

TECHNOLOGY NEEDS ASSESSMENT APPLICATION
Fall 2017

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:	Michael Lysak
Program or Service Area:	Physics/Astronomy/Engineering
Division:	Science
Date of Last Program Efficacy:	Spring/Fall 2016
What rating was given?	Continuation
Amount Requested:	\$70,000
Strategic Initiatives Addressed: Strategic Directions + Goals	Student Success; Communication, Culture, & Climate

Replacement Growth

- 1. You are required to meet with Rick Hrdlicka – Director of Campus Technology Services prior to submitting a Technology Needs Request. 909-384-8656 or rhrdlicka@sbccd.cc.ca.us. Please provide the date and time of your meeting.**

Meeting on 10/17/17 at 8:30am by phone, and subsequent e-mail contacts 10/18-10/20/17

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?

A New Planetarium Dome Projection System

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.)*

According to the EMP for Physics/Astronomy, some of the program goals/challenges/action plans are: to hire a new Planetarium specialist to maintain the Planetarium programs and community outreach activities; hiring a replacement Planetarium specialist will maintain or increase the present student success and retention rates. The Physics/Astronomy 2016 Program Efficacy document states (pg. 28) that “Planetarium shows have been presented throughout each academic year for the general public, for elementary and secondary school programs, for various SBVC physical sciences classes, for various SBVC groups/programs/organizations, and for special outside groups/programs. For the past four years, from September 2011-May 2015, the average combined yearly audience of the Planetarium shows has been approximately 3858 with an average yearly income of \$3726; the department plans to continue this most valuable outreach program. Following the public shows, the N.A. Richardson Observatory has also been opened to provide views of the Moon and planets, with an average yearly total of approximately 250 people attending the viewings. This is the oldest observatory in the valley and contains a very historic telescope. The planetarium has participated in and presented shows for many of the “Science Day” activities, and will continue to do so. The planetarium instrument was professionally serviced recently to ensure its successful, continued operation for both academic and public outreach purposes.

Given the myriad services that the Planetarium provides under the guidance of the Planetarium Specialist, it is clear that the Planetarium is clearly a most valuable academic resource, it provides vital community outreach activities, and it is of paramount importance to the academic programs at SBVC and to the local community. However, according to the retired Planetarium Specialist and the Physics Lab Tech, we need upgraded technology in the Planetarium Audio-Visual show presentation technology to include both the image projection system and the sound system. Further, since the Physics/Astronomy department program has rapidly grown and expanded, if the department is to maintain quality instruction, to successfully plan for future enrollment increases, and to meet the continuing need of the Planetarium programs and services for our college classes as well as for other various academic and community outreach activities, we must replace the outdated Planetarium Audio-Visual equipment.

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

According to the retired Planetarium Specialist and the Physics Lab Tech, we need upgraded technology in the Planetarium Audio-Visual show presentation technology to include both the image projection system and the sound system; these upgrades are needed to support our Astronomy program, Planetarium presentations, and other classroom experiences. Presently, the Planetarium is using 15-30 year-old slide projectors, run by 15-year old computers with 20-year-old software designed to run slide projectors, an obsolete technology. The present audio system is using amplifiers which are 40 years old (some equipment from 1977), and some audio equipment at least 20 years old. During presentations, because of the advanced age and the near dilapidated state of the audio-visual equipment, the Planetarium Specialist often has needed to make quick, last-minute repairs on either the slide projectors and/or the sound system; further, since most of the equipment is so outdated, replacement parts are unavailable, and the Planetarium Specialist has needed to swap out parts of damaged equipment with some of the other, non-functioning spares.

The laser projectors of the New Planetarium Dome Projection System will provide low maintenance, no lamps required, and will last for several years, which, in the long term, is more cost-effective than a system with LCD lamp bulbs for four projectors that cost \$300-450 each; if one bulb fails and/or dims (a typical bulb lifetime is 1-2 years), one would need to replace them all.

6. Provide a complete itemized list 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.*)

A New Planetarium Dome Projection System \$70,000; This includes a High-End Laser Projector (6000 lumens), Lenses, Vioso Micro-Server, Installation, and Training

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

As stated earlier, since all of the Planetarium audio-visual equipment is very outdated, and running presently in varying states of near-disrepair, we need upgraded technology in the Planetarium Audio-Visual show presentation technology to include both the image projection system and the sound system; these upgrades are needed to support our Astronomy program, academic and outreach Planetarium presentations, and other classroom experiences. In light of increasing numbers of Physics/Astronomy lecture and lab sections, without proper support from resources such as provided by the Planetarium Specialist, high quality instruction for our students would not be possible, and such lack of support stifles successful attempts of program growth, development and expansion, and negatively impacts enrollments, and, ultimately, productivity.

The department will soon be hiring a replacement for the retired Planetarium specialist, and this individual will need to be able to train and work with high-quality, upgraded audio-visual equipment, and not the present audio-visual equipment which is barely functional.