



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Natural Sciences  
Campus Division Lesley Davidson-Boyd

**Total Amount Requested for FY 2016** \$6,500.00

**Project Title:** HPAC Virtual Computer Lab

**Project Abstract:**

We at the Health Professions Advising Center (HPAC) advise students who are interested in attending Graduate/Doctoral level programs in the Health Professions (Medicine, Dentistry, Physicians Assistant, Veterinary, Pharmacy, etc.). We have several hundred advising appointments/walk-ins each quarter and visit a couple hundred classes per quarter to promote our services. Our proposal is to purchase 5 Apple laptops to help the students we serve. Students could use these computers in our office or check them out to make their applications process as easy as possible in order to get accepted into a Health Profession program. Our checkout process could be modeled after the libraries or other offices on campus. Our proposal would help students who have little or limited access to a computer. We can help students with using the computers, online navigation to find information they need, work on application requirements, and answer questions they have. We have a college IT Representative who can help us set up computers if needed. We would also be able to maintain the computers and update them accordingly so they are sustained for several years.

**Challenge(s) this project will address:**

Students do not have regular computer access to work on Health Professions programs application requirements.

**Alternate solution(s) should this project not be funded:**

Students would need access to another computer to find the information they need and help their application process. Then they would need to schedule an appointment with our office or come in during walk-in hours to ask for help.

**Impact(s) if this project is not funded:**

Students would have a more difficult time in applying to Health Professions graduate programs.

**Cost: \$\$ (One time or recurring)**

\$6,500.00 (One time)

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. Students would have better access to computers, enabling our office to guide them towards the information/resources they need and to make them more familiar with Health Professions application processes. 2. Students could use the computers to work on application requirements such as personal statements, application documents, resumes, Skype online interviews, and applying for Internships/Shadowing.

**Project Timeline** Start: 07/01/2016 End: 06/30/2017 **First Quarter of Student Use** Fall 2016

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Education  
Campus Division LASISI AJAYI

**Total Amount Requested for FY 2016** \$20,000.00

**Project Title:** Transforming English-Language Arts Teacher Preparation: Preparing Pre-service Elementary Teachers to Integrate iPad into Literacy Lessons

**Project Abstract:**

Recent explosion of new media and students' levels of engagement with the technologies have called attention to the need for teacher preparation programs to integrate new media into literacy methods courses to better prepare elementary students for a broad range of knowledge, skills and abilities that they need to succeed in the 21st century. However, most teacher education programs prepare pre-service teachers to teach the traditional English Language Arts curriculum with emphasis on rote learning. The goal of this study is to examine how this researcher integrates iPad into a methods course —Reading and Language Arts Curriculum and Pedagogy (EELB 315)—to prepare pre-service teachers to use the technology to teach elementary students to develop learning and literacy skills. Four research questions guides the study: ( a) In what ways do the professor prepare the pre-service teachers to use iPad to support elementary students' learning and literacy skills development? (b) What are the affordances of iPad for elementary literacy instruction? (c) What are the constraints that pre-service teachers face in using iPad? (d) What are the pre-service teachers' perspectives about using iPad to teach their students? Each quarter, 30 pre-service teachers in EELB 315 will be assigned iPads with apps such as Edutopia, iFontMaker, and Doodle Buddy. The professor will teach the participants how to use the apps to develop learning and literacy skills in their students. The outcome of the study will be assessed through questionnaire, focused interviews, weekly reflection and lesson artifacts. The data will be analyzed using qualitative data analysis.

**Challenge(s) this project will address:**

The challenges this project may face include the following: 1. Raising sufficient funds to buy the 30 iPads and apps 2. Technology support personnel for trouble shooting if there is a problem 3. Resistance from some students (to use new media technologies) because they may not be familiar with using new media for instruction 4. It requires that students spend a considerable amount of time to prepare their lessons. Some students may think they don't have such time

**Alternate solution(s) should this project not be funded:**

I am working with the Director of Development in the COE for additional sources of funding.

**Impact(s) if this project is not funded:**

I will not be able to start the project

**Cost: \$\$ (One time or recurring)**

\$20,000 - One time

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

1) The pre-service teachers will develop the knowledge, skills and abilities to use iPad technology as a tool to teach English -Language Arts lessons in their classrooms. 2) The pre-service teachers will learn to enhance their students' engagement with English-language arts learning/teaching activities in their classrooms since they will learn to draw upon their students' home literacy practices. 3). The participants will derive the satisfaction that they are giving their students the skills to succeed in the information age characterized by new media technologies such as apps, websites, network media, and the Internet.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

I will use question, interview, survey and teaching/learning artifacts to find out the participants' views about the project. From these sources, I will be able to determine if the students are acquiring the knowledge, skills and abilities they need to integrate iPad into their literacy instructional practices.

**Project Timeline** Start: 09/22/2016 End: 06/12/2017 **First Quarter of Student Use** Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Natural Sciences  
Campus Division Nicole Bournias-Vardiabasis

**Total Amount Requested for FY 2016** \$95,500.00

**Project Title:** Digital Microscopes: Enhancing Student Collaboration and Engagement in Biology Classrooms with Information Technologies

**Project Abstract:**

This proposal centers around the procurement of 24 Wi-Fi enabled, digital stereomicroscopes and 6 Wi-Fi enabled, digital compound microscopes to facilitate micro photography in a number of upper division biology course laboratories. The Wi-Fi capable digital cameras integrated in these microscopes will deliver high-definition image to students' mobile devices via an app mobile application. A total of 14 labs and approximately 400 students will benefit from funding of this proposal. Science and technology are often used together; smartphones, tablets, and laptops are certainly the carriers of modern networked knowledge. Introducing Wi-Fi capabilities to classroom will enable students to learn in a digital environment that is already part of their lives. Since learning content is transferred directly to the students' devices, teachers can engage them more easily and promote team work. They can share results, work together, and network wherever they are. The students will require minimal formal technical training and these technologies will allow them to examine and explore content in cellular biology and create electronic lab reports using digital images and motion videos captured during lab exercises. These applications have implications for both curriculum-related biology lab experiences and emerging computer-based learning technologies. Successful technology integration increases collaboration and interactivity among the technology and the learners and it is expected that the students will be able to identify, explore and analyze many more cell samples than we are currently able to accommodate.

**Challenge(s) this project will address:**

Presently students taking Biology 300, Biology 413 and Biology 513 have to spend a large proportion of their lab time taking microphotographs (to document and analyze their experimental work). I have seen time and time again the frustration of not been able to take pictures of their images, share their images and basically learn all that they can from the experiment /exercise they are carrying out. The Wi-Fi technology we are proposing to get (if the grant gets funded) will take all these frustrations and replace them with more interactivity and learning time.

**Alternate solution(s) should this project not be funded:**

We will just keep doing what we are currently doing which is not at all desirable. Funds for replacing our microscopes are very hard to come by. Maybe we can get lottery funding but that comes from a much more limited group of money. Outside funding agencies (NIH, NSF) are unlikely to fund this type of application for microscopes.

**Impact(s) if this project is not funded:**

We want to be able to enable our students to have the latest tools and technologies that are available in the education sector. Not having this grant funded will be in my opinion detrimental to our mission as a department and as such should be avoided.

