



Program Review

Purpose

“Program review is the process through which constituencies (not only faculty) on campus take stock of their successes and shortcomings and seek to identify ways in which they can meet their goals more effectively. It is important to note here that the task of identifying evidence-based successful practices, and sharing these practices college-wide, is far more important than the negative perspective of trying to ferret out ineffective practices” – Academic Senate for California Community Colleges

Data Driven Decision Making

*Continual improvement
Evaluation of program resource needs
Fiscal stewardship and transparency
Culture of evidence*

Reporting Cycle

Program Review will be conducted every two years beginning Fall semester 2021.

Reporting Cycle Activities	Timeline
Program Review forms posted on the Program Review website :	August 22, 2023
Data is available on the ORPIE website:	
<ul style="list-style-type: none"> Instructional Program Review Dashboard 	Available now
<ul style="list-style-type: none"> Student Services Program Review Dashboard 	Coming August 28, 2023
<ul style="list-style-type: none"> State comparison data may be found on Data Mart or Cal-Pass Plus 	Available now
Program Review Office Hours and Data Support offered in a hybrid format in the Language Arts (LA) Room 115 and by zoom.	See the Program Review website schedule information.
Program Review draft due via Dynamic Forms.	Friday, October 6, 2023
Review and Feedback Steps to Finalize Program Review:	
<ul style="list-style-type: none"> Step 1a: Technical Review by IEC (for all) and Academic Senate (for any that include a faculty request). See the technical review rubrics. 	Friday, October 6, 2023
<ul style="list-style-type: none"> Step 1b: Content Review by Deans/Director. Feedback due to author. 	Friday, October 6, 2023
<ul style="list-style-type: none"> Step 2: Completed Revisions submitted by author for final approvals by Deans/Manager and Vice Presidents. Final draft will address technical and content review feedback. 	Friday, November 3, 2023
<ul style="list-style-type: none"> Step 3: Final Program Review Approvals by Deans/ Manager, Vice Presidents, and IEC. ORPIE will post final draft to the website. 	Friday, December 1, 2023
<ul style="list-style-type: none"> Step 4: Funding Requests proceed through governance structure. 	
<ul style="list-style-type: none"> Depending on the request either the Vice President or the IEC will assign the Program Review to the appropriate committee(s), including Planning Council for prioritization. 	Friday, December 1, 2023
<ul style="list-style-type: none"> Committees forward recommendations to the Budget Committee 	Friday, December 1, 2023

• Faculty Hiring timeline:	
• Academic Senate Q&A	Tuesday, November 14, 2023
• Senator Ratings due	Friday, November 17, 2023
• Academic Senate – Special Meeting to Review Rankings	Tuesday, November 28, 2023
• Prioritized requests for faculty positions will be provided by the Academic Senate to the Executive Team	Wednesday, November 29, 2023
<ul style="list-style-type: none"> ▪ President makes final faculty decisions and reports to Senate at Special Meeting. ▪ Based on approved faculty positions, faculty submit search committee membership and supplemental questions to HR and the Academic Senate. 	Tuesday, December 5, 2023
• Hiring committee participants appointed by the Academic Senate.	Tuesday, December 12, 2023
• The Budget Committee forwards all recommended non-faculty requests to the Executive Committee	Tuesday, December 12, 2023
• President announces all funded recommendations campus-wide	Monday, April 1, 2024

AUTHOR INFORMATION

Employee ID (E# or C#): First Name Last Name
Wing Email Address Office Phone

Dean/Manager First Name Last Name Email
Vice President First Name Last Name Email

Program Review - Draft

*Program-Review-Instruction-Chemistry.docx

Program Review - Final Submission

*Program-Review-Instruction-Chemistry-FinalVersion.docx

This Program Review includes the following:

Pick all that apply.

Faculty Request

Facilities, Technology, Equipment Request

Classified Request

This Program Review includes the following:

Pick all that apply.

If the answer was "Yes" but one of the following is not picked it will affect the form's workflow and you will have to resubmit.

Faculty Request

Facilities, Technology, Equipment Request

Classified Request

Faculty Requests (up to 3)
One upload per request

Faculty Upload1
Faculty Upload2
Faculty Upload3

Faculty Requests (up to 3)
One upload per request

Faculty Upload1
Faculty Upload2
Faculty Upload3

Facilities, Technology or Equipment Draft Requests (up to 5)

Facilities, Technology or Equipment Update

Requests (up to 5)

FTE Upload1
Program-Review-Request-for-Funding-2023-24-Facilities,-Equipment,-Technology,-Other-Funding-Chemistry-Balances.docx
FTE Upload2
Program-Review-Request-for-Funding-2023-24-Facilities,-Equipment,-Technology,-Other-Funding-Chemistry-Spec2000s.docx
FTE Upload3
FTE Upload4
FTE Upload5

FTE Upload1
FTE Upload2
FTE Upload3
FTE Upload4
FTE Upload5

Classified Personnel Draft Requests (up to 3)
One upload per request

Classified Personnel Updated Requests (up to 3)
One upload per request

Classified Upload1
Program-Review-Request-for-Funding-2023-24-Classified-Personnel-Stockroom.docx
Classified Upload2 StockroomOrgChart.docx
Classified Upload3

Classified Upload1
Classified Upload2
Classified Upload3

Supporting Materials (Optional)

Supporting Materials (Optional)

Upload1 VWRQuotation_8032243435 (002)_Balances.pdf
Upload2 3277-0714-38.pdf
Upload3 Instructional Assistant - Biological Sciences_Chemistry.pdf

Upload1
Upload2
Upload3

...3838393633

Author - Draft Signature

10/06/2023

Date

[Empty signature box]

...3734353836

Author - Final Signature

11/03/2023

Date

Dean/Manager Draft Feedback

no concerns.
thank you for all your work with the program review(s)....

FileUpload2

IEC Feedback

- Program's strengths- Use data to support transfer claims and/or site the source. Include additional KPI discussion.
- Program challenges: DI group is mentioned. However, more information on initiatives and efforts attempted need to be included. Essentially, why is this a continued challenge? What is the department doing to resolve this?
- Goals from Previous PR Cycle: For Goal #1, what does "significant" mean in terms of the number of students who attended the speaker series?
- The current Goal 1 metric measurement: Be specific about what you will track, i.e., what does achievement gap mean for your department.
Course enrollment, course retention, course success, the number of chemistry majors, the number that stay in chemistry once they declare it, the number of awards earned....
- The current Goal 3: should mention the need for full-time stockroom staff to tie back to staff request.
- Additional info: Wondering if the reclassification process has been explored for Annie Ly.
- Funding Request – Spec 2000s: The current additional documentation is a quote for one spectrometer. Include a quote for the 10 that are being requested.
- Funding Request – Balances: The total dollar amount requested for each type of balance doesn't match the quote provided. Also, the quote provided includes additional equipment.

