

#7

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, December 16, 2022 10:17:41 AM  
**Last Modified:** Friday, December 16, 2022 11:11:54 AM  
**Time Spent:** 00:54:13  
**IP Address:** 104.178.250.8

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Page 1: For Annual Planning/Program Review Requests AND Off-Cycle Requests

**Q1****2022-2023**

Technology Plan Year

**Q2**

Title of Request

Repair, replace and upgrade necessary equipment related to NMR instrument

**Q3**

Location of Request

H-205

**Q4**

Department

Chemistry

**Q5**

Contact Person

Name

**Robert Anness**

Email Address

**robert.anness@gcccd.edu**

**Q6**

Description Please provide a brief description of the technology/software or technology project and its core goal(s).

The NMR instrument is a fundamental piece of equipment in the organic chemistry lab. The power supply for this instrument has recently failed and it is no longer operational. Moreover this instrument needs to be upgraded with a usb interface to be used with a modern computer. This upgrade will allow us to use new software that is much more user-friendly.

What we are requesting:

A new power supply

a usb interface upgrade

a new software license

## Page 2: Proposal Justification

**Q7**

Please explain how the technology or enhancement supports the strategic plan and impacts students, employees, the college, and/or the district. Which Strategic Plan priority (or priorities) are supported by this request? To access the Strategic Plan, please click [here](#).

Other (please specify):

This is a fundamental and necessary piece of equipment in the organic chemistry lab

**Q8**

How does the request support the above priorities?

The NMR instrument is tied to several lab experiments in our organic chemistry classes (Chem 231 and 232), and unfortunately this necessary instrument is currently not functioning. Given that this was a \$60,000 investment, it is imperative that we keep it running and utilize it as much as possible in our chemistry labs.

**Q9**

Who would this impact? Please select all that apply.

**Students,**

**Employees**

**Q10**

What is the number of students or employees impacted per semester?

48

**Q11**

How would this impact the above group(s)?

Students receive a wealth of experience and knowledge when they have the opportunity to use the NMR instrument to analyze their work in the organic chemistry lab. Moreover, the upgrades and software we are requesting will make the experience enormously more user-friendly. The current software requires command prompts similar to the old DOS system, which is challenging even for instructors and chemistry technicians, let alone students.

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**Q12****No**

Does the technology support a state-wide initiative or is it a legal mandate or in support of a legal mandate?

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**Q13****Respondent skipped this question**

If yes, please explain how the technology supports a state-wide initiative or is it a legal mandate or in support of a legal mandate?

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**Q14**

Please be aware that projects, once approved, are typically scheduled 6 months to a year in advance. Consider the consequences if the technology/software is not implemented, upgraded or renewed. What are the consequences if the technology/software is not implemented/upgraded, or renewed? Examples: Security concerns, loss of FTES, mandates, accreditation, etc.

If the NMR instrument is not functioning, our students will lack hands-on experience with the most important analytical tool in the organic chemistry laboratory. Given that the power supply has failed, the instrument can't be used at all right now. This is highly unfortunate since its use is tied to several lab experiments in our Chem 231 and 232 classes. Moreover, even with a new power supply, use of this instrument will not be sustainable much longer without the usb interface upgrade. When the instrument was purchased back in 2007 or 2008, it was connected to a computer with pre-usb connectors. The instrument is still running on this same computer and cannot be connected to a modern computer without the usb upgrade. It goes without saying that this is unsustainable. Moreover, being restricted to an old computer has meant we haven't been able to upgrade the software since purchasing the instrument approximately 15 years ago.

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**Q15**

What is your preferred time for implementation?

Spring 2023 semester

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**Q16****Respondent skipped this question**

Tell us how the data you have supports the implementation of the technology. This can be qualitative or quantitative in the form of surveys, observations, SLO or other assessment data, institutional research data or other reports and data.

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**Q17****5**

How critical is this need in terms of supporting curriculum and services?

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**Q18****Respondent skipped this question**

Please attach any supporting data/documentation using the "Upload" button below.

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Page 3: COST ANALYSIS

**Q19****Hardware**

Is the request for hardware or software?

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**Q20****Upgrade (replacing outdated technology)**

Is the request for new or an upgrade to existing technology?

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**Q21**

Total initial cost of request: This includes hardware and software maintenance, licence, taxes, fees, shipping, storage, etc. Contact Bryan Cooper for assistance.

This is a request for both hardware and a software license, however, I selected hardware above as it is the principal expense.

The total initial cost is approximately \$10,000

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**Q22****General Fund**

Funding Source:

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**Q23**

Please attach quote using the "Upload" button below.

Cuyamaca\_USB\_G3PWR\_PNMR\_SNAP.pdf (205.9KB)

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Page 4: Grant Funding Source

**Q24****Respondent skipped this question**

Please specify the grant that will fund the technology you are requesting.

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Page 5: Evaluation Plan

**Q25**

Evaluation. How do you plan to evaluate the technology after implementation?

The upgraded NMR and software will allow for expanded use of the instrument in our Chemistry 231 and 232 courses. New lab activities will be tied to SLO assessments that will be evaluated on a regular basis.

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Page 6: Type of Request

**Q26**

**No**

Is this an Off-Cycle Request (e.g., not part of the annual planning/program review process)?

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Page 7: Off-Cycle Requests Only

**Q27**

**Respondent skipped this question**

What are the exigent circumstances and/or contributing factors that would qualify this request to be eligible for Off-cycle consideration? Please explain why this request cannot wait until the next annual planning cycle.

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Page 8: Technology Request Process

**Q28**

**Respondent skipped this question**

How can the Technology Request process be improved for next year?

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Page 9: Ready to Submit

**Q29**

**Yes**

Are you ready to submit your technology request?

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