**Cost: \$\$ (One time or recurring)**

Cost is one time.. Once microscopes are purchased there are no other elements that are needed for their functionality.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Funding of this proposal will definitely increase the time that I get to spend constructively with my students in the lab. The students will definitely receive a huge benefit from employing this technology because instead of fighting the microscope and the camera, they will be spending their time in the lab analyzing and assessing the images, sharing the work with the professor and their fellow labmates.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

It is projected that the students will be able to write and document much better research reports than what they are currently able to do. They can present their work in a digital format and the whole class can easily access their images and make suggestions or interpretations of their work. It is expected that the evaluations of the labs will be better since it is projected that the students will enjoy and benefit from this digital environment.

**Project Timeline** Start: 08/01/2016 End: 06/01/2015 **First Quarter of Student Use** Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Arts and Letters  
Campus Division Kurt Collins

**Total Amount Requested for FY 2016** \$39,798.00

**Project Title:** Objects to Avatars

**Project Abstract:**

The addition of portable 3D scanning technology will allow students from many different fields to efficiently move from object to digital model. The project will allow the students in four different Design and Art courses to directly access portable 3D scanners as part of course curriculum. The project will also make the scanners widely available through College of Arts and Letters, Media Arts Center.

**Challenge(s) this project will address:**

Currently there is no easy way to create a digital model of a human, product, work of art or naturally occurring object. Creating a digital model is a fantastic way to teach how something looks, feels or functions. 3D scanners are indispensable for creating avatars for games, rapid prototyping product designs or reverse engineering existing machines. Modeling is the current method of making digital objects it is a difficult and time-consuming endeavor that stands in the way of creating models, tools and prosthetics.

**Alternate solution(s) should this project not be funded:**

As stated modeling is the current method for creating a digital representation of an existing object. Model making software such as AutoCAD, Cinema 4D and SolidWorks is difficult to learn, many times requiring courses devoted to the task. While this solution can continue to be used, many more students will also be unable to learn from digital models created quickly and easily with digital tools.

**Impact(s) if this project is not funded:**

Perhaps hundreds or thousands of students will attend different universities. America may lose its technological leadership. One professor will be very sad.

**Cost: \$\$ (One time or recurring)**

The cost of the scanner(s) and software is \$36,180. Assuming an additional 10% cost for shipping, and tax the total cost of the requested technology is \$39,798.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

While the direct result of the purchase of the scanners will be that students learn how to use a 3D digital scanner to acquire digital representation of real-world objects, that is a bit like saying "inventing the saw allowed people to cut things". A 3D scanner will be especially important in the fields of Product Design where a 3D scanner can be used to design and reverse engineer products. It is also the tool of choice when developing technical animation, live actor animation, 3D simulation for movie and video production. 3D scanning is also an indispensable tool for recording and cataloging antiquities such as those found in RAFFMA museum. 3D scanners are used in reproduction of and recreation of ancient and damaged art works this is part of a new and burgeoning field of Applied Art. Other areas that have adopted the use of 3D scanners are Archeology for recording position and location of artifacts. Outcome 1. The addition of a digital tool for the purpose converting existing objects to digital objects allows for easy modification of existing tools. This will be demonstrated by many more students re-designing existing everyday tools. The tool will also be used to scan costumed actors for the purpose of creating animated characters for advertising and entertainment projects. I also expect many students from fields outside of design to utilize this new tool (or the file created by the scanner) to study rare and delicate art objects.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Two methods will be used to assess the value of these scanners. 1.) Evidence Portfolios for students within the Design program. – Evidence of success will be visible in graduating student portfolios in the form of products developed as the result of initial scans, complex characters for advertising or entertainment developed as the result an initial scan. 2.) Questionnaire and survey for students from other programs. – When students check out the scanner, housed at Visual Resources Center, as part of the Media Arts Center, they will be asked how the scanner will be used, they will also be asked for an email address. This email address will be used to send the student a survey for them assess the performance and value of the scanner. This information will be used to improve the lending program and assess if additional or different scanners would be useful.

**Project Timeline** Start: 10/01/2016 End: 07/01/2018 **First Quarter of Student Use** Winter 2017

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

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|------------------------|------------------|------------|--------------|
| <b><u>Division</u></b> | Academic Affairs |            | Pfau Library |
|                        | Campus Division  | <b>Les</b> | <b>Kong</b>  |

**Total Amount Requested for FY 2016**      **\$25,000.00**

**Project Title:**                      **Streaming Media for Students, 2.0**

**Project Abstract:**

The Library proposes to continue using "hoopla" (a streaming media platform) to make available to students 200,000+ video, music, audio and ebook titles. This year ~10% of CSUSB's students used hoopla to access new, popular, classic, and educational content through major entertainment companies (NBC Universal, Starz Media, Paramount, Warner Music, PBS, et al). Aside from the substantial recreational use (music & films being the most popular among our students), hoopla content also supports a broad range of curricular programs (communication studies, economics, education, ethnic studies, history, music, sociology, et al). At an average cost per circulation of \$1.87 (borne by the Library), this is a very cost effective distribution model. CSUSB is the first academic library (in the world!) to roll out this "Netflix" type platform to its students. This 24/7 service enhances our students' access (without ever having to physically come to campus) to documentaries, popular films (many include close captioning), music, audio and ebooks. Titles are "borrowed" via a mobile app for specified loan periods, and "returned" automatically once the loan period expires, thus eliminating annoying overdue fines. Additionally, unlimited multiple users may simultaneously access titles, so no more waiting for materials to be returned. The Library will increase its outreach and marketing efforts (partnering with other CSUSB entities) in the coming year to promote greater awareness of hoopla around campus.

**Challenge(s) this project will address:**

The Library has a finite budget to support students' media collection needs. As such, it can only afford to purchase single physical titles of videos, music, audio and ebooks (typically these skew heavily towards academically oriented material). Accordingly, students have limited access to such materials. Physical items wear out, become damaged, or are subject to being lost, stolen, or missing. The Library's ability to replace such items is limited due to budgetary restrictions. The Library's ability to reach students with its collections is extended with hoopla, providing access to popular materials, and meeting the needs of distance learners. The availability of audiobooks and close captioned films through streaming technology benefits students with special needs and/or disabilities. Another side benefit has been the use of hoopla by faculty (e.g., world languages, communication studies, history) to assign films for students to view to complete assignments.

**Alternate solution(s) should this project not be funded:**

The Library will look to other vendors who provide complementary digital platforms for streaming media, however, hoopla is unique in its cost effective distribution model, and the breadth of its popular content. Other vendors skew more heavily to academic content, are more expensive, and do not provide access to all the different media formats that hoopla provides.

**Impact(s) if this project is not funded:**

Students' access to media content will be limited to current physical collections, and subscribed streaming academic media content through vendors such as, Alexander Street Press, and Kanopy.

**Cost: \$\$ (One time or recurring)**

Proposed funding is \$25,000, for this year.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Process Outcomes: 1. Through student use of hoopla, the Library will experience an increase in circulation of media content. 2. Through student use of hoopla, satisfaction levels of students will increase as a result of enhanced access and availability of media content.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. The Library will monitor and track usage statistics and analytics through hoopla's administrative portal, and compare and contrast this usage with the previous year's usage, as well as with the usage of its physical media collection. 2. The Library will administer surveys to assess and gauge student satisfaction of this service.