FileUpload4

Program Review Rubric Upload

Academic Senate Executive Board Feedback

^

v

FileUpload1

Program Review Rubric Upload

Dean/Manager Final Feedback

attaching updated quote

FileUpload2 VWRQuotation_8032243435 (1).PDF

...3732383034

Danny Johnson 11/13/2023
Dean/Manager Signature Date

Vice President Feedback

^

v

FileUpload3

...3633303734

Kay Nguyen 12/05/2023
Vice President Signature Date

Downloaded to the following Committee Teams folder on:

...3136373836

Lauren Davis-Losenko 12/11/2023
IEC Signature Date

Dean/Manager -
Feedback Signature

Electronically signed by Danny Johnson on 10/17/2023 3:05:59 PM

Academic Senate:
Technical Review
Signature

Signature not required

Academic Senate
Signature

Signature not required

IEC: Technical Review
Signature

Electronically signed by Jeannette Jaramillo Hernandez on 10/20/2023 4:40:17 PM



Program Review Request Instruction

Program Review Purpose

“Program review is the process through which constituencies (not only faculty) on campus take stock of their successes and shortcomings and seek to identify ways in which they can meet their goals more effectively. It is important to note here that the task of identifying evidence-based successful practices, and sharing these practices college-wide, is far more important than the negative perspective of trying to ferret out ineffective practices” –Academic Senate for California Community Colleges, 2009

SUBMITTER INFORMATION

First Name:	James
Last Name:	Almy
Email:	jalmy@gwc.cccd.edu
ID:	
Phone Number:	Ext 52150
Who is your Dean/Supervisor?	Danny Johnson
Are you the Department Chair?	Yes

GENERAL PROGRAM QUESTIONS

Name of Program (Academic Programs should be listed per discipline):
Chemistry

Please provide a brief description and any significant change in your program since the last Program Review cycle.
<p>The chemistry program prepares students for further study in chemistry or related physical and life sciences. It also provides a background in general chemistry that includes skills appropriate for entry-level employment in science-related industries or laboratories, such as environmental, pharmaceutical, or materials chemistry. Coursework includes instruction in molecular-level interpretations of the properties and reactions of inorganic and organic substances.</p> <p>The Covid-19 pandemic induced shift to remote instruction is now behind us and all of the lab courses are being taught in-person, enabling hands-on lab skills to be acquired by our students. This resumption of in-person instruction has returned the quality of our course offerings to their previous pre-pandemic level.</p> <p>However, remote instruction has not been entirely abandoned. A small number of chemistry lectures are being taught in an asynchronous online manner.</p>



Program Review Request Instruction

A dual-enrollment Preparation for General Chemistry (CHEM G130) course was offered for the first time during the summer of 2022. Having been deemed a success, this same course was offered again during the summer of 2023 and we look forward to it becoming a regular summer offering.

The Organic Chemistry A (CHEM G220) and Organic Chemistry B (CHEM G225) courses have switched to the use of OERs.

Matt Carlson was hired as a full-time, tenure-track instructor of chemistry.

What are your program's strengths? (Answers could include but not limited to KPI data)

The chemistry courses offered by our department range from those capable of meeting the needs of non-science majors to those required of students majoring in chemistry, geology, physics, engineering, biology, nursing, and health careers. We pride ourselves on our rigorous courses that well prepare students for the next course in the sequence or in their major. We reach all of these students with a limited number of full-time faculty. Members of the faculty and staff work well in a collegial atmosphere, with full-time faculty mentoring and supporting the part-time faculty who teach the same course. Despite a limited budget, we provide a complete laboratory experience for most courses. In addition to our work with the students of Golden West College, we are active in the community, conducting multiple outreach activities.

What are the challenges for your program? (If there are regulations or requirements for your program that require additional support, please note those here)

Hispanic/Latinx students continue to be the largest disproportionately impacted group.

Describe any trends and contributing factors related to enrollment, retention, and success for this past cycle.

Success rates in two of our gateway courses (CHEM G130 and G180) have generally increased over the past five years. Overall, chemistry course success rates have remained relatively constant during this same time-period. Overall enrollment in chemistry courses during the previous program review cycle (2021-2023) was less than in the program review cycle prior to that (2019-2021). Retention, which dipped to a low of 84.7% in 2019-2020 has since increased to over 88% for each of the past three years.

How does your department/program support the goals of diversity, equity, inclusion, and accessibility? (Answers could include but not limited to gaps in success data, modality of course offerings, part/length of term (full-term, non full-term, etc.)

One of the program's goals for the previous program review cycle was the reduction of the achievement gap observed in student success rates for Hispanic/Latinx students, the largest of our disproportionately impacted groups. We sought out advice from the Equity Squad on ways to address these equity gaps. Additionally, all full-time faculty in the program completed one or more



Program Review Request Instruction

professional development activities related to equitable teaching practices. These professional development activities have led to changes in instruction.

A small number of chemistry lectures are being taught in an asynchronous online manner. Coupled with one of these asynchronous online chemistry lectures is a one-day-a-week lab on Fridays, which limits the required number of days on-campus each week for these students to one.

One member of the program is conducting a Student Equity and Achievement Program (SEAP) project whose goal is to improve the success and retention rates of Latinx and Black students by exposing them to role models of successful Latinx and Black chemistry students.

How does your department/program collaborate with other areas on campus to advance student success?

The program coordinates with the STEM Center on its speaker series. The program acted on the advice of the Counseling department to make Pass/No Pass an option for Preparation for General Chemistry (CHEM G130).

How does your department/program utilize technology to support student success?

Technology is used extensively by the Chemistry program. The classroom projectors and speakers are used for PowerPoint and video presentations. Canvas sites are used to disseminate course materials and announcements, for their gradebook capabilities, and for the assessment of students via quizzes. Many classes make video recordings of lectures available to students. Simulations are used for instruction. Excel is used for the construction of graphs and statistical analysis of data. Laboratory equipment such as UV/Vis spectrometers are used to provide students with hands-on exposure to the sorts of sophisticated instrumentation that modern chemistry relies on for its application.

Do any of the courses in your program have a CTE TOP code?

No

AWARDS

What type of awards does your program offer?

- Certificates
- Associate Degree
- Associate Degree for Transfer

Please provide the information for the number of awards for Associate Degrees (CCI-approved), Associate Degrees for Transfer (State-approved), and Certificates of Achievement for this program. Please put N/A if an area is not applicable for your program.



Program Review Request Instruction

	3 years ago	2 years ago	1 year ago
Certificates	NA	NA	NA
Associate Degrees	35	37	35
Associate Degrees for Transfer	NA	NA	NA

Please comment on the trends for the number of awards. You may then comment on any other relevant information provided by the Office of Research and Planning, and Institutional Effectiveness (ORPIE).

The number of Associates in Arts degrees in chemistry has remained steady over the last three years, despite decreasing enrollment in the program. While a Associate Degree for Transfer in Chemistry was recently approved. It was approved too recently for any degrees to have been awarded.

