#4

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Thursday, January 14, 2021 9:43:35 AM
Last Modified:	Thursday, January 14, 2021 11:05:14 AM
Time Spent:	01:21:39
IP Address:	75.50.126.140

Page 1: Classified Position Request Form

Q1

Please enter the following:

Department	**Engineering and Physical Science**
Position Title	**Physical Science Lab Technician**
Salary Range	**$50,388 -$63,012**
Annual Salary at Step B*	**$53,280**
Hours/week and # of months (e.g., 10-month, 11-month, 12-month)	**40 hours/week, 12 months**

Q2

Additional general fund position

What type of position is being requested?

Q3

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

Science Lab Technician III.doc (102.5KB)

Q4

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.
- Coordinate and lead research projects where appropriate

Q5

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)

Current Lab technician doing as much overtime as can be approved and we have help coming in from the biology techs and we still cannot get everything done. (SHOW OVERTIME DATA)

- Lack of a first shift technician to support daytime labs disproportionately hurts disadvantaged students (all physics and earth science labs are currently scheduled between 2:00 - 10:00 PM)
  - Students with children or other dependent family members

Most daycares close at 5-6pm, after hours care can be prohibitively expensive

  - Students who work second shift are not supported if their major requires physics and earth sciences labs
  - Students who rely on public transportation or carpooling may be affected by large gaps between early morning lectures and afternoon labs held on the same day
  - Every semester we have students coming to us to ask for a morning physics class
- Potential loss of only technician carrying extensive specialized knowledge

Our current technician knows everything for six disciplines. No one else does. A previous lab technician left for a substantial raise and lighter workload. This could easily happen again.

- Lab turnaround and in-class demonstration set-up/take-down impacts faculty interaction with students

Our courses are very tightly scheduled and there are 4 labs at different locations on the campus. A second technician with overlap during the busiest lab times could ensure fast, smooth turnaround. In addition, we know that faculty contact time with students is one of the most important ingredients for student success and one of the major support systems within the entire guided pathways concept (major college goal). We have mostly part time faculty who work regular jobs during the day, or who are working at multiple colleges and are barely making it from one place to the next, if they have to spend their time setting up equipment when they arrive for their class, that takes time away from their ability to interact with students. It would be more effective from the perspective of student success and retention to have part time faculty working with students before and after class, then prepping or taking down equipment. This is problem during unsupported daytime lectures in which faculty must take time out of class or student interactions to set-up and take-down their own demos.

- Care and Maintenance of Expensive and Fragile Equipment

Without lab support there is no way to guarantee the appropriate handling, storage and maintenance of expensive and sensitive equipment. With the district going into stability, the availability of funds to replace equipment over the next few years is unlikely to be available, so doing everything possible to keep the equipment we have functional is important.

Q6

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)

Physics has grown and continues to grow. We are averaging 57 FTES in 2019 (we averaged 51 in 2015 and 41 in 2012). Most of this growth has been seen in the recently revamped PHYC 190/200/210 series, which primarily serves engineering majors. According to institutional research data, the number of engineering majors has grown from 292 (Fall 2012) to 486 (Fall 2016), a 66% increase. This trend is likely to continue as it echoes a larger trend in both college majors and the job market , .

Physics (>50% FTES increase) and Engineering (>100% FTES increase) have enjoyed tremendous enrollment growth in the past five years without losing efficiency. This means the total FTES brought in by all four disciplines has risen 25% total, posing new problems:

- Resources are already overstretched

Physics and Earth Science have received two full-time faculty leading to extensive lab overhauls that require a lot of technician labor managing budgets, ordering, and the organization and storage of new equipment. These improvements in the labs have already begun to yield promising results in student success (see Physics PR figure 2), but their maintenance and continuing development will generate additional work for many more semesters as well.

Physics and Engineering are rapidly approaching growth capacity without further lab support

We are limited in adding new sections by lab space and technician coverage. We cannot add more sections (and thus FTES) without morning coverage and the current system of faculty/students supporting the engineering labs is unsustainable. Both physics and engineering are still growing. Enrollments are full and waitlists are beginning to rise. If physics becomes bottlenecked, then that will impact the engineering and vice versa.

Q7

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.

Guided Student Pathways,

Student Validation and Engagement,

Organizational Health

Q8

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

Support of strategic plan

- Student Validation and Engagement

Instructors can spend less time concerned with the logistics of a lab and more time actually supporting students during and after lab. Labs in these disciplines are currently being reworked to introduce and reinforce basic and soft skills. Any changes to labs require technician support. Field trips will gain an additional chaperone that can provide support, contact, and instruction.

- Guided Pathways

Position supports all of the curriculum improvements and the addition of sections in four disciplines so that students are able to access courses when they are needed to complete their pathways in a timely manner.

- Organizational Health

Position will support full-time faculty and allow them to maximize their resources to better support and participate in professional development, committees and other organization-level activities.

Q9

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)

Ability to innovate and meet changing needs
This position provides much needed support to four disciplines with room and demand for growth. With much-needed support, faculty can reallocate time they spend supporting the current technician.

Ability to restore faltering programs
A technician in this position will pair well with our initiative to dramatically update our general educations courses in earth science, physics, and astronomy. We hope to add and update courses as well as exploring online options for both lectures and labs. With the current staffing this has proved to be nearly impossible.

Q10

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.

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