**Project Timeline**      **Start:** 09/01/2016      **End:** 06/30/2017      **First Quarter of Student Use**      Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs Stanislav College of Social Behavioral Sciences  
Campus Division Eremeev

**Total Amount Requested for FY 2016** \$1,271.00

**Project Title:** An iPad as an Instructional Tool to Enhance Learning Opportunities for Students

**Project Abstract:**

The Apple iPad Pro and pencil will enable the National Security Studies program to better aid the student learning experience. This technology will allow for better communication between professors and students, improving both the exchange of information process as well as accessibility. The visual aids that can be designed or readily displayed with the iPad Pro also have the benefit of optimizing collaboration and operational output while also enhancing the productivity of both the professor and students. Essentially, with this technology, students will be granted tools which integrate digital and classroom learning, especially with the help of interoperable technologies that will be provided by the National Security Studies and Political Science Department in the upcoming months, that will create an engaging and rewarding educational experience.

**Challenge(s) this project will address:**

The challenges this project will address include the issues of obscurity, accessibility, use of technology, and communication. The problem of obscurity often arises in the classroom. This often arises from the limited technology professors have at their disposal that limits their ability to clarify and expand upon the material. The Apple iPad Pro and pencil will enable professors to create visual aids and alter their presentations to directly meet individual student needs. Another challenge that this project aims to overcome would be the issue of accessibility. Students often struggle due to the lack of instructional aids provided by instructors. This project would remedy this by lending both students and professors the technology necessary to transfer lecture materials and in-class aids into an easily accessible digital format. Students would also be able to access this material within the classroom, granting them access to the material regardless of whether they themselves own any similar devices, thus allowing students from all economic backgrounds the ability to access the needed information in the classroom. Students' inability to operate new technology has hindered their educational experience. By providing students new technology, this will help to establish a skill set that will not only improve their educational experience but will also increase their productiveness in their future careers. This technology would also help individuals coordinate activities or tasks between multiple people. Therefore, this technology would improve communication and negotiation while also providing mobility and flexibility. This project would also allow both students and instructors to better organize group activities while also solving the issue of student involvement.

**Alternate solution(s) should this project not be funded:**

Should this project not be funded, one alternative is that the department would have to provide the necessary funds for both this project as well as the other interoperable technology that would accompany it.

**Impact(s) if this project is not funded:**

The impact that would occur if this project is not funded is the lack of technology available to meet the needs of the students and faculty.

**Cost: \$\$ (One time or recurring)**

The cost includes \$120 (recurring annually) for the Evernote feature, \$5.99 for the Notability application (one time), \$949 for the iPad Pro (one time), and \$99 for the Apple Pencil (one time). The total is \$1,271 including tax. Also, the Political Science Department/National Security Studies is expecting to spend around \$5,000 or more in conjunction with this project in order to upgrade the technology in SB 514.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

1. One intended student learning outcome is that the technology will provide students the power to merge the digital world with activities and lessons engaged within the classroom. 2. With this technology, instructors would be able to tailor their information to student needs and, through the use of Apps, create new material and visual aids within the classroom, increasing the efficiency of classes and improving the educational experience. 3. An intended process outcome from this project will be that professors will be able to provide access to lecture and assorted class materials at any time. 4. The technology desired will enable students to build stronger connections to the information, allowing for a better grasp of the material. Several features of the technology will allow professors to introduce information through a dynamic medium that will better illustrate complex concepts. 5. The iPad will enable students to communicate more effectively with their peers and the professor, allowing for better management of tasks and an overall improved classroom experience. 6. Key features of both the iPad and the Apple pencil will permit professors to keep their original lesson plans while still being able to tailor it to student needs, essentially integrating the new material into the lesson's structure. 7. The technology provided would improve the conduct of activities by outside groups and guest lecturers in SB 514, and would also be widely available to the student organizations, such as the Pi Sigma Alpha and the CSU-ACE scholars, and the greater institution.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. One such measure that will indicate whether the project has achieved its outcome is the ability to access to lecture materials online (via BlackBoard, etc). This can be verified through feedback from student surveys. 2. Another measure that will illustrate whether a student outcome has been achieved is through the number of visual aids used or created by the faculty. This can be verified through student feedback, in the form of a survey, on the quality of the visual aids. 3. The availability of lectures provided online will help indicate whether or not the outcome has improved accessibility. This can be validated by the student body in the form of surveys. 4. Another way to verify whether the indicated student outcome has been achieved will be through how students perceive the accessibility of the information. This can be accomplished through a student survey. 5. A way in which to verify whether the intended student outcome has been met would be through the opinions and satisfaction levels of the affected student body. This would be accomplished through the use of student surveys. 6. Increased visual and verbal interaction between the students and the instructors would be one way in which this student outcome can be measured. This will be achieved through the student surveys. 7. The success of the final outcome can be measured through written or verbal feedback from the individuals or groups who rent the room and technology.

**Project Timeline** Start: 06/06/2016 End: 06/06/2017 **First Quarter of Student Use** Fall 2016

**Budget:**  
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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Information Technology Services  
Campus Division **Leon** **McNaught**

**Total Amount Requested for FY 2016** **\$82,772.00**

**Project Title:** **Assistive Technology Access for ALL CSUSB Students**

**Project Abstract:**

Mission: The benefits of assistive technologies at CSUSB have traditionally been available only to students with disabilities, and only then at a select few locations, or at specialized labs across campus specific to programs or colleges. This proposal will for the first time make the benefits of assistive technologies available to ALL students whether or not they have a disability. This significant increase in access will be accomplished by deploying an AT adaptive workstation in every single public access computer lab. ATAC has surveyed all public access computer labs in all buildings at both CSUSB and PDC. Providing our technology in each lab will provide 20 additional parallel points of access to utilize these great technologies. Students need not have a specific disability to utilize some tremendous productivity gains such as converting textbooks to audio MP3 quickly and for playback via smartphone, composition of papers via speech recognition, magnification, mind -mapping, screen reading and more. These systems will be centrally managed by ITS so they will not languish or become obsolete and will remain in proper working order. Inoperability has been a problem with fragmented deployments of assistive technology workstations by specific departments or colleges and continues to be a problem. This proposal is big picture and will make a huge impact for CSUSB, PDC, and every student who wants the benefits of enhanced productivity . Goals: \*Increase utilization of assistive technology for ALL students. \*Eliminate poorly maintained obsolete/subpar assistive technology workstations. \*Reduce barriers to access for ALL students.

**Challenge(s) this project will address:**

\*limited locations to access assistive technology \*out-of-date poorly maintained assistive technology workstations \*non standard/inappropriate assistive technology purchases \*Limited use for students with disabilities only \*Underutilization due to lack of awareness

**Alternate solution(s) should this project not be funded:**

Funding will be sought via ITS should this proposal not be selected.

**Impact(s) if this project is not funded:**

Impaired access to resources resulting in general student body missing out on the opportunities to engage in new productivity and study methods available via assistive technology. Undue burden to disabled students who may require access to assistive technologies in different locations. High fragmentation of "project specific" assistive technology labs or workstations will continue to be implemented, including non-centralized support, continued restricted access only for students who have college-specific degree programs or who have a documented disability.