FTES and FTEF

For the below questions, please provide your FTES (full-time-equivalent students, resident) divided by your FTEF (full-time-equivalent faculty). Please submit your rates from three years ago, two years ago, and this past year.

Please note: For programs with earned credit please use FTES (Res)/FTEF. For non-credit, please use FTES (Total)/FTEF.

	3 years ago	2 years ago	1 year ago (this past year)
FTES/FTEF Ratio:	0.97	0.80	0.85

Outside of hiring new faculty or staff, please discuss the data trends above, and your plans for serving more students.

The efficiency of our offerings generally decreased. This is a consequence of an unexpected reduction in enrollment. We have tried to adjust to these changes by reducing the number of sections offered by the program, a change that has seen the efficiency increase from two years ago to one year ago. Currently, enrollment seems to be on a slight upward trajectory. We'll monitor these developments, looking to offer additional sections if waitlists suggest that doing so would be wise.

CURRICULUM

After a thorough review of your courses in CurricUnet, with the assistance of your CCI representative, answer the following questions.

If you do not currently have a representative on CCI, you may contact either:

Gary Kirby: gkirbyjr@gwc.cccd.edu

Monica Jovanovich: mjovanovich@gwc.cccd.edu



Program Review Request Instruction

Do you have any courses that have not been updated to CCI, within the required timeframe (6 or more years for a transfer-level course, 3 years or more for a CTE course)?

- Yes
 No

Are there courses in your Program (Degree/Certificate) that have not been successfully offered since the last Program Review? Please note, classes that were cancelled, they were not successfully offered)

- Yes
 No

Do you have active courses that are not part of a degree or certificate?

- Yes
 No

Please indicate the name of the course(s) and the name(s) of the certificate(s) or degree(s) you intend to connect it to when you submit your revision to CCI.

Neither CHEM G099N nor G205 will be connected to a course or degree. These courses train students to assist instructors in the teaching of chemistry lab classes.

STUDENT LEARNING OUTCOMES

Do any of your SLOs use the exact wording as the course objectives?

(SLOs should be written to reflect the course objectives while not using the exact same language as the course objectives).

- Yes
 No

How has your department/program utilized SLO (Student Learning Outcome) results to make changes or improvements to your Program?

One of the Chemistry program SLOs involves the development of chemistry laboratory skills. The faculty in the Chemistry program have reviewed the chemistry laboratory skills being taught across our curriculum with the aim of eliminating unnecessary redundancies and of ensuring that all necessary skills are being taught. One omission noted in this analysis was the proper use of weighing paper. This omission has been corrected. Instruction in the proper use of weighing paper is now a part of the Chemistry program, occurring in General Chemistry A (CHEM G180).

GOALS AND REQUESTS FOR FUNDING



Program Review Request Instruction

Requests – If you are requesting any of the following, they **MUST** be addressed within your Department goals. These forms must be submitted separately from the Program Review.

- Faculty
- Facilities, Equipment, Technology & Other
- Classified Personnel

GWC Strategic Plan Goals Legend

1. **Enrollment:** GWC will increase credit and noncredit enrollment while providing efficient academic programs and student services.
2. **Equity and Success:** GWC will support, enhance, and develop equity-minded services and academic programs that lead to student success.
3. **Completion:** GWC will ensure students' timely completion of degrees and certificates by providing high quality academic programs and student services.
4. **Workforce Preparation:** GWC will support student success by developing and offering academic programs and student services that maximize career opportunities.
5. **Facilities:** GWC will provide flexible, accessible, and sustainable learning environments that support the success of students, faculty, staff, and communities.
6. **Professional Development:** GWC will support the success of all employees by providing professional development opportunities that focus on the achievement of the College Goals.
7. **Communication:** GWC will effectively communicate and collaborate within the College and its communities.

GOALS FROM PREVIOUS PROGRAM REVIEW CYCLE

Please refer to your previous Program Review cycle and summarize all outcomes for each goal.

Summary and Outcomes of Previous Goals (from the last Program Review) including resource requests and if they were funded or not.

The Chemistry program had five goals for the previous program review cycle:

1. Improve our outreach activities.

While we have contacted the College outreach specialist regarding creating informational brochures describing our program and organizing on-campus outreach events, we've been unable to coordinate our schedules in order to accomplish anything substantive. We also planned to develop sets of science demonstrations for various age groups, but this work was meant to supplement on-campus outreach events and since no on-campus outreach events for various age groups were held, no progress on this was accomplished. Another aspect of our outreach work was the goal of identifying professional scientists, ideally individuals whose race, ethnicity, or special population status matches that of the groups we serve who are experiencing a disproportionate impact, willing to talk about their work oncampus. This was accomplished, with our department partnering with the STEM Center



Program Review Request Instruction

to host speakers. The number of current and potential students who attended these outreach events was significant, as was their satisfaction with each event. However, the number of students enrolled in chemistry courses (CHEM 110, 130, and 180) has not increased as a result. One last action taken regarding this goal was the outfitting of the third-floor Math & Science display cases with items that better share the excitement and wonder that chemistry, physics, and astronomy can inspire. By better sharing the excitement and wonder of these programs, we hope to attract more student interest in them. This goal has been partially achieved.

2. Improve lab instruction in CHEM 180, 185, 220, and 225.

Our requests to purchase additional conductivity meters, glass burets, and a UV/Vis spectrometer for use in the chemistry teaching labs was approved. These acquisitions led to (1) more students being able to use lab equipment, as opposed to sharing it, (2) improved experimental accuracy, and (3) more efficient use of lab time. However, there was no noticeable improvement in overall lab success rates. This goal was largely met.

3. Secure the quality of our stockroom operations.

A night stockroom manager was hired, dramatically decreasing the likelihood of turnover in this position. This goal has been met.

4. Reduce the achievement gap observed in student success rates for Hispanic/Latinx students, the largest of our disproportionately impacted groups.

In our previous program review we stated that we would seek advice from the Equity Squad on how we can reduce the achievement gaps observed in our courses and pursue professional development activities in order to learn relevant instructional techniques. Both of these actions were taken. We asked for advice from the Equity Squad on ways to address these equity gaps and all full-time faculty in the program completed one or more professional development activities related to equitable teaching practices. These professional development activities have led to changes in instruction. Additionally, most courses in the program use embedded tutors to support student learning. Unfortunately, there has not been a significant reduction in the achievement gaps for Hispanic/Latinx students despite these actions. This goal has not been accomplished.

5. Establish one or more partnerships with local businesses so that these local businesses see our students as their first choice for internships and jobs.

Little formal progress was made on this goal, mainly because the champion of this goal was a part-time faculty member who no longer works at GWC. Informally, however, several of our students have found positions with AQMD, a result of one of our faculty having a personal relationship with an AQMD employee. This goal has not been achieved.

