

#8

COMPLETE

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Page 1: Classified Position Request Form

Q1

Please enter the following:

Department	Engineering & Physical Science
Position Title	Physical Science Lab Technician
Salary Range	\$51,900 - \$64,896
Annual Salary at Step B*	\$54,876
Hours/week and # of months (e.g., 10-month, 11-month, 12-month)	40 hours/week, 12 months

Q2

Current goal this position will directly advance/support

New Goals: (1) Faculty Training in Equitable Teaching Practices, (2) Physics Outreach, (4) Project-Based Learning/Equitable Assessments

Q3

How will this position directly advance/support the goal listed above?

(1) Faculty Training in Equitable Teaching Practices

This position directly supports faculty setting up and executing labs in person as well as sourcing, assembling, and distributing lab kits for online lab classes. As we implement more complex, student-driven, project-based labs this position will be vital in assuring that faculty (especially part time faculty) get access and training on the variety of highly technical equipment needed to run the labs and that students get access to what they need in a timely manner. This position also supports demonstration equipment for lectures as well as our video recording studio for online lectures. Without them faculty (especially part time faculty) will not be able to effectively use either.

(2) Physics Outreach

This position is essential in organizing and preparing demonstration equipment for K-12 and new student outreach. This is a key part of our plan to work on our representation gaps in race and gender for Physics and Astronomy.

(4) Project-Based Learning/Equitable Assessments

Our department is working on shifting many of our labs and assessments to student-driven, project-based learning to address improve our overall success and engagement as well as our equity gaps. To do this equitably we need to provide students with access to equipment that is well organized and maintained, which is the role of the lab tech.

Q4

Replacement for a funded (vacant) position

What type of position is being requested?

Q5

Please attach the description for the position classification (contact GCCCD Human Resources to obtain this).

Science Lab Technician III.doc (102.5KB)

Q6

What are the actual duties and responsibilities that are specific to this requested position that you would like to highlight to help the Classified Hiring Priorities Committee understand the need for this position?(200 words or less)

Perform a variety of responsible, skilled, specialized, and technical duties related to the organization, coordination and operation of physics, astronomy, engineering, and physical science laboratories. Interpret circuit schematics and perform repairs on sophisticated electronic equipment such as oscilloscopes, oscillators, generators, power supplies, Geiger counters, multimeters, lasers, microwave equipment, telescopes, solar filters and a variety of eyepieces. Maintain and audio-visual equipment. Dry mount and heat press charts and diagrams.

- Coordinating general laboratory operations.
- Support of instructors: setting up and taking down equipment, assisting in labs and demonstrations, training faculty on specialized equipment, managing budgets and lab curriculum, keeping supplies in stock.
- Equipment purchasing, organization, maintenance, and repair (or managing outside repairs)
- Operate a wide variety of specialized equipment including telescopes, lasers, testing and measurement devices, chemical instruments, microscopes, audio-visual and other electronic, electrical and mechanical devices. Troubleshoots processes and makes recommendations or alters protocols to improve procedures.

Q7

Please address the following: How are the duties of the requested position currently being performed, if at all? How does the lack of this position impact the program or service area? What impact, if any, have frozen or vacant positions within the department had on services or staff workload? (200 words or less) (Rubric Criteria 1)

Without this position, our program cannot function. Over at least the last 5 years we have asked repeatedly for a second position, as our program has more than doubled in size just in Physics and Astronomy and this lab tech covered Engineering, Geology, Geography, and Oceanography as well since they have no Tech. That is a VERY broad range of technical skills across that many disciplines, such that anyone truly qualified for the job would never take it for the ridiculously low pay, and that is not considering the workload required just to meet the bare minimum support needed for classes to run (we have doubled our enrollment but have not received double the lab support) and the fact that we had no daytime coverage and thus could not run labs during half the day. Even with the pandemic, we run labs in person or have to organize, purchase, and send out complex lab kits (managed by the lab tech). Now, with the retirement of our one lab tech, we have no one at all.