**Cost: \$\$ (One time or recurring)**

\$85,827 one time

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Outcomes: 1. Improve student access points to assistive technology across CSUSB and PDC. 2. Improve student's experience and success by providing access to innovative assistive technology to help with study skills. 3. Increase assistive technology utilization by all students including but not limited to students with disabilities.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Measures: 1. Obtain login metrics via Active Directory to ascertain: A. Number of students using resources will increase B. Location of resource being utilized will expand 2. Students will be asked to complete a very short online survey designed to gauge specifics about particular assistive technology available to increase retention, make studying more effective, and provide additional modalities for information recognition. Self-report perceived benefit to use of assistive technologies when studying. 3. Active Directory logins of two meta groups will be compared to determine whether there is an increase in assistive technology use by the general student population. A. Metadata tracked for increase over time.

**Project Timeline** **Start:** 8/1/2016 **End:** 12/1/2018 **First Quarter of Student Use** Fall 2016

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs Pfau Library  
Campus Division Les Kong

**Total Amount Requested for FY 2016** \$3,770.00

**Project Title:** GoPro Cameras & Updated Photo Gear for Students

**Project Abstract:**

The Library has been successful in providing access to digital photography equipment for a couple of years, but has recently noted substantial demand from students for updated equipment, including the popular GoPro cameras. GoPro cameras are designed for action and sports enthusiasts, enabling the capturing of cool sports and outdoor activities -- whether this be on ski slopes, on ocean waves, on skateboards, bicycles, etc. The Library's Multimedia Center (LMMC) lends out digital and video cameras, as well as tripods and lighting equipment. With the addition of GoPro cameras (plus accessories, such as mounts and selfie sticks), the LMMC aims to extend its mission to further meet the multimedia needs of CSUSB's students, by providing this latest technology. In addition, the Library has noted a particularly high demand for its digital cameras, and proposes to update these cameras to the latest models.

**Challenge(s) this project will address:**

There currently is no place on campus that students can borrow GoPro cameras for either academic or recreational use. The Library proposes to acquire GoPro cameras plus accessories, to meet this need. The updating of existing digital cameras will expand access to these cameras to more students, who otherwise would be waiting for these items to be returned.

**Alternate solution(s) should this project not be funded:**

The Library has a finite budget for multimedia equipment. Should this project not be funded, the result will be delays (estimated to be up to 2 years) in the time to update its complement of digital cameras.

**Impact(s) if this project is not funded:**

If the project is not funded, the result will be that digital cameras will be unavailable for student use, as demand currently far outstrips the present supply of equipment. In addition, the lack of GoPro camera equipment will mean that a stated student need remains unmet.

**Cost: \$\$ (One time or recurring)**

\$3,770.00 (one time)

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Process Outcomes: 1. Through student use of digital cameras, including GoPro equipment, the Library will experience an increase in circulation of such equipment. 2. Through students' use of photography equipment from the Library, satisfaction levels of students will increase as a result of enhanced access and availability of such equipment.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. The Library will monitor and track usage statistics through its Millennium system, and compare and contrast usage from the previous year. 2. The Library will administer surveys to assess and gauge student satisfaction of this service.

**Project Timeline** Start: 09/01/2016 End: 06/30/2017 **First Quarter of Student Use** Fall 2016

**Budget:**  
[http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-26fe124ecc633432e25809b4c503928d\\_VETI\\_BUDGET\\_GoPro\\_KONG.xls](http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-26fe124ecc633432e25809b4c503928d_VETI_BUDGET_GoPro_KONG.xls)



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Education  
Campus Division Maria Elena Akimoto

**Total Amount Requested for FY 2016** \$5,500.00

**Project Title:** UCDD Student Observation Initiative

**Project Abstract:**

The UCDD program is currently aiding several departments in the training of their students. Departments send student observers and interns to UCDD so they may gain some insight into working with the disabled population in preparation for their future careers. UCDD is currently servicing students in the fields of Sociology, Psychology, Social Work, Human Development, and Rehabilitation Counseling. Students are given the opportunity to observe UCDD staff working with consumers of the program. After initial training on UCDD strategies, students work one-on-one with consumers and then meet with the training coordinator and Center staff, who give them tips on how to improve interaction using UCDD strategies. The Center would like to provide better training for students by allowing them to observe themselves using video equipment. We would like to purchase and install ceiling mounted cameras, as well as cameras mounted at strategic places around the UCDD building in order to improve the learning experience of the student population.

**Challenge(s) this project will address:**

Currently, students meet with the training coordinator to gain skills in their areas of learning. They also discuss consumers with the consumers assigned teacher assistant. However, having videotaped interaction between the students and consumers would greatly increase the student's ability to learn by allowing them to see themselves while working with the consumers. We feel that this will give the students greater insight into what areas they need to work on. Being able to view their interaction, instead of just meeting with the training coordinator and getting verbal feedback would improve the students ability to learn the skills they will need once in the workforce.

**Alternate solution(s) should this project not be funded:**

Currently there is no alternate solution beyond what the program already provides the students. We would continue giving simple verbal feedback.

**Impact(s) if this project is not funded:**

The UCDD program has limited staffing and it is difficult at times to have students get feedback from staff as a "situation unfolds". At times, feedback must be delayed due to time constraints or because the training coordinator must attend to other duties. Having a videotaped session for the students to view independently and then with our staff would be of great benefit.

**Cost: \$\$ (One time or recurring)**

\$6,000 (one time only)

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

UCDD aims to improve the learning experience for students at our center with the potential to increase the number of students we can serve. We want to increase the skills that they gain at our facility by allowing the students more hands on experience with the ability to observe themselves in their interactions with consumers with disabilities.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Tracking the number of interns that are able to use UCDD services. A short survey for the students to report the usefulness of their observations process would also be implemented.

**Project Timeline** Start: 08/01/2016 End: 06/30/2017 **First Quarter of Student Use** Fall 2016

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-10b39c27cd947c3493dfe7034db4c7dd\\_Letter+for+UCDD.docx](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-10b39c27cd947c3493dfe7034db4c7dd_Letter+for+UCDD.docx)

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

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| <b><u>Division</u></b> | Academic Affairs<br>Campus Division | Arturo | College of Natural Sciences<br>Concepcion |
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**Total Amount Requested for FY 2016**      **\$143,520.00**

**Project Title:**      **CSE455, Inc.: Evolution of a CSUSB Software Mobile App Company**

**Project Abstract:**

The mission of the proposal is to enhance the software development skills of computer science and engineering students in the software engineering course (CSE 455) and art students who are involved as graphics designers in the course. In particular, the course focuses on software development of mobile applications in both Android and iOS platforms. We currently have a team of 8 student interns, the Mobile App Development Team, which was supported by previous VTI grants, and who are developing mobile apps for the campus and external entities. The interns are actively assisting in the development of mobile app projects in the CSE 455 course by being consultants and resources for the teams in class. The goals of the grant are two folds: First goal is to provide CSE students the knowledge and training on how to apply software engineering principles and practices to the development of mobile app projects. The second goal is to enable the Mobile App Dev Team to evolve into a mobile app development company within the university. This will lead to expanding the Mobile App Dev Team to include business students to handle marketing and business research for viable commercial mobile apps.