GOALS FOR CURRENT PROGRAM REVIEW CYCLE

Current goals should be connected to GWC's Strategic Plan Goals.



Program Review Request Instruction

GOAL 1 (Required)

Description of goal:

Reduce the achievement gap observed in student success rates for Hispanic/Latinx students, the largest of our disproportionately impacted groups.

What actions will be taken to accomplish the goal?

We will continue pursuing professional development activities in order to learn relevant instructional techniques. We will investigate the possibility of offering Introduction to Chemistry (CHEM G110) as a course with support, i.e., as CHEM G110S.

What metric will you use to measure your goal?

We will look for a reduction in the achievement gaps experienced by Hispanic/Latinx students. Specifically, we will look for reductions in the success rate percentage point gap (PPG) for Hispanic/Latinx students. The PPG compares the percentage in a particular outcome for a disaggregated subgroup to the percentage for all students.

Which of the College's missions and goals does this goal support? (check all that apply)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

GOAL 2 (Required)

Description of goal:

Improve chemistry lab instruction.

What actions will be taken to accomplish the goal?

We will request the purchase of additional chemistry lab equipment: 10 Spectronic 200s and 36 digital balances.

What metric will you use to measure your goal?

This goal will be considered a success if it leads to (1) more students being able to use the equipment, as opposed to sharing it, (2) improved experimental accuracy, (3) more efficient use of lab time, and (4) overall lab success rates.



Program Review Request Instruction

Which of the College's missions and goals does this goal support? (check all that apply)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

GOAL 3 (Required)

Description of goal:

Improve the efficiency and organization of the stockroom.

What actions will be taken to accomplish the goal?

The procedures used to prepare items necessary for experiments will be reviewed for accuracy, ease of editing, and ability to be backed-up. The manner in which lab equipment is stored will be reviewed. Replace two part-time stockroom positions with one full-time position.

What metric will you use to measure your goal?

Instructor satisfaction with the changes will be surveyed.

Which of the College's missions and goals does this goal support? (check all that apply)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

OTHER INFORMATION

What additional information would you like to share about your program?

We are requesting that Annie Ly be given additional compensation for the work she does proctoring and scoring the Chemistry Placement Exam, extra work begun in 2019 for which she has yet to compensated. In 2019 a prerequisite was added to General Chemistry A (CHEM G180). That prerequisite was successful completion of Preparation for General Chemistry (CHEM G130) or a passing score on the Chemistry Placement Exam. The original plan was for the Chemistry Placement



Program Review Request Instruction

Exam to be administered by the same folks who handled the placement exams for Math and English, but the coincidental enactment of AB 705 effectively eliminated these Math and English placement exams and the need for staff dedicated to administering them. The college reassigned these staff, leaving us without an obvious choice for who would administer the Chemistry Placement Exam. After consultation with the Dean of Math & Science, it was decided that Annie Ly would assume responsibility for proctoring and scoring the Chemistry Placement Exam. Annie has been performing this work since 2019. It requires about six to eight hours a week of her time to do this work. Annie's compensation has yet to be increased to recognize her extra duties. Extra work without extra compensation is unjust and breeds resentment. We're requesting that Annie's pay be increased to recognize her greater workload and her vital contribution to our program. We're requesting that Annie, who is currently at range/step level is 114/8, be raised to range/step 115/8.

Submitter's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Supervisor's Review

As the supervisor of this program, I have reviewed this request.

- No concerns
- I have concerns

Comments: Click or tap here to enter text.

Supervisor's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Vice President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

FACILITIES, EQUIPMENT, TECHNOLOGY & OTHER FUNDING REQUEST

Submitter's First Name:	James
Submitter's Last Name:	Almy
Submitter's Email:	jalmy@gwc.cccd.edu
Submitter's Phone Number:	Ext 52150
Who is your Dean/Supervisor?	Danny Johnson
Are you the Department Chair?	Yes
Who is your Vice President?	Kay Nguyen
Program/Department:	Chemistry/Physical Sciences

Type of Review:

Note: Library and Counseling should submit individual Program Reviews: one for Instruction and one for Student Services.

- Instruction
- Student Services
- Administrative

Directions:

- Fill out the GOAL section, including narrative (required) and include supporting data (if necessary/desired).
- Fill out the REQUEST FOR FUNDING section, indicating a request for Facilities, Technology or Equipment, including description of the item(s) being requested and total dollar amount.
- Fill out one form per GOAL/REQUEST FOR FUNDING.

GOAL

Description of Program's Goal (required):

Improve chemistry lab instruction.

Data in the chemistry lab takes many forms. Sometimes it's a color change, or production of solid when one wasn't initially present, or the amount of light absorbed by a sample. But one of the most commonly acquired types of data is mass. The masses of solids, liquids, and gases are measured. The mass of what you start with is measured. The mass of what you end with is measured. Reactant masses, product masses, the list goes on. All of these masses are measured in the chemistry lab using a digital balance. We have digital balances, but they are aging. Years of student use—nudges, bumps, spills—have left them in poor condition.

Data to support the Program's Goal (if necessary/desired)

[Data Dashboards](#)

If additional data is necessary/desired, fill out a [Research Request](#) - May take up to 4 weeks

Click or tap here to enter text.

What actions will the program take to accomplish this goal?

The program is requesting the purchase of 36 digital balances.



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

What metric will you use to measure this goal?

This goal will be considered a success if it leads to (1) more students being able to use the equipment, as opposed to sharing it, (2) improved experimental accuracy, (3) more efficient use of lab time, and (4) overall lab success rates.

Which of the College's missions and goals does this goal support? (Vision 2030)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

Please describe how this goal supports the College's missions and goals [\(Vision 2030\)](#).

Enrollment: GWC will increase credit and noncredit enrollment while providing efficient academic programs and services.

The effectiveness of the chemistry program will be improved by providing students access to better equipment. Our current balances are still working, but their condition is deteriorating, causing them to no longer be at their peak of reliability and accuracy.

Completion: GWC will ensure students' timely completion of degrees and certificates by providing high quality academic programs and student services.

Funding this request will aid in the providing of a high-quality chemistry program.

REQUEST FOR FUNDING

Request: What do you need to accomplish this goal? (Mark one per request)

- Facilities (e.g. improvements/repairs to classrooms, offices and buildings)
- Technology
- Equipment
- Other (e.g. conferences, funding for professional development)

Description of Item(s) / Cost

All requests must have a sales quote that includes:

1. Sales tax
2. Installation fee
3. Training fee
4. Service life agreement/fee

Please note: approved requests over 10k will need 3 quotes before purchase



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

Description of Item(s)	Total Dollar Amount Requested
12 Analytical Balances, 0.001 g	\$11,179.96
24 Precision Balances, 0.01 g	\$13,946.48
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.

Do you have any existing funds in your budget to cover this expense? Please describe.

Maybe. It might be possible to purchase these with lottery funds.

Will there be an on-going cost for this request? What is the total cost of ownership?

