funds for marketing our general sciences program. Funds can be used to produce videos introducing students to the program, going over program requirements, and producing outreach videos highlighting the more fun aspects of science, such as laboratory experiments.

Professional Development

The department requests ongoing funding for conference attendance. Science conferences are particularly useful for professional development, as our fields are constantly expanding. To fully understand the directions jobs are heading, faculty must be aware of current developments in the field. By providing avenues for faculty to learn and network, our students can be better prepared for future careers in academia or industry.

Other Needs

Geology kits - the department would like to purchase 8 hardness kits, 8 intro mineral kits, and 7 rock formation kits. These are to supplement our meager physical geology repository at IWV. In order to run a geology course effectively, mineral kits are used to explore various properties of minerals. This is a basic equipment requirement to teach the curriculum in the COR. Without these, students will not be able to effectively complete geology labs. Once purchased, they should last indefinitely with minimal routine maintenance.

Funds for a field trip and guest speaker for Honors biology students to learn from the president of the Audobon Society in a field trip to Owens Lake. The president will escort students around various birding sites and netting areas while providing information about ecology to supplement the students' understanding. This field trip will occur twice per year.

Staffing Requests

1000 Category - Certificated Positions

Chemistry

Location:

Ridgecrest/IWV

Justification:

1. Chemistry courses required for non-science majors have high enrollment. Indeed, CHEM C111 is the only course at the Ridgecrest campus to consistently have over 50 students in one lecture, with additional students waiting to take the course.

2. Cerro Coso currently has only one full-time faculty member qualified to teach chemistry, which is insufficient to meet both the present and growing demands of the department. The chemistry program offers five courses, two of which include honors sections, and per the faculty contract, a full-time instructor can only be responsible for a maximum of three different course preparations per semester. However, in the spring, the chemistry department is scheduled to offer Chem C101, C111, C113, C113H, C223, and C223H—well beyond the allowable workload for a single faculty member. Additionally, the existing faculty member is developing a new general, organic, and biological chemistry course tailored for allied health majors, which will further increase the course offerings. Given these factors, the current reliance on adjunct faculty is unsustainable and does not meet the academic standards set by AB1725, which requires that 75% of course offerings be taught by full-time instructors.

Moreover, recent changes to C-ID requirements have made Chem C101 a prerequisite for Chem C111, the largest course by lecture capacity and one of the college's highest FTES per instructor contact hour. This change will significantly increase the demand for Chem C101 sections, which are already near capacity. Since Chem C111 is a requirement for many Cerro Coso programs and transfer pathways, including those in health, STEM, and allied fields, this shift will necessitate additional faculty support to accommodate the influx of students.

In terms of enrollment patterns, lower-level chemistry courses (C101 and C111) regularly reach capacity and have waitlists, while higher-level courses such as C113 and C223 experience lower enrollment. This disparity, however, does not diminish the need for organic chemistry, as it remains a requirement for students pursuing degrees in biology, chemistry, biochemistry, and chemical engineering, as well as those seeking to fulfill major prerequisites for transfer. Without additional full-time faculty, Cerro Coso risks not only failing to meet student demand but also compromising the quality and continuity of instruction in critical STEM fields.

Growth in the science department is indicated in both the Educational Master Plan and the General Sciences Program Review.

To ensure the continued growth and success of the chemistry department, meet institutional and statewide teaching standards, and maintain high-quality student outcomes, hiring an additional full-time chemistry faculty member is imperative.

3. Chemistry courses are core mission.

4. The current full-time chemistry faculty member has been at Cerro Coso since 2020. In that time, the instructor has been overloaded every semester. The college has had FTEF values of 2.0-2.7 for chemistry during the years the current full-time instructor has been employed. The chemistry faculty member is currently the department chair, and with the release time allotted for chair duties, the faculty member will be even further overloaded in coming semesters. Chemistry offerings are difficult to staff; they are high contact-hour courses, and per CA law, adjunct faculty cannot be assigned more than one course without exceeding 67% of a full-time load. Further, adjunct faculty are difficult to source in Ridgecrest, with the majority of the (few) applicants in the adjunct pool seeking online or remote teaching opportunities, which are not possible for chemistry courses, as they require in-person labs. Finally, for safety purposes, labs should be run during the daytime under the purview of our lab safety coordinator. This further limits the availability of adjunct instructors. Again, the department must expand to meet student need with changes to C-ID and development of additional courses. Science courses cannot be offered fully online, thereby severely limiting the availability of adjunct instructors further.

