TECHNOLOGY NEEDS ASSESSMENT APPLICATION
Fall 2019

Technology: Programs should list the technology needed to provide ongoing service or instruction, and an approximate cost of the request. *Technology that is listed in this category will be forwarded to Campus Technology Services to evaluate through their own processes.*

Name of Person Submitting Request:	**Carol Jones**
Program or Service Area:	**Chemistry**
Division:	**Science**
Date of Last Program Efficacy:	**Spring 2016**
What rating was given?	**Continuation**
Amount Requested:	**$790.00 (HP Color Laser Jet Enterprise M553dn Color Laser Printer - Duplex)**
Strategic Initiatives Addressed:	6. Provide Exceptional Facilities
Needs Assessment Resources (includes Strategic Initiatives):	https://www.valleycollege.edu/about-sbvc/campus-committees/academic-senate/program-review/needs-assessment.php

Replacement ☐ Growth ☒

1. **You are required to meet with Rick Hrdlicka – Director of Campus Technology Services--by WEDNESDAY, OCTOBER 9 if you are submitting a Technology Needs Request. 909-384-8656 or rhrdlicka@sbccd.cc.ca.us.**
   Please provide the date of your meeting.

Meeting with Rick Hrdlicka; 09/19/2019 at 2:45-3:15 p.m. CTS-101

2. Projects that require modification to Buildings or Rooms will require a Facilities Need Request. Will this project require facilities changes?

No

3. What technology-based equipment or software are you requesting?

HP Color Laser Jet Enterprise M553dn Color Laser Printer - Duplex

4. Indicate how the content of the department/program's latest Efficacy Report and/or current EMP supports this request and how the request is tied to program planning. *(Directly reference the relevant information from your latest Efficacy Report and/or current EMP in your discussion.)*

The Chemistry 2018-2019 EMP "Goals" are to "improve student success" and to "increase the number of science and engineering majors". Over the last few years (2012-2019) the Chemistry success rates have been 54-60% (EMP, action plan). In the Chemistry Department, it is mandatory to pass the lab session as well as the lecture section in order to pass the course. It is likely that the success rates in Organic Chemistry will improve if the tedious nature of the lab technology is streamlined. Some labs require up to eight samples per student and this is only possible in the time allotted with proper functioning equipment – currently the low number of instruments along with the current sometimes unreliable printer (due to the bottle neck because there are up to five chemistry labs running at the same time any of which may need to have data/graphs printed for analysis. This creates a major huddles for time sensitive labs such as those that occur in Organic Chemistry and Second Semester General Chemistry.

The current problems in the Organic Chemistry Laboratory relate to:

(1) students leave chemicals unattended on the instruments while they go down the hall to get print-outs from the stockroom printer (a potential safety issue). They leave chemicals on the instrument to try and prevent other students from erasing their data in order to run their own samples. If students clean the instrument before they leave it unattended (as they should be doing) another student will start using the instrument – to do so they erase the precious students data – which in some causes failed to print (we have issues with network failure).
(2) Lab exam security is being compromised while students leave the lab to go to the stockroom to get their printouts. Since organic chemistry already takes up two adjacent lab rooms it is impossible for the instructor to proctor the two rooms and the hallway at the same time.
(3) Valuable lab time is wasted because students have to go all the way to the stockroom to get their printout – which often fail to print – when this happens the next students has already erased the previous students data/graphs and started running their own samples – this results in the student that's printout did not print to have to start over from the beginning. This has led to students and instructors having to stay overtime to get the data needed for the lab. With a printer designated for the Organic Lab room this would allow students to get their printout without leaving their instrument and sample unattended (fixing both the safety and overtime issue).

5. Indicate any additional information you want the committee to consider *(for example, regulatory information, compliance, updated efficiency, student success data, or planning, etc.).*

We would like this printer to be in the Organic Chemistry lab. Organic Chemistry laboratories use many different instruments. The Infrared Spectrometer and the Nuclear Magnetic Resonance Spectrometer and Gas Chromatographers are instruments that are used in these course which require students to print out the spectra/graphs produced. Currently we are linking to the printer in the Chemistry stockroom and this has several negative issues. One is that organic chemistry students have lab practical's in which they need to print out several spectra/graph in order to analyze the spectra/graph during the exam. Currently there are many times when the printer in the stockroom is not able to connect to the wireless network in the stockroom. This forces students to take a cell phone picture (this is not acceptable during an exam – but sometimes it is the only way to allow them to see their spectra since we only have 3 Infrared Spectrometers, 3 Gas Chromatographers and 1 NMR Apparatus but have 20 students per section), even if the current stockroom printer is working – students have to walk down the hall to the stockroom to get the printouts (this is also unacceptable during a lab exam but unavoidable given the current print set-up and staffing situation).

6. Provide a <u>complete itemized list</u> of the initial cost, as well as related costs (including any ongoing maintenance or updates) and identification of any alternative or ongoing funding sources. (*for example, Department, Budget, Perkins, Grants, etc.*)

$728.00 +tax (HP Color Laser Jet Enterprise M553dn Color Laser Printer - Duplex)

7. What are the consequences of not funding this request?

If this request is not funded Lab Exam Security in Organic Chemistry courses will remain compromised. Also, organic students and instructors are forces to work overtime to help combat the technical issues. Students have to take turns to use the limited number of IR, NMR and GCs that we have in the Organic Chemistry Lab and when student A leaves the lab to get the print-out in the stockroom sometimes student B erases students A work so that they can start their own work only to have student A find that their graph failed to print and they must repeat their work. This is unfair to both the student and instructor that must often go overtime in lab to make up for the lost time do to the technology inadequacies in the chemistry labs.