No.

Supervisor's Review

As the supervisor of this program, I have reviewed this request.

No concerns

I have concerns about this recommendation

I believe department or wing funds exist to cover this request: partial full payment

Comments: Click or tap here to enter text.

Supervisor's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Vice President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

OFFICE USE ONLY

President's Recommendation:

- Funding recommended
- Funding not recommended

President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

FACILITIES, EQUIPMENT, TECHNOLOGY & OTHER FUNDING REQUEST

Submitter's First Name:	James
Submitter's Last Name:	Almy
Submitter's Email:	jalmy@gwc.cccd.edu
Submitter's Phone Number:	Ext 52150
Who is your Dean/Supervisor?	Danny Johnson
Are you the Department Chair?	Yes
Who is your Vice President?	Kay Nguyen
Program/Department:	Chemistry/Physical Sciences

Type of Review:

Note: Library and Counseling should submit individual Program Reviews: one for Instruction and one for Student Services.

- Instruction
- Student Services
- Administrative

Directions:

- Fill out the GOAL section, including narrative (required) and include supporting data (if necessary/desired).
- Fill out the REQUEST FOR FUNDING section, indicating a request for Facilities, Technology or Equipment, including description of the item(s) being requested and total dollar amount.
- Fill out one form per GOAL/REQUEST FOR FUNDING.

GOAL

Description of Program's Goal (required):
<p>Improve chemistry lab instruction.</p> <p>The interaction of light and matter is a crucial aspect of modern chemistry. Because atoms are too small to see with the naked eye, chemists must make inferences about their composition and properties using experimental data. The light absorbed by a chemical sample provides such information. Absorbance of light at certain wavelengths can be used to determine the presence of certain chemical compounds, or even the presence of certain groups of atoms within a chemical compound. Differing levels of light absorbance by different chemical samples can be related to the relative amounts of a particular chemical compound in these different samples. Since the interaction of light and matter is such an important aspect of chemistry, chemistry students are exposed to equipment for making such measurements early in their studies, during the second semester of general chemistry (General Chemistry B) at Golden West College. The instrument of choice for these first experiments involving light and matter are the Spectronic 200s.</p>

Data to support the Program's Goal (if necessary/desired)
<p>Data Dashboards</p> <p>If additional data is necessary/desired, fill out a Research Request - May take up to 4 weeks</p>
<p>Click or tap here to enter text.</p>



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

What actions will the program take to accomplish this goal?

The program is requesting the purchase of 10 Spectronic 200s.

What metric will you use to measure this goal?

This goal will be considered a success if it leads to (1) more students being able to use the equipment, as opposed to sharing it, (2) improved experimental accuracy, (3) more efficient use of lab time, and (4) overall lab success rates.

Which of the College’s missions and goals does this goal support? (Vision 2030)

- Enrollment
- Equity and Success
- Completion
- Workforce Preparation
- Facilities
- Professional Development
- Communication

Please describe how this goal supports the College’s missions and goals [\(Vision 2030\)](#).

Enrollment: GWC will increase credit and noncredit enrollment while providing efficient academic programs and services.

The effectiveness of the chemistry program will be improved by better utilizing classroom time. The current limited number of spectrometers necessitates a great deal of sharing, which slows student data acquisition. Since students are delayed in their acquisition of data, they have less time for the analysis of data. It’s an inefficient use of classroom time, one that would be rectified by the purchase of 10 Spectronic 200s.

Completion: GWC will ensure students’ timely completion of degrees and certificates by providing high quality academic programs and student services.

Funding this request will aid in the providing of a high-quality chemistry program.

REQUEST FOR FUNDING

Request: What do you need to accomplish this goal? (Mark one per request)

- Facilities (e.g. improvements/repairs to classrooms, offices and buildings)
- Technology
- Equipment
- Other (e.g. conferences, funding for professional development)

Description of Item(s) / Cost

All requests must have a sales quote that includes:

1. Sales tax



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College

2. Installation fee
3. Training fee
4. Service life agreement/fee

Please note: approved requests over 10k will need 3 quotes before purchase

Description of Item(s)	Total Dollar Amount Requested
10 Spectronic 200s	\$24,917.50
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.

Do you have any existing funds in your budget to cover this expense? Please describe.

No.

Will there be an on-going cost for this request? What is the total cost of ownership?

No

Supervisor's Review

As the supervisor of this program, I have reviewed this request.

No concerns

I have concerns about this recommendation

I believe department or wing funds exist to cover this request: partial full payment

Comments: Click or tap here to enter text.

Supervisor's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Vice President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

OFFICE USE ONLY

President's Recommendation:

- Funding recommended
- Funding not recommended

President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.



Program Review Request- Facilities, Equipment, Technology & Other

Golden West College



Program Review Request- Classified

Golden West College

CLASSIFIED REQUEST

Submitter's First Name:	James
Submitter's Last Name:	Almy
Submitter's Email:	jalmy@gwc.cccd.edu
Submitter's Phone Number:	Ext 52150
Who is your Dean/Supervisor?	Danny Johnson
Are you the Department Chair?	Yes
Who is your Vice President?	Kay Nguyen
Program/Department:	Chemistry/Physical Sciences

Type of Review:

Note: Library and Counseling should submit individual Program Reviews: one for Instruction and one for Student Services.

- Instruction
- Student Services
- Administrative

POSITION REQUEST

Please check one of the following:

- Replacement Position (Previously funded/ not currently funded)
- New Position (Never been funded/newly created)

Please note: that an approved job description from the District office is required in order to complete the request form. You may not proceed with the request without the job description.

If this request is for a replacement, how long has the position been vacant?	NA
Job Title	Instructional Assistant - Chemistry

Salary Information

Salary Schedule Range:	113
Annual Salary (Step 1) \$:	\$56,678.77
Step 5 \$:	\$68,893.83

Contract (check one):

- 100% FTE
- Other FTE %:
- 12 month
- 11 month
- 10 month

Job Description Summary

- Required:** Attach a copy of the department Organizational Chart showing all positions and highlighting the position requested.
- Required:** Attach a copy of the CCCD Position Description, if available (obtain from Personnel Dept).
- CCCD does not have a position description as it is a new position within the district.**



Program Review Request- Classified

Golden West College

What are the essential duties this position will fulfill?

The essential duties of this position are:

1. Assist in laboratory preparation for all assigned Chemistry, Physics, Geology, Astronomy, and Physical Sciences classes.
2. Create written instructions for use of lab services and computer equipment, as necessary. Create answer keys for sample materials for all materials in instructional materials files.
3. When performing setup, calculate amounts and portions such as mass, volume, length, percentage, concentration levels, angles, etc. Safely keep and properly dispose and/or takes down experiments and simulations.
4. Makes repairs to equipment and learning assistance devices. Checks out and maintain control over tools, equipment, supplies, and materials used by students.
5. Maintain records of laboratory activity, including typing forms or inputting data or otherwise retaining information regarding the acquisition, maintenance and distribution of tools, equipment, materials, supplies, and/or written materials.
6. Provide for the general cleanliness and security of the laboratory or shop work area. Handles and disposes of harmful or hazardous materials according to specific instructions relating to their disposal. Participate in providing for a safe environment for the conduct of the laboratory. Report maintenance problems as they occur.
7. Attend training as necessary to maintain currency of knowledge and communicate safety concerns and necessary updates to supervisors.
8. Perform other related duties as assigned that support the objective of the position.
9. Abide by all District policies and procedures including Board Policy 3050–Code of Professional Ethics.