**Challenge(s) this project will address:**

There are various challenges this project will address: -- How to conduct the software engineering class so the students are not overwhelmed by the complexity and difficulty of developing mobile apps. The development of mobile apps involves the use of many kinds of technologies and languages depending on the app you are developing. Among them are: Swift, XCode, Objective C, HTML, iOS, Android Studio, Java, JavaScript, OpenCV, and WebGL. So in addition to learning software engineering principles and practices, the students will need to know enough of the above to develop successfully the mobile app project . -- How to utilize the student interns' talents and skills to guide and provide expertise to CSE 455 students who are learning mobile technologies and languages for the first time. The student interns must be supervised and appropriately assigned to student teams so they will be able to guide and help the teams develop their mobile app project. The interns must select and assign trainings and tutorials from the Internet so that students will learn mostly on their own. The interns will also be the source of information for any CSE 455 students in the teams who may have any questions. -- How to keep the Mobile App Dev Team working on the additional job of maintaining current campus mobile apps and developing new ones while being engaged in CSE 455? In addition to being experts and consultants in CSE 455, the interns are developing and maintaining current and new mobile apps. The 20 hrs/week of work may not be enough to do all their job with full-time study in their respective degree programs. -- How to maintain and keep all the mobile apps updated and respond to changes in the requirements, platforms, technologies, and upgrades to the mobile devices. There should be a scheduled plan on the maintenance of current mobile apps . Changing requirements, new operating systems, new mobile devices, and updated technologies and languages add to the complexities of maintaining mobile apps. Thus we propose in this grant that interns be allowed to work up to 40 hr/week during the summer months to perform the maintenance work. -- How to choose promising mobile app projects that will lead to possible commercial products and thus obtain revenue. The choice of which mobile app projects will lead to a successful commercial product will be a challenge. We are currently developing in CSE 455 winter 2016 a prototype of the First Place winner, Matthew Acuna, of the 2015 IECE Fast Pitch Competition, CBPA. We assume that the First Place winner has already been evaluated as a promising commercialization idea. Other promising apps that are being developed as prototypes in the CSE 455 winter 2016 class are Library Occupancy and Bubble-In apps. -- How to replace graduating interns in the Mobile App Dev Team? As you know interns are students in various stages in their baccalaureate degree programs and oftentimes some of them graduate and it is the university policy that no personnel can hired in the student intern position without the status of being a student. There was one time when we have to replace six interns out of the eight due to graduation. The most qualified applicants came from students who finished CSE 455. But there is still the challenge of selecting the best students with the right skills and talents, with the ability to work seamlessly in a team. -- When to evolve the Mobile App Dev Team into a university software company? The challenge is we do not know exactly when this is going to happen. Our most promising mobile app is CaseAide and the client, Michael Edwards, is in the middle of various negotiations and marketing the app to different counties in the State of California. No one knows when an agreement will be reached. -- How to evolve the Mobile App Dev Team into a software development company specializing in mobile apps? As far as we know, there has never been an incubated company at CSUSB. If we are successful in generating revenues then we become sustainable without any need of support from VETI grant, our challenge is how to evolve into a software company within CSUSB following university policies and rules.

**Alternate solution(s) should this project not be funded:**

We have been developing the mobile app, CaseAide, for nearly two years and this year we are very close to delivering the first version. If this mobile app project will be successful, it could generate the revenue we need to support the Mobile App Dev Team. The app is a useful tool to assist social workers in the State of California.

**Impact(s) if this project is not funded:**

If this proposal will not be funded by VETI and we are unsuccessful in generating revenue, the Mobile App Dev Team will be dissolved. We would lose the expertise and capability of the campus to develop mobile apps for the students and offices. The software engineering course (CSE 455) will lose a valuable asset in teaching this course. The student interns act as consultants and experts for students in this course to develop their own mobile apps. The university will lose an important asset in enhancing the education and training of CSE students in the application of software engineering principles and practices in the development of mobile apps. The university will also loose the opportunity to launch a mobile app company that could generate revenue for the university and to the student interns who could potentially be hired as full-time software engineers in this mobile app company.

**Cost: \$\$ (One time or recurring)**

Total budget requested = \$ 143,520



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Process Outcomes. We plan to maintain current mobile apps that we have developed so far and continue to develop new mobile apps generated by the needs of the campus and other entities. CaseAide, as mentioned earlier, is an app that is being developed by the Mobile App Dev Team for nearly two years. It is currently valued at \$2.5M and the university is negotiating a 5% equity. This amount is not enough to support the budget being sought in this grant because of other university entities that will partake of the 5% equity. But there is a very big possibility that more revenue could be generated and more work will be needed to improve the app in the future and thus the launching of the software mobile app development company, CSE 455, Inc., will be a possibility. Student Learning Outcomes. The students in the software engineering course, CSE 455, will have the knowledge and experience of using a development software process, which starts from the client's requirements up to testing the prototype. They will also learn the technologies and languages that are used in mobile apps. This will be valuable skills and assets when the students will search for a job after graduation. The student interns of the Mobile App Dev Team will be good candidates for finding a job as a mobile developer or continuing their studies into graduate program. All former interns have been hired at Esri, LLU, Warner Brothers, and others.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

For process outcomes, we currently have the following mobile apps being used in the campus and elsewhere, and maintained by the Mobile App Dev Team: 1. CSUSB Mobile 2. Tour CSUSB 3. C S U S B Advising 4. Coyote Radio 5. Rec Sports 6. RAFFMA 7. ArrowHeart (Arrowhead Credit Union) 8. Red Folder (CSU Chancellor's Office) 9. Slidewinder mobile game. The following mobile apps are delivered or near publications in Google Play and/or Apple App Store: 1. CSUSB Dining 2. CaseAide 3. International Studies 4. Campus Safety 5. CSUSB Forms 6. BubbleShot mobile game The following mobile apps and clients have been prototyped in CSE 455 winter 2016 and will be continued in development: 1. SOAR (Zach Brenner, Division of Student Affairs) 2. Gift-Giving (Monica Alejandre, University Advancement) 3. RoomQuest (Dr. Gerad Au, AVP ITS) 4. Library Occupancy (Dean Cesar Caballero, Library) 5. CircuitSnap (Dr. Timothy Usher, Department of Physics) 6. Bubble-In (Dr. Helena Addae, Dept. of Management, CBPA) 7. Tetranucleotide Visualization Viewer (Dr. Jeremy Dodsworth, Department of Biology) 8. Project under NDA (Matthew Acuna, First Place winner of 2015 Fast Pitch Competition, IECE) For student learning outcomes, we will conduct a survey about the use of mobile app projects in the lab. The results will be analyzed if the students learn from the development of mobile apps and find the skills they acquire as useful.

**Project Timeline**      **Start:** 07/01/2016      **End:** 06/30/2017      **First Quarter of Student Use**      Summer 2016

**Budget:**  
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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Student Affairs  
Campus Division Elizabeth Perez  
Workability IV

**Total Amount Requested for FY 2016** \$2,017.55

**Project Title:** WorkAbility IV Technology Enhancement

**Project Abstract:**

The CSUSB WorkAbility IV (WAIV) program assists students with disabilities in meeting their career goals through services focused on employment preparation, like resume development and mock interviews, and job development connecting students with regional employers attuned to the needs of employees with disabilities. WAIV seeks VETI support in elevating its practice model to a level recognized as "best practices" in career services. First, in support of its employment preparation services, WAIV requests funds to acquire a digital camcorder and tripod to film mock interviews. WAIV students are already provided with verbal and written feedback after participating in mock interviews. Literature indicates, however, that visual feedback is most effective in acquiring these skills, especially for students with disabilities who, compared to their non-disabled peers, tend to face a higher degree of challenge with certain nonverbal aspects of the interview process. Second, in support of its job development services, WAIV requests funds to acquire a new accessible computer workstation and two "Feedly Pro" accounts to enable WAIV to provide nearly 200 students and alumni each year with the best practice of individualized job search support. Instead of periodic email blasts with general job postings, WAIV students will have customized job feeds sending opportunities tailored to their interests regularly and directly to their personal computers and smart phones. The accessible workstation will also be available for students to create resumes and cover letters, complete applications, and conduct job searches with direct guidance from WAIV staff.