5. There is currently available lab space to hold additional courses. Currently, only one lecture offering is available each semester for Chem C111, which limits the amount of students who can enroll due to scheduling conflicts. Chemistry courses all have 3-hour labs, which means students must have clear schedules for significant portions of multiple days of the week. By

expanding the number of sections, students who would be otherwise unable to attend one section due to scheduling conflicts may now be able to enroll in another offering.

6. There is a national deficit of STEM graduates. Locally, there is a need for healthcare workers, veterinary workers, and physicians, all of whom require chemistry.

7. It is difficult to project costs/lost revenue. However, at least two students in the 2024-2025 year will not be able to graduate with degrees in general sciences - chemistry focus due to a lack of course offerings. With new prerequisite requirements, the college should see a dramatic increase in students taking Chem C101. Without any available adjuncts, the college will not be able to offer more sections without drastically overloading the current full-time faculty member.

8a. Current wait lists are at 2-3 per section. However, this does not account for the in-development allied health chemistry course, nor does it account for the need for additional Chem C101 offerings.

b. c. 1

d. 2

e. 0

f. 0; this discipline does not have a discrete degree. General sciences, however, had 9 degrees awarded.

g. Chem C101, C111, C113, C221, C223

h. N/A

i. Headcount: 88; enrollment: 8.

2000 Category - Classified Staff

Laboratory Technician

Location:

ESCC Bishop, ESCC Mammoth Lakes

Salary Grade:

Number of Months:

10

Number of Hours per Week:

10-20

Salary Amount:

Justification:

1. There is no current staff at these locations.

2. The college may be held liable for hazardous waste storage/disposal violations and ensuing illnesses experienced by students, staff, and faculty. The college could be fined and/or exposed to litigation.

3. No.

4. The preparatory and cleanup work is performed by the course instructors in addition to their normal duties, while at other sites, tasks are performed by a classified staff member. However, the hazardous waste is left to accumulate until our IWV lab safety tech conducts a biannual trip to ESCC sites to address it. Our lab safety tech does not have travel in their job description.