JUSTIFICATION

What is the compelling need for an immediate replacement?

Two of our long-term, part-time lab assistants will be leaving at the end of the academic year, one to attend medical school, another to pursue other professional opportunities. Given their years of service in the stockroom, their departure constitutes a significant loss of institutional memory. We'd like to replace these two part-time positions with the one full-time position being requested here. We feel this will better leverage our existing human resources, enabling our long-serving night stockroom associate to become a full-time employee, allowing us to better utilize their skills and talents, which should offset the loss of our two part-time positions.

What are the consequences if this position is not immediately replaced?

Since there this request is for a position to begin next academic year, there is no immediate consequence to its not being filled. However, if this position request is not granted effective next academic year, it will leave our already thinly spread staff devoid of vital experience.

If the full-time position is approved, will there be a request for funding for 160-day position during the hiring process?

- Yes
 No

Position title and Area of Specialization (if applicable)

Night Stockroom Manager (Chemistry)

Needs/Priority Rubric (1-10 points)

- 1 - 4 points: Little or no contribution or impact
- 5 - 7 points: Some contribution or impact
- 8 - 10 points: Significant contribution or impact

How does this request for a classified position meet the following criteria? (2 page max.)



Program Review Request- Classified

Golden West College

Fully respond to each of the following questions. Your responses will be the basis that Planning Council and the Executive Team members will apply the criteria and rate this request.

#1. Program Needs (1-10 points):

Explain the conditions that are unique to the program/department which support the need for additional full-time classified staff and how this position addresses those needs. If this position is not filled, explain the consequences to the **program/department** that will result. Please use information from Program Review.

Two of our long-term, part-time lab assistants will be leaving at the end of the academic year, one to attend medical school, another to pursue other professional opportunities. Given their years of service in the stockroom, their departure constitutes a significant loss of institutional memory. We'd like to replace these two part-time positions with the one full-time position being requested here. We feel this will better leverage our existing human resources, enabling our long-serving night stockroom associate to become a full-time employee, allowing us to better utilize their skills and talents, which should offset the loss of our two part-time positions.

#2. College-Wide Priority (1-10 points):

How does this request align and directly support the [College's Goals](#)? How does this position address stated long-term college priorities identified by College plans? (e.g. Master Plan, Instructional Plan, Student Equity Plan, Facilities Plan) *Please cite the plans and goal(s).*

Enrollment: This hire allows us to maintain the quality of the program's lab offerings. The quality of our program is what drives our enrollment.

Equity and Success: This hire is vital to maintaining the quality of our program. If the quality of our program decreases, our students will have less success in efforts to transfer and join the workforce.

Completion: The stockroom supports all of the courses in the program, from the first to the last. The stockroom and its staff are essential to our being able to offer courses that contain the educational experiences necessary for the successful completion of degrees and certificates.

Workforce Preparation: The stockroom primarily supports lab instruction, which is where students acquire the hands-on skills prized by employers. Without this support from the stockroom, the quality of our program offerings decreases, lessening the acquisition by students of the skills they need to be prepared to join the workforce.

Facilities: This position plays a role in the care of the stockroom and labs on the third floor of the Math & Science building.

Professional Development: The enhancement of this position over the current one provides its holder an incentive to pursue professional development activities. When the college demonstrates that it values its employees, they reward it with an increased commitment to developing their professional skills.

Communication: This position regularly communicates with the day-time stockroom manager and night-time faculty, both full- and part-time, within the program.

#3. Contributions to Other College Operations (20 points):



Program Review Request- Classified

Golden West College

To what extent would the position requested benefit or serve other departments, programs, or plans?

The night-time manager of the stockroom serves all of the programs within the Department of Physical Sciences: Chemistry, Geology, Physics, Astronomy, and Physical Science. This position will regularly communicate with and aid the instructional assistants in the Biology stockrooms.

#4. Request fills a current position that has been filled by an hourly employee for over one year because there is a demonstrated need. (10 points):

(Determined by the Executive Team)

This request replaces two part-time stockroom employees with a full-time stockroom employee. The part-time employees have been in their positions for more than one year.

Please provide justification why the department wants the position to be permanent.

The position should be permanent in order to retain and leverage the sizeable institutional knowledge gained by our current part-time stockroom employees. Losing this institutional knowledge is a loss for our department and our college. And any loss to our department and college is a loss for our students.

Submitter's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Submitter's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Supervisor's Review

As the supervisor of this program, I have reviewed this request.

- No concerns
- I have concerns

Comments: Click or tap here to enter text.

Supervisor's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

Vice President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.

OFFICE USE ONLY

President's Recommendation:

- Hire position
- Hire one-year temporary



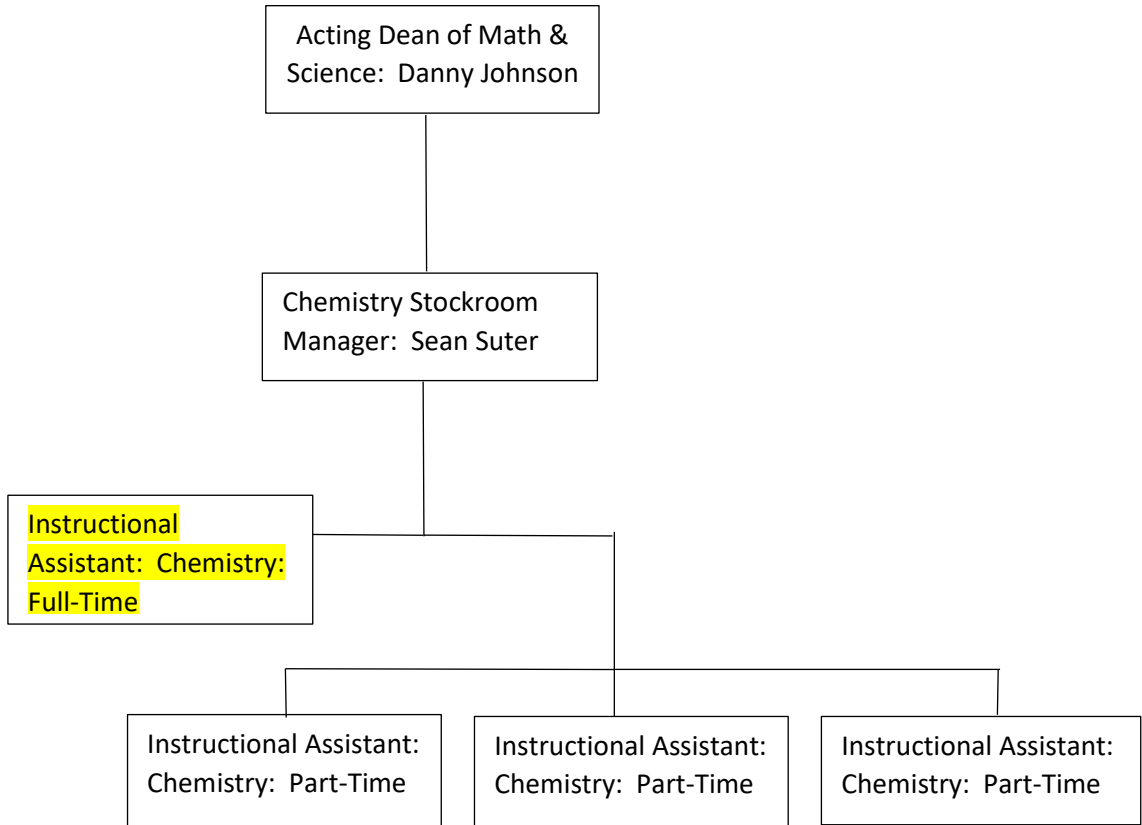
Program Review Request- Classified

Golden West College

Not hiring at this time

President's Signature: Click or tap here to enter text.

Date: Click or tap to enter a date.






QUOTATION			
Quote Number	Valid From	Valid To	Page
8032243435	10/06/2023	11/05/2023	1 of 2
Currency	Sales Representative	Customer Reference	
USD	Debbie Potalivo		

To Place an Order	
Phone :	1-800-932-5000
Fax :	1-866-329-2897
Web :	www.vwr.com

Quote Prepared For	Contact Phone / Fax / E-Mail
Sean Suter	714-438-4685 ssuter@gwc.cccd.edu
Ship To :	Sold To :
80248646	80248646
GOLDEN WEST COLLEGE 15744 GOLDENWEST ST HUNTINGTON BEACH CA 92647-3103	GOLDEN WEST COLLEGE 15744 GOLDENWEST ST HUNTINGTON BEACH CA 92647-3103

When placing your order, please include your quotation number and account number to ensure you receive the correct price.

THANK YOU FOR THE OPPORTUNITY TO EARN YOUR BUSINESS.

Row	VWR Catalog Number	Product Description	Qty	UOM	Unit Price	Extended Price
10	82021-160	VWR THERMOMTR PEN-SHAPE DIGITL	50	EA	40.52	2,026.00
		VWR® Electronic Stem Thermometer, Calibrated, Stainless Steel, 197 mm Probe Product Link : https://us.vwr.com/store/catalog/product.jsp?catalog_number=82021-160 Shipping Dimensions Weight / Size (L*W*H) per UOM : 0.250 LB / 8.000*1.000*1.000 IN UOM Component Info : EA(1items) Availability : Product Ships Directly from Manufacturer				
20	75802-866	VWR BALANCE B-SRS ANAL .001G 0.2MG 400 G	12	EA	848.33	10,179.96
		VWR® B2-Series Analytical and Precision Balances Product Link : https://us.vwr.com/store/catalog/product.jsp?catalog_number=75802-866 Shipping Dimensions Weight / Size (L*W*H) per UOM : 18.000 LB / 21.000*18.000*22.000 IN UOM Component Info : EA(18lb) Availability : Product on Order. Estimated delivery date will be provided after order is placed				
30	76175-404	VWR BALANCE PRECISION 2000G / 0.01G READ	24	EA	622.77	14,946.48
		VWR® P2-Series Balances Product Link : https://us.vwr.com/store/catalog/product.jsp?catalog_number=76175-404 Shipping Dimensions Weight / Size (L*W*H) per UOM : 4.400 LB / 16.000*16.000*8.000 IN UOM Component Info : EA(1items) Availability : Product on Order. Estimated delivery date will be provided after order is placed				

Item Total : 27,152.44
Estimated Tax : 2,104.32
Quote Total : 29,256.76



QUOTATION			
Quote Number	Valid From	Valid To	Page
8032243435	10/06/2023	11/05/2023	2 of 2
Currency	Sales Representative	Customer Reference	
USD	Debbie Potalivo		

Financing Available. Contact your VWR Representative for details about flexible financing programs.

VWR International's Terms and Conditions of Sale apply. A copy is available on our website (https://us.vwr.com/store/content/externalContentPage.jsp?path=en_US/about_vwr_terms_conditions_product_sales.jsp), or by request. Customer represents that it has read and agrees to VWR International's Terms and Conditions of Sale.

Identified stock status is based on product availability at time of the quote and may change at time of order. Delivery dates are based on standard lead times from suppliers.

Charges displayed on the quotation including freight, tax and other charges are estimates and may vary at time of order.

Any images used are not necessarily representative of any product offering from VWR International and do not constitute the basis for purchase decisions.

Customer is responsible for unloading and providing standard receiving facilities for large and/or heavy shipments. Special unloading or delivery can be arranged, provided VWR International is notified at the time of order placement. For such arrangements, please contact VWR International for a quotation. All quotes for installation assume that services related to the equipment are in place at the Customer site (including, but not limited to, gas, plumbing, electrical and ventilation) as per the equipment manufacturer's specifications prior to the installation of the equipment. Installation or other services are not included in this quotation, unless otherwise noted on the quotation.

Customer has a limited amount of time to document and report any shipping damage. Please inspect all shipments upon receipt and refer to Section 4 of VWR International's Terms and Conditions of Sale for additional information.

Items prefixed with "MISC" are subject to regulatory approval once VWR International receives acceptance from the customer. They are special order, and as such may not be returnable. Please allow 6-8 weeks delivery from the time of your first order or acceptance of this quotation.