**Challenge(s) this project will address:**

As with the population at large, educational attainment is positively related to employment for people with disabilities. Degrees, in themselves, however, are by no means "the great equalizer," as people with disabilities who hold a bachelor's degree or higher are employed at a rate less than half that of those without disabilities (26% versus 76% in 2014 according to Bureau of Labor Statistics). Reflected here, in part, are the challenges students with disabilities face in establishing social capital. The proposed project addresses this challenge by using technology to elevate the quality of WAIV's services to the level of best practices, empowering students to effectively engage in the more interactive aspects of the job search process, namely interviewing and securing job leads.

**Alternate solution(s) should this project not be funded:**

Lacking a budget to acquire or improve technology, WAIV staff will continue to provide students with verbal and written feedback when conducting mock interviews, and will provide job leads as they are presented, and support students in developing resumes as needed. This will be more an ad hoc than coordinated solution.

**Impact(s) if this project is not funded:**

Demonstrable gains in students' interviewing skills will be lost for as many cohorts of WAIV students that will be served until such time that the program can acquire a camcorder. Without an accessible student work station, the benefits of developing a customized job search, resumes, cover letters, and applications, will likely elude students with the most to gain from individualized service, especially those with less technological savvy who would require more direct guidance in creating professional development tools and putting their feeds into operation.

**Cost: \$\$ (One time or recurring)**

WAIV requests \$5,936 for an accessible computer workstation, accessibility software, a digital camcorder with kit including tripod and case, and two Feedly Pro accounts.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Process Outcome #1: 100% of students participating in mock interviews will receive visual, as well as verbal and written feedback on their interview performance. Process Outcome #2: 85% of WAIV students will report a decrease in perceived barriers to workforce entry within first year of project implementation. Student Learning Outcome #1: 85% of students participating in mock interviews will demonstrate increased interviewing skills. Student Learning Outcome #2: 90% of WAIV students will acquire the skills to set up customized job feeds targeting their specified geographies and career fields within first year of implementation.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Process Indicator #1: Count of students participating in mock interviews and receiving video feedback. Process Indicator#2: WAIV participant survey, including items related to perceived barriers to workforce entry. Student Learning Indicator #1: Assessment of interview skills using rubric to rate student performance in interview content and delivery. Student Learning Indicator #2: WAIV participant survey, including item indicating whether or not student has utilized personalized job feed application on their personal computer or smart phone.

**Project Timeline** Start: 09/19/2016 End: 06/23/2017 **First Quarter of Student Use** Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

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| <b><u>Division</u></b> | Academic Affairs<br>Campus Division | <b>Teodora</b> | College of Arts and Letters<br><b>Bozhilova</b> |
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**Total Amount Requested for FY 2016**      **\$27,433.15**

**Project Title:**      **iPad Pro Pilot Project, Interactive Technology Resources**

**Project Abstract:**

The Visual Resource Center (VRC) of the Department of Art serves as a research, reference lab, incubator for implementation of new technology and a place of discovery. The VRC supports the educational mission of the Department of Art by providing access to visual materials to be used for educational and research purposes both within the arts and across the university. The center provides services not only to 500 students enrolled in our majors, but also to 1000+ others enrolled with minors and completing art general elective (GE) classes. This application seeks support to purchase of 20 new-generation iPad Pros and associated dedicated apps for a pilot project to promote and develop interactive technology resources for our students and faculty. It provides the means for technological innovation by improving classroom instruction and enhancing student learning and engagement. The iPad Pro complemented with the adequate arts apps will be a unique learning and teaching device incorporating the new artist canvas, a virtual art museum, a sketchbook with a superior tablet stylus. The iPad Pro supports students for more affordable education, and saving students money through apps and e-books that are more cost-effective, timely and relevant than traditional textbooks and support materials. Moreover, its versatility allows desired employability skills to be incorporated into the learning experiences and the personalization of iPads can accommodate the needs of students with mobility and specific learning difficulties. Project website: <https://vtgrantcsub.wordpress.com/>

**Challenge(s) this project will address:**

The iPad Pro is a powerful computer with enhanced screen resolution (2732x2048) that will be of direct benefit to visual art students and faculty. The iPad Pro incorporates true tone multi touch display, a high-octane A9X processor, and support for Apple's Smart Pencil. All of these capabilities will allow to represent artworks in greater detail, where often subtle details in art works are key to understanding their meaning. The use of iPads will be extremely beneficial to Arts Education majors and other students since it will also teach future educators how to integrate the iPad in the classroom as an educational, visual and graphic resource. Great benefits to students will be iPad apps such as Art Authority that allows access to the works of 1,500 of the western world's greatest artists, with over 100,000 images of paintings and sculptures from ancient times to today. Using iPad virtual museum apps students in Art History will be enabled to take virtual tours to museums around the world from the comfort of the classroom and explore and research artworks anywhere in the world whilst engaging in intensive group activity in class. They will be able to learn more quickly and more deeply using 'augmented reality' type software in situ both in the classroom and museum settings. (Please see our project website: <https://vtgrantcsub.wordpress.com/>) Students will be inspired by a diffractive pedagogical approach specifically suited to learning in arts disciplines that moves beyond traditional reflexivity. The use of iPad Pro in the classroom (and outside) improve and expand the scope of the learning environment by propagating more reactive and deeper interactive dynamics amongst the students as they can share what is on their individual screens with fellow students immediately. This unique benefit will help to expedite and strengthen the group learning that is already a key part of arts pedagogy.

**Alternate solution(s) should this project not be funded:**

Continuing teaching in a traditional way, using less mobile technologies. However, students will not have the enhanced more immediate learning experience nor the experience of adaptive creativity though utilization of the dynamic interaction afforded by the iPad Pro. Without using new innovative technology faculty and students may effect their performance. Currently we are moving to a semester plan and it is very appropriate time for incorporating new technology into the faculty curriculum and students studies.

**Impact(s) if this project is not funded:**

We will be unable to develop our pedagogy in art history, visual studies, studio arts and graphic design towards great peer-learning techniques (i.e. dynamic interactive group learning) if we do not implement this initiative, and our students will miss the opportunity to learn about the expanding scope of iPad Pros for ongoing lifelong learning, which we strongly believe this pilot project will propagate for our students.