AUP Budget Worksheet for Science - FY25

F				A	L	2024	2024	2025	2026			If requesting increase of %5 or more		
Fund	Org Description	Account Description	Program Title	Activity	Location	Adopted Budget	Actual Expenses	Adopted Budget	Request	Notes	Increase?	In planning document	Data?	Relevance?	Operational Efficiency?
GU001	Science Department	Non-Inst Supplies & Materials	Biology, General		CI			$ 1,000.00	$ 1,500.00	Many of the consumables used in the sciences are deemed non-instructional. These supplies include gloves, laundry detergent, wipes for safety goggles, scissors, rulers, water bottles, and styrofoam cups. The costs for these have increased or have not been able to be purchased in previous years. Gloves in particular are an absolute safety necessity for both chemistry and biology labs.	yes	no	If we run out of gloves, we cannot conduct labs. This will cause us to be unable to fulfill our curricula. Gloves and other sundries are baseline protective equipment for protecting the colllege against liability and keeping our students, staff, and faculty safe in the lab.	Lab experiments are a core component of science cpurses. They account for 40-66% of contact hours for lab classes and are required for articulation.	While most non-instructional supplies are for safety purposes (and therefore shielding against a costy lawsuit), some are used for general efficiency -- it is far more efficient in time and cost to use a squirt bottle for distilled water than to pour from a gallon bottle directly.
GU001	Science Department	Non-Inst Supplies & Materials	Biology, General		CB	$ 65.00	$ 700.46	$ 300.00	$ 750.00	Many of the consumables used in the sciences are deemed non-instructional. These supplies include gloves, laundry detergent, wipes for safety goggles, scissors, rulers, water bottles, and styrofoam cups. The costs for these have increased or have not been able to be purchased in previous years. Gloves in particular are an absolute safety necessity for both chemistry and biology labs.	yes	no	If we run out of gloves, we cannot conduct labs. This will cause us to be unable to fulfill our curricula. Gloves and other sundries are baseline protective equipment for protecting the colllege against liability and keeping our students, staff, and faculty safe in the lab.	Lab experiments are a core component of science cpurses. They account for 40-66% of contact hours for lab classes and are required for articulation.	While most non-instructional supplies are for safety purposes (and therefore shielding against a costy lawsuit), some are used for general efficiency -- it is far more efficient in time and cost to use a squirt bottle for distilled water than to pour from a gallon bottle directly.
GU001	Science Department	Non-Inst Supplies & Materials	Chemistry General		CI				$ 1,000.00	Many of the consumables used in the sciences are deemed non-instructional. These supplies include gloves, laundry detergent, wipes for safety goggles, scissors, rulers, water bottles, and styrofoam cups. The costs for these have increased or have not been able to be purchased in previous years. Gloves in particular are an absolute safety necessity for both chemistry and biology labs. Chemistry has not had a separate non-instructional supply budget in the past, and we have had to use gloves, etc. from biology funds. Without discrete FOAPALs, our spending is not documented as efficiently; we currently cannot determine how many non-instructional supplies are used by each program. Establishing this new line will also support future accreditation documentation and align with district fiscal policy.	yes	no	If we run out of gloves, we cannot conduct labs. This will cause us to be unable to fulfill our curricula. Gloves and other sundries are baseline protective equipment for protecting the colllege against liability and keeping our students, staff, and faculty safe in the lab.	Lab experiments are a core component of science cpurses. They account for 40-66% of contact hours for lab classes and are required for articulation.	While most non-instructional supplies are for safety purposes (and therefore shielding against a costy lawsuit), some are used for general efficiency -- it is far more efficient in time and cost to use a squirt bottle for distilled water than to pour from a gallon bottle directly.