Sales Quotation

*Quote Nbr	Creation Date	Due Date	Page
3277-0714-38	10/04/2023		1 of 1
Payment Terms		Delivery Terms	
NET 45 DAYS		DEST	
Valid To		Prepared By	
12/31/2023		WEDIG, ROGER	
Customer Reference		Sales Representative	
QUOTE SEAN SUTER		ROGER WEDIG	
To place an order	Ph: 800-955-1177	Fx: 800-955-0740	
Submitted To:		Customer Account: 154000-002	
SEAN SUTER		GOLDEN WEST COLLEGE 7112 MCFADDEN AVE HUNTINGTON BEACH CA 92647	



FISHER SCIENCE EDUCATION
4500 TURNBERRY DRIVE
HANOVER PARK IL 60133-5491

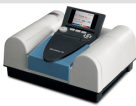
[Review and Place Order](#)

[Click here or go through your purchasing system to fishersci.com quotes](#)

***Please reference this Quote Number on all correspondence.**

Don't have a profile? Register on fishersci.com

For complete Terms and Conditions, please [click here.](#)

Nbr	Qty	UN	Catalog Number	Description	Unit Price	Extended Price
1	1	EA	S28434	SPEC 200E WITH USA POWER CORD	2,312.53	2,312.53
				Thermo Scientific SPECTRONIC 200 Spectrophotometer, SPECTRONIC 200, 115V, US Power Cord, Description: SPECTRONIC 200E, US Power Cord, Lamp: Tungsten-halogen (typical lifetime 1000 hrs), Optical Design: Single Beam, Spectral Bandwidth: <4 nm Vendor Catalog # 840-281700/EMD This item is being sold as 1 per each		
				=====		
				Extended warranty available for purchase below:		
				70 105 6239 UNITY BASIC DEPOT WAR SPEC 200 \$521.00		
				701681700 SPECTRONIC 200 EXTENDED WARRAN \$929.50		
				=====		

MERCHANDISE TOTAL	2,312.53
Estimated Sales Tax	179.22
TOTAL	2,491.75

NOTES:
DELIVERY: FREE SHIPPING

We now offer highly competitive financing with low monthly payments. Please contact your local sales representative for more information.

Tell us about your recent customer service experience by completing a short survey. This should take no longer than three minutes. Enter the link into your browser and enter the passcode: USA-PGH-CS2
<http://survey.medallia.com/fishersci>

Classification: Instructional Assistant – Biological Sciences/Chemistry	Specification Number: 94363
Board of Trustees’ approval date: 11/06/19	Salary Grade: 113

Summary

Provides tutorial, technical assistance, and/or lab support to students either in a classroom or walk-in laboratory setting, who are usually but not limited to, pre-college, non-credit certificate, or non-transfer course work. Tasks performed require technical competence in the subject taught.

Distinguishing Career Features

The Instructional Assistant – Biological Sciences/Chemistry is the first level in a career path for classroom, walk-in and scheduled labs, and tutoring. The Instructional Assistant – Biological Sciences/Chemistry will demonstrate subject matter competency in pre-college or first-year academic courses and other occupations that result in a certificate. Instructional Assistants may also be assigned as a second position in more advance and scientific courses.

Essential Duties and Responsibilities

Specific duties may vary among departments, divisions and jobs. Incumbents typically perform a substantial portion or all of the following types of duties, as assigned:

1. Works with faculty/instructional administrator to design, construct, troubleshoot, modify or rebuild equipment, modules, experiments that will be used in the classrooms/ laboratories in a division comprised of various related but different subject areas.
2. Assists in laboratory preparation for all assigned Biological Sciences/Chemistry classes.
3. Creates written instructions for use of lab services and computer equipment, as necessary. Creates answer keys for sample materials for all materials in instructional materials files.
4. When performing setup, calculates amounts and portions such as mass, volume, length, percentage, concentration levels, angles, etc. Safely keeps and properly disposes and/or takes down the experiments and simulations.
5. Makes repairs to equipment and learning assistance devices. Checks out and maintains control over tools, equipment, supplies, materials used by students. May be required to maintain contact with appropriate vendors.
6. Maintains records of laboratory activity, including typing forms or inputting data or otherwise retaining information regarding the acquisition, maintenance and distribution of tools, equipment, materials, supplies, and/or written materials.
7. Provides for the general cleanliness and security of the laboratory or shop work area. Handles and disposes of harmful or hazardous materials according to specific instructions relating to their disposal. Participates in providing for a safe environment for the conduct of the laboratory. Reports maintenance problems as they occur.
8. Attends training as necessary to maintain currency of knowledge and communicates safety concerns and necessary updates to supervisors.

9. Performs other related duties as assigned that support the objective of the position.
10. Required to abide by all District policies and procedures including Board Policy 3050 – Code of Professional Ethics.

Qualifications

▪ Knowledge and Skills

1. The position requires working knowledge of principles and properties of general and analytical chemistry, biology, chemistry, or physics.
2. Requires working knowledge of chemical reactions.
3. Requires working knowledge in the use of basic-to-advanced scientific and laboratory equipment.
4. Requires in-depth knowledge of laboratory or workshop procedures, organization, equipment, tests, experiments, and simulations.
5. Requires knowledge of safe and proper handling of harmful chemicals, substances, and hazardous wastes.
6. Requires a well-developed knowledge of instructional methods and techniques.
7. Requires advanced mathematics skill to make calculations for preparation of chemical solutions and compounds, including statistical confidence limits, algebraic computations, weights volumes, and percentages.
8. Requires sufficient knowledge of computers to use common desktop and specialized applications used in education.
9. Requires sufficient knowledge of the English language to prepare correspondence and materials suitable for classroom presentation.
10. Requires sufficient human relation skills to facilitate learning and to convey technical concepts to others.
11. Requires sensitivity to the needs of students of diverse backgrounds and abilities.

▪ Abilities

1. Requires the ability to perform the essential responsibilities and functions of the position.
2. Requires the ability to carry out the responsibilities of the position and set up laboratory assignments, experiments, simulations, and tests.
3. Requires the ability to prepare instructional equipment, solutions, and solids for laboratory experiments.
4. Requires the ability to operate, calibrate, and perform minor repairs to laboratory equipment and tools.
5. Requires the ability to conduct research of educational materials, and equipment.
6. Requires the ability to maintain the lab and equipment in a safe and organized manner, including the handling of hazardous or dangerous materials and equipment as required for some labs.
7. Requires the ability to perform routine record keeping and report writing duties.
8. Requires the ability to organize and prioritize work and manage time effectively.

9. Requires the ability to communicate in both formal and informal setting with students, instructors, and other interested parties.

- **Physical Abilities**

1. The general physical demands, working conditions, and essential job functions associated with this classification will be kept on file with the Office of Human Resources.
2. Essential functions will vary by position.
3. As defined by Title I of the Americans with Disabilities Act (“ADA”) and California’s Fair Employment and Housing Act (“FEHA”), the District shall engage in a timely, good faith interactive process with employees or employment applicants who are requesting or are in need of reasonable accommodations and, provide reasonable accommodations for employees or employment applicants who, because of their disability, are limited in or unable to perform one or more of the essential functions of their job in accordance with applicable state and federal law.

- **Education and Experience**

The position requires a High School diploma or equivalent and completion of a certificate program at the college level or internship in a trade. Six months of prior experience tutoring students, supporting or setting lab exercises. Or, any combination of education and experience which would provide the required equivalent qualifications for the position.

- **Licenses and Certificates**

May require a valid driver license.

Working Conditions

Work is performed predominately indoors where some safety considerations exist from lifting and relocating medium weight materials.

This job specification describes the general nature of the work performed, representative duties as well as the typical qualifications needed for acceptable performance. It is not intended to be a complete list of all responsibilities, duties, work steps, and skills required of the job.