**Cost: \$\$ (One time or recurring)**

\$28,728 (One-time purchase)

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

We believe that student learning will be greatly enhanced by this initiative; both in individual learning and in peer-learning situations inside and outside the classroom. We can see how group discussions of art history and theory and visual studies will be strengthened and made more accessible due to the immediacy of sharing information and images found online and shared instantly with the group. Design students will be able to work more effectively and more quickly sharing research, sketches, and preliminary designs; engaging in group productivity because of this initiative. Studios arts students will also be able to share more fully and more immediately their ideas, inspirations, and plans for their art work in groups and with their tutor because of this technology. All our students will be able to compare and contrast their own work and the work of peers, and other artists and designers more efficiently and more productively with this technology (literally) at their fingertips.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Quantitatively, we will measure the number of uses of each iPad Pro during each coming term, and report on the usage of different apps. This will be done via an online booking system already in place via the VRC. Qualitatively, we will compare the performance of students and lecturers with previous years, measuring the improvement of grades of students, the SOTEs written by students, and by measuring the productivity of the students, to see if they are able to produce more work more quickly, and to assess that the quality and complexity of their work is improving with the use of the iPads. We will ask tutors to engage in an assessment of the effectiveness of the iPads in performing formative assessments of students work (delivering supportive feedback of work in progress) of the use of the iPads half way through each term, and we will gather information on the use of the iPads in the production of summative assessment coursework. We will ask all tutors to garner verbal and brief written feedback from all students in the pilot project at the end of each term, and we will record the findings of all tutors who use the iPads in debriefing sessions with the Chair of the Department and the Director of the Visual Resources Center.

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| <b><u>Project Timeline</u></b> | <b>Start:</b> 09/01/2016 | <b>End:</b> 06/30/2017 | <b><u>First Quarter of Student Use</u></b> | Fall 2016 |
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**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs Undergraduate Studies  
Campus Division **Eduardo** **Mendoza**

**Total Amount Requested for FY 2016** **\$20,963.00**

**Project Title:** Proactive Academic Advising and Outreach

**Project Abstract:**

Advising is one of the major keys in increasing student retention and graduation. The struggle to reach students about advising and registration information has also increased. In order to meet the needs of our current students, the status quo is not enough anymore. AAS will lead an effort to reach more students by meeting them where they are at. AAS can be considered a "hub" for academic advising on campus. With the various services and programs offered including undeclared advising, academic probation, basic skills & remediation, SOAR advising, international orientation, four year graduation pledge, and undergraduate petitions, all undergraduate students have the potential of communicating with our office during their educational career. Tinto (1987) indicates that the factors in students 'stopping' out include not just academic difficulty and lack of clear academic and career goals, but also poor integration with the college community. Collaboration with other departmental offices is key to student success. AAS has collaborated with various offices including advising tabling with Housing and Residential Life, undeclared information sessions with the Career Center, and advising promotion with the college advising centers and Center for International Studies & Programs. Through advising, along with CAS Standards, students are able to 'connect knowledge to other knowledge areas, ideas, and experiences; construct knowledge; and relate knowledge to daily life' (Robbins, 2014). Through this project, increased outreach, proactive advising and a greater number of students will be served.

**Challenge(s) this project will address:**

Financially, the VETI Grant would allow the office of Advising and Academic Services to purchase technology that would not be plausible with its limited budget. According to SSC Campus analytics, 54% of undeclared students at CSUSB are considered "high risk" of not graduating. Various factors contribute to this, including not being able to envision their academic and career goals. MBTI assessments would allow for our undeclared student population to decide on a major early on in their education, which would assist with retention and graduation rates. With only two laptops, access for staff to use in providing advising outside the office is limited. Additional laptops would allow for easier access to academic advising through on-the-go advising. With SSC Campus, laptops would also serve as remote kiosk check-in stations for logging attendance/interaction. Tablets have been used for intake/exit assessment surveys. These surveys assist the staff advisors with having a better understanding of students' possible academic or personal barriers. This allows the advisors to build partnerships with their students and to make more valuable recommendations. With older tablets and increased staff, we cannot efficiently accommodate students. With SSC Campus, the tablets would also serve both staff and peer advisors with additional on-the-go advising and mobile kiosk check-in stations, as well as set up appointments for students with their major advisors. With millennial college students spending an average of 2 hours a day on their smartphone, academic advising through social media is of key importance. Camera equipment, GoPro, and iPod Touch would increase social media and online presence. This would also develop and enhance video content video including advising tips, petitions and forms, academic probation, and study skills. Currently, personal phones and camera equipment are being used for the office's Instagram, Snapchat, Facebook and YouTube accounts. With limited resources, group advising/probation sessions are unlikely. A plasma tv would be utilized to hold small group undeclared advising, academic probation, and SOAR advising sessions. This would allow for an increased number of students being served and time available for follow up appointments. Additional projection screen and projector would grant access to hold advising workshops in various locations and 'popup' advising sessions on campus. A portable scanner would be used in office and on-the-go to scan education plans and documents for the four year graduation pledge program to easily attach as files into SSC Campus for advisors across campus to have access to. The scanner would also be used for scanning previous quarter undeclared advising files and academic probation contracts.

**Alternate solution(s) should this project not be funded:**

The office of Advising and Academic Services' operational budget would cover minor costs such as printing, but will not be able to accommodate the items required to improve academic advising. Advising and Academic Services would have look to funding through the Associated Dean of Undergraduate Studies, Office of Academic Affairs/Provost, and private donations.

**Impact(s) if this project is not funded:**

The advising project is meant to allow the office of Advising and Academic Services to expand academic advising from its current state by providing proactive advising and outreach to more students. Without funding for this project, Advising and Academic Services will not be able to venture out and would remain a reactive office.

**Cost: \$\$ (One time or recurring)**

\$20,963, One time

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

1. Increase student use of advising resources
2. Students will participate in high impact practices
3. Improve a sense of belonging, engagement and inclusion
4. Decrease average time to completion

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. Use SSC Campus to track student visits
2. Through SSC Campus, track students use of high impact practices
3. CSUSB will conduct an annual survey to assess students
4. Using Institutional Research to measure unit completion and time to degree

**Project Timeline** Start: 08/01/2016 End: 06/30/2017 **First Quarter of Student Use** Summer 2016

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/105-21f0a7409b0abb817967725fc0d153e8\\_Student+Letters+of+Support.pdf](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/105-21f0a7409b0abb817967725fc0d153e8_Student+Letters+of+Support.pdf)

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs Pfau Library  
Campus Division Stacy Magedanz

**Total Amount Requested for FY 2016** \$55,280.00

**Project Title:** Library Laptop Lending Expansion

**Project Abstract:**

In the fall of 2012, the John M. Pfau Library implemented a laptop lending program, which became an immediate success, with demand far outstripping the supply of laptops. Though the number of laptops have increased since the program's inception, it still far away from meeting student demand. During the fall of 2013, laptops were checked out 9,096 times. That number increased to 10,871 in fall of 2014. On most school days, the entire inventory of laptops is checked out by 11:00 a.m. Students even line up at the Check-Out Desk to wait for a laptop to be returned, so that they can borrow one. This funding request proposes replacement of the first 40 laptops that were purchased and have now reached the end of their lifecycle. The new laptops would provide a similar computing experience as those currently used, building on our successful past deployments. They are 13-inch MacBook Pros with Solid State Drives, configured to dual-boot, allowing the student to choose between Mac OS X and Windows 7 operating systems. A 2013 student survey found that there was not a clear preference for either operating system. In fact, many respondents indicated that they used both Mac OS X and Windows 7. The MacBook Pro, with its aluminum casing and solid state drive, has proven very rugged in use: Loaned laptops have been returned with significant dents but continue to function normally.

**Challenge(s) this project will address:**

Access to computing resources.

**Alternate solution(s) should this project not be funded:**

We would explore the option of purchasing low-cost Chrome Books, though these would not have the applications with which students are familiar, such as Microsoft Word.