GU001	Science Department	Non-Inst Supplies & Materials	Anatomy & Physiology		CI	$ -	$ 429.49		$ 500.00	Many of the consumables used in the sciences are deemed non-instructional. These supplies include gloves, laundry detergent, wipes for safety goggles, scissors, rulers, water bottles, and styrofoam cups. The costs for these have increased or have not been able to be purchased in previous years. Gloves in particular are an absolute safety necessity for both chemistry and biology labs.	yes	no	If we run out of gloves, we cannot conduct labs. This will cause us to be unable to fulfill our curricula. Gloves and other sundries are baseline protective equipment for protecting the colllege against liability and keeping our students, staff, and faculty safe in the lab.	Lab experiments are a core component of science cpurses. They account for 40-66% of contact hours for lab classes and are required for articulation.	While most non-instructional supplies are for safety purposes (and therefore shielding against a costy lawsuit), some are used for general efficiency -- it is far more efficient in time and cost to use a squirt bottle for distilled water than to pour from a gallon bottle directly.
GU001	Science Department	Employee Travel DO	Biology, General		CT	$ 100.00	$ 28.36	$ 100.00	$ 100.00		no	no			
GU001	Science Department	Employee Travel DO	Biology, General		CB	$ 300.00	$ 48.22	$ 300.00	$ 300.00		no	no			
GU001	Science Department	Employee Travel DO	Biology, General		CM	$ 300.00	$ 48.22	$ 300.00	$ 300.00		no	no			
GU001	Science Department	Other Maintenance/Repairs	Biology, General		CM	$ 435.00	$ -	$ 500.00	$ 500.00		no	no			
GU001	Science Department	Other Maintenance/Repairs	Biology, General		CB	$ 500.00	$ -	$ 500.00	$ 500.00		no	no			
GU001	Science Department	Other Maintenance/Repairs	Biology, General		CT	$ 300.00	$ -	$ 300.00	$ 300.00		no	no			
GU001	Science Department	Other Maintenance/Repairs	Biology, General		CI	$ 1,200.00	$ -	$ 1,200.00	$ 1,200.00		no	no			
GU001	Science Department	Other Maintenance/Repairs	Chemistry General		CI	$ -	$ 2,980.72		$ 3,500.00	Chemical balances and fume hoods need annual maintnenance. Without being properly maintained, they can fail and present safety hazards, or will be damaged beyond repair. This line hasn't been funded in the past, but has not been budgeted for.	yes	no	OSHA recommends annual fume hood maintenance.	Fume hoods are a critical piece of engineering to vent toxic gases produced in chemistry experiments. They are also used to contain microbes in microbiology labs.	Repairing fume hoods is far less expensive than replacing them.
LR001	Science Department	Inst Supplies & Materials	Anatomy & Physiology		CM	$ 1,500.00	$ 2,471.00	$ 1,500.00	$ 2,500.00	We have consistently spent more than the originally budgeted amount; this increase is to allow us to budget more effectively.	yes	no			
LR001	Science Department	Inst Supplies & Materials	Anatomy & Physiology		CI	$ 9,000.00	$ 8,989.55	$ 9,000.00	$ 10,000.00	Consumable prices have increased slightly.	no	no			
LR001	Science Department	Inst Supplies & Materials	Anatomy & Physiology		CT				$ -		no	no			
LR001	Science Department	Inst Supplies & Materials	Anatomy & Physiology		CB				$ -		no	no			
LR001	Science Department	Inst Supplies & Materials	Chemistry General		CI	$ 5,000.00	$ 6,682.09	$ 6,000.00	$ 7,000.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	yes	no			
LR001	Science Department	Inst Supplies & Materials	Chemistry General		CM	$ 500.00	$ 1,250.65	$ 500.00	$ 1,500.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	no	no			
LR001	Science Department	Inst Supplies & Materials	Chemistry General		CB				$ 500.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	no	no			
LR001	Science Department	Inst Supplies & Materials	Biology, General		CM	$ 1,500.00	$ 1,200.07	$ 1,500.00	$ 1,750.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	yes	no			
LR001	Science Department	Inst Supplies & Materials	Biology, General		CB	$ 2,500.00	$ 4,122.01	$ 2,500.00	$ 5,000.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	yes	no			
LR001	Science Department	Inst Supplies & Materials	Biology, General		CI	$ 9,000.00	$ 9,323.78	$ 9,000.00	$ 10,000.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	yes	no			
LR001	Science Department	Inst Supplies & Materials	Biology, General		CT	$ 500.00	$ 550.65	$ 1,000.00	$ 1,050.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	no	no			
LR001	Science Department	Inst Supplies & Materials	Physics General		CI	$ 1,000.00	$ 314.66	$ 1,000.00	$ 1,000.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	no	no			
LR001	Science Department	Inst Supplies & Materials	Physical Sciences General		CI	$ 50.00	$ -		$ 50.00	Consumable prices have increased slightly. We have consistently spent slightly over our budgeted amounts; this increase should prevent overspending.	no	no			
LR001	Science Department	Non-Inst Supplies & Materials	Chemistry General		CB				$ 500.00	Bishop will have a chemistry course run for the first time ever. We request a small amount of noninstructional supplies such as gloves, wash bottles, and other sundries to prepare the lab adequately for safe experiments.	yes	no			
LR001	Science Department	Software Licensing/Maintenance Svcs	Biology, General		CL	$ 5,000.00	$ -		$ 5,000.00		no	no			