Consequences of not having enough support over the last 5 years:

1. No one really covered engineering and the prep room became so disorganized and messy that we could not always find equipment and there were actual rats living in there
2. We have had two tenure track instructors resign over workload issues partially because they needed to support their own labs. Both taught very lab-heavy courses.

Consequences in the future if we do not get AT LEAST one tech:

1. We will not pass lab inspections and face huge fines
2. We will continue to lose good full and part time faculty by asking them to do extensive work outside their job description
3. There will be no one to perform care and maintenance on several hundred thousand dollars of highly specialized equipment, much of which is old and fragile
4. There will be no one to run the weather station we are contractually obligated to maintain for the US Weather Service
5. Students will likely not get kits and we will be unable to run equitable, hands-on, at-home labs.

Q8

How has the program/service area changed over the most recent five academic years and/or how is it expected to change within the next five years (i.e. growth, additional services, increased workload and reorganization) that warrants this position? **Please use both quantitative and qualitative data including, but not limited to: enrollment and productivity data, staffing or other studies, surveys, volume of students or employees served, total comp time accrued, number of hourly/intern/volunteer/work-study, and services provided.** (200 words or less) (Rubric Criterion 2)

1. Students Served in Physics and Astronomy: 10 years ago 324 (2011) students, 5 years ago 363 (2016), now 486 in Spring 2021. Our enrollment went up during the pandemic and it is still strong. And we maintained fill rates in the 80% range and success and retention rates in the 80-90% range DURING THE PANDEMIC. Also this position was shared with other engineering, which had similar growth.
2. Shift to Hybrid/Online Models: We have gone from offering a few labs in the afternoon/evening to labs at all times including online labs, which is a huge change in the work conditions for the lab technician. As we have moved online, the labs have mainly stayed in person where available for practical reasons, and any online labs need extensive planning and kits so that we can maintain quality, equitable, project-based experiences for students.

Over the next 5 years we expect enrollment and demands on the changes in modalities to continue to grow. Engineering is adding a maker space and many new and different hands-on courses that will increase their need for more specialized help, and we plan to increase our project-based labs which are more complex to plan for and run than traditional labs to generate better equity outcomes by using a more student-driven lab experience. This will require close work with a qualified lab technician to accomplish, particularly with part time faculty.

Q9

**Guided Student Pathways,
Student Validation and Engagement**

Which of the College's strategic priorities will this position most directly support? Note: Selecting more than one strategic goal will not impact the Classified Hiring Priorities Committee rating of the position.

Q10

Please explain how the requested position will support the college strategic priority(ies) identified above. (200 words or less) (Rubric Criterion 3)

- Student Validation and Engagement

This position directly supports faculty setting up and executing labs in person as well as sourcing, assembling, and distributing lab kits for online lab classes. As we implement more complex, student-driven, project-based labs this position will be vital in assuring that faculty (especially part time faculty) get access and training on the variety of highly technical equipment needed to run the labs and that students get access to what they need in a timely manner. This position also supports demonstration equipment for lectures as well as our video recording studio for online lectures. Without them faculty (especially part time faculty) will not be able to effectively use either.

- Guided Pathways

Physics Outreach - This position is essential in organizing and preparing demonstration equipment for K-12 and new student outreach. This is a key part of our plan to work on our representation gaps in race and gender for Physics and Astronomy.
Project-Based Learning/Equitable Assessments - Our department is working on shifting many of our labs and assessments to student-driven, project-based learning to address improve our overall success and engagement as well as our equity gaps. To do this equitably we need to provide students with access to equipment that is well organized and maintained, which is the role of the lab tech.

Q11

How will the position impact the ability of the program or service area to innovate and meet changing needs? (200 words or less) (Rubric Criterion 3)

This position is essential to the function of our program and without it faculty will be unable to do any innovation as we will be spending all of our time just setting up and putting away equipment that will no longer be well maintained and organized. With one position we would be barely back to business as usual, with two we might be able to get more creative and have lab techs that engage in the classroom during both morning and evening.

Q12

**Yes, I have discussed this position request with
the Dean or Manager**

Please confirm that you have discussed this faculty position request with the dean or manager and that you understand that deans and managers will be providing feedback to help inform the prioritization process.