**Impact(s) if this project is not funded:**

Laptop demand would continue to exceed supply, forcing the Library to turn away students who need to borrow laptops.

**Cost: \$\$ (One time or recurring)**

\$55,280.00 one-time

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

1). Expansion of the laptop lending program would increase student access to computers, reducing waiting time for available workstations, particularly during peak periods, including mid-terms and finals. It would also allow students to check out older laptops (i.e., those that have reached their lifecycle) for extended periods. 2). The laptops would enhance student achievement by providing increased access to information and computing resources. This proposal, if funded, would significantly benefit a large segment of the student population that does not own or have access to a laptop computer, with the potential to impact the broader student body.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1). To measure use, we will gather circulation statistics, which record the time, day, and duration of every check-out, as well as compare with past circulation statistics to determine the change in use. 2). To evaluate impact, we will survey the students who use laptops during selected periods of time.

**Project Timeline** Start: 07/01/2016 End: 06/30/2017 **First Quarter of Student Use** Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Education  
Campus Division Brett Nelson

**Total Amount Requested for FY 2016** \$14,278.18

**Project Title:** School Psychology Enhanced Assessment

**Project Abstract:**

The School Psychology Program at CSUSB is noted in the Inland Empire as providing exceptional training for students in several areas, most notably assessment, resulting in imminent employment. The purpose of the current grant proposal is to enhance instructional technology resources for students by providing cutting edge assessment tools not previously accessible. The tools to be purchased will greatly increase the knowledge base of students in all three cohorts, and will contribute to our already best practice multidisciplinary assessments of students who have special needs and various disabilities, especially students with attentional challenges and specific learning disabilities. The monies will enhance training for students in their use of technology by allowing integration of paper /pencil assessments with computerized performance tasks. The grant will increase student access to support services across the University as the clinic provides assessment for students, children through adulthood. The School Psychology Program already has an established relationship with the Institute for Research, Assessment and Professional Development, where space exists to both house and use the purchased technologies. The requested monies and materials will enhance the Institutes ability to provide services as well, especially in the area of Rehabilitation Counseling. Training programs in the Psychology Department will also benefit from exposure to the new instruments. Local agencies, such as San Bernardino Unified School District, will also benefit by having certain students with exceptional needs receive evaluations.

**Challenge(s) this project will address:**

Supporting students learning cutting assessments will allow them to have an edge over other programs. We are challenged because of limited funds to purchase new tests, especially considering that evaluations in psychology are re-normed every 10 years, necessitating the re-purchase of existing tests with technology support to keep current. We simply cannot train students at the level necessary for them to be viable in the job market without the assessments requested.

**Alternate solution(s) should this project not be funded:**

Continue with present assessment tools, rely on student fees and curriculum budget.

**Impact(s) if this project is not funded:**

Not expose students to certain psychological assessments that enhance their ability to diagnose disabilities. We want be graduate students to be prepared.

**Cost: \$\$ (One time or recurring)**

12,000.00

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Students will expand their knowledge of various psychological assessments allowing them to have an advantage over other programs. Hopefully this will increase student satisfaction,with the program. Students will gain knowledge of, and skills in,using Continuous Performance Tests as well new Behavior Rating scales, incorporating them into current cross battery assessments and adding another ecological domain to their assessment repertoire.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Insure reliable administration through observation (instructor) and inter-rater reliability indices. Use psychological reports to determine appropriate administration and integration of results. Measure satisfaction through existing program evaluations.

**Project Timeline** Start: 9/25/2016 End: 09/25/2017 **First Quarter of Student Use** Fall 2016

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-60b913ef84f76b259f0b9a1f14da8002\\_statements+of+support\\_+bnelson.pdf](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-60b913ef84f76b259f0b9a1f14da8002_statements+of+support_+bnelson.pdf)

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs Pfau Library  
Campus Division Stacy Magedanz

**Total Amount Requested for FY 2016** \$33,000.00

**Project Title:** Thesis Digitization, Phase 1

**Project Abstract:**

Since 2014, CSUSB theses and dissertations have been produced in digital formats only and posted online in CSUSB's ScholarWorks institutional repository. These open-access documents showcase the scholarship of our graduate students and make it freely available to researchers all over the world. (Please see <http://scholarworks.lib.csusb.edu/etd/> ) However, approximately 5,000 more theses for degrees granted prior to 2014 remain available only in hard copy from the library. We propose to hire a professional scanning firm in the Los Angeles area to convert these volumes, containing an estimated total of 750,000 pages, into PDF files, with text recognition to aid readers with visual disabilities. The files, along with metadata about each theses from the Pfau Library Catalog, will then be uploaded by the library to ScholarWorks . The project will enable us to present a complete archive of our graduates' theses and projects to all interested scholars. Due to the large scale of the project, we propose to split it into two phases, with half the digitization in year 1 and the remainder in year 2. Most of the request is for the digitization itself, with some student assistant time allocated for verifying holdings, pulling volumes from shelves and boxing for shipping, file checking, and related project activities.

**Challenge(s) this project will address:**

Currently, the majority of our theses are available to only the few people who can use the physical copies on-campus or obtain them through Interlibrary Loan. They are also invisible to important search tools such as Google Scholar. The library lacks the staffing and equipment necessary to complete such a massive digitization project. Outsourcing the scanning is the most practical solution.

**Alternate solution(s) should this project not be funded:**

None. The expense associated with the project is outside the scope of the library's regular operating budget. Without outside sources of funding to enable scanning, the project cannot proceed.

**Impact(s) if this project is not funded:**

Older theses will remain in hard copy only, and access to our students' scholarship will continue to be limited.

**Cost: \$\$ (One time or recurring)**

\$33,000 This represents year 1 of the project. We plan to ask for approximately equal funds to complete the project in the following year. We expect no further costs after year 2 is completed.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Increased visibility and usage of CSUSB's graduate theses. Additional content for ScholarWorks, making it more representative of campus scholarship and publications.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable) ScholarWorks automatically keeps detailed statistics on downloads of documents from the repository. These statistics will indicate usage. They may be compared with prior library circulation statistics to indicate change in usage levels.

**Project Timeline** Start: 07/01/2016 End: 06/30/2017 **First Quarter of Student Use** Spring 2017

**Budget:**  
[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/191-b4be7b6b8d1e2214116960f07e583c4d\\_Theses+submitted+16-17.xls](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/191-b4be7b6b8d1e2214116960f07e583c4d_Theses+submitted+16-17.xls)



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Natural Sciences  
Campus Division Mary Anne Schultz

**Total Amount Requested for FY 2016** \$37,500.00

**Project Title:** The Use of Real Life RN to Improve Test Scores

**Project Abstract:**

Use of a digital tool called "Real Life RN" from Assessment Technologies Institute (ATI) has been known to improve scores on both teacher-made tests and standardized exams in the undergraduate nursing student population. A set of modules with branching logic, Real Life RN assists users with the critical thinking skills necessary in the practice of the applied science of nursing. Thought to improve selected student outcomes such as better clinical performance and improved test scores, use of the tool in Medical-Surgical nursing and Health Assessment core courses has met with student and faculty satisfaction, alike. At an approximate cost of \$150/user licensing software fee (for use over 3-5 years), the student user is likely use the tool to its fullest throughout the term, the nursing program and post-graduation in preparation