AUP Budget Worksheet for Science - FY25

Resouce Requests

Type of request	1 time or ongoing?	Requested amount	description/explanation	In planning document	Data?	Relevance?	Operational Efficiency?
Other	1 time	$ 1,000.00	Geology kits - 8 hardness kits, 8 intro mineral kits, 7 rock formation kits. These are	AUP	We currently do not have sufficient kits to run a geology lab for a cost-effective amount of students. One department initiative this year is to expand geology offerings at IWV.	Geology requires rocks and testing kits for experiments.	Suffient supplies are essential to effectiveness of the department; we cannot teach effectively with 3-4 fully funtional kits.
Other	ongoing	$ 1,000.00	Funds for a guest speaker for Honors biology students to learn from the president of the Audobon Society in a field trip to Owens Lake. The president will escort students around various birding sites and netting areas while providing information about ecology to supplement the students' understanding. This field trip will occur twice per year.	AUP	The biology honors CORs have field trips as methods of instruction. These funds will be used to support the learning during these field trips from local experts.	The biology honors CORs have field trips as methods of instruction. These funds will be used to support the learning during these field trips from local experts.	Having multiple methods of learning improves learning effectiveness.
Facilities	1 time	$ 32,000.00	Lab chairs. Our current lab chairs are falling apart after decades of use. These funds would provide physical seats for students to use while in the laboratory. These chairs are resistant to corrosion, fire, and other laboratory hazards. The chairs would be utiziled for chemistry, physics, and biology laboratory rooms. Without replacing our defunct chairs, we will not be able to fill our classrooms to capacity and would need to reduce class sizes to compensate. These funds include 90 standard laboratory chairs and 6 ADA-compliant chairs. We currently have 0 ADA-compliant chairs, making these a legal necessity.	AUP	The current lab chairs are decades old. New chairs will also allow us to fulfill ADA requirements.	Students spend up to 3 hours in one sitting during laboratory exercises. Lab chairs are needed to provide comfort for students, while being resistant to chemicals and flame.	Seating is an important component of classroom design. Currently dilapidated chairs can distract from learning, and the lack of ADA-compliant chairs violates federal policy.
Facilities	1 time	$ 5,000.00	Accessories for dishwasher. We have a lab glassware dishwasher, but it can't currently wash small pieces of glass, like test tubes. These funds would be used to purchase accessories to allow the dishwasher to clean a greater variety of glassware. This is necessary because brushes, soap, and cleaning solutions sometimes are insufficient for cleaning lab glass; only a machine is powerful enough and can use hot enough water to effectively clean everything.	AUP	Our current dishwasher setup does not allow us to power wash every piece of glassware we have. We purchased the washer with the final amount of HERFF funds, and did not have enough to purchase accessories the first time.	This is necessary because brushes, soap, and cleaning solutions sometimes are insufficient for cleaning lab glass; only a machine is powerful enough and can use hot enough water to effectively clean everything.	A fully functional dishwasher would allow us to reuse all our glassware. If it's not able to be cleaned, it must be disposed.
Facilities	1 time	$ 4,000.00	Biology students access the garden to supplement their plant biology learning. These funds would be used to purchase a shed to store equipment safely and securely.	AUP	We currently have no dedicated shelter for gardening tools.	Plant biology covers a significant portion of the biology survey and majors sequence curricula.	Prevents corrosion of tools, prevents theft of tools.
Facilities	1 time	$ 1,000.00	Light switch for MB 330. There is currently only one light switch in this room, located on the northwest side of the room. The lights are not connected to motion sensors. So anyone entering this room from the main hallway (i.e., the south entrance) must walk through complete darkness to reach the light switches on the far side of the room. They will encounter chairs, tables, a pillar, and a safety shower along the shortest path to the lights. This is a clear safety hazard and a potential liability for the college.	AUP	We currently have one light switch located on the far side of the room.	Safety is paramount. A pitch-black room is a massive safety issue.	Supports safety.
Marketing	ongoing	$ 1,000.00	These funds would be used to create marketing materials for the sciences.	AUP	We currently have no budget for marketing materials.	Increased enrollment would align with educational master plan goals of expanding the department.	Increases enrollment, thereby increasing income.
Facilities	1 time	$ 5,000.00	Ice machine. We currently do not have any ice supply within the main building, aside from the Coyote kitchen. Per food safety regulations, our lab tech cannot enter the kitchen to procure ice. Many chemistry experiments and a few biology experiments require ice, and thus a consistent and constant supply is required. Additionally, the ice used in experiments should be crushed or in as small pieces as possible. We used to have access to the ice machine next to the community room, but that machine is no longer in commission.	AUP	We have no accessible ice machine in the main building.	Ice is used in many chemistry experiments and some biology experiments.	We used to have access to an ice machine next to the community room. That ice machine is no longer there, so these funds would be used to purchase a new one. The previous machine has been removed and dismantled.
Facilities	ongoing	$ 7,500.00	Chemical and biological waste disposal. With courses increasing in enrollment and offerings being expanded, there is a need to have our hazardous waste removed twice a year instead of annually. These funds would be used to remove hazardous waste from all sites before it is allowed to pile up in freezers or waste containers.	AUP	We need to dispose chemical and biological waste more frequently. This is a safety measure.	Chemistry and biology experiments produce waste which must be disposed of properly. Environmental regulations require proper disposal, and safety demands prompt disposal.	We could be fined for improper waste disposal.
Professional Devel	ongoing	$ 2,000.00	The department requests ongoing funding for conference attendance. Science conf	AUP	The chemistry instructor has gone to conferences in past years and funding was acquired through HERFF or student services. This line would establish a travel fund through more "proper" channels.	Professional development is essential for learning developments within science fields to better serve our students' future career goals.	Being aware of current developments in rapidly-changing fields makes us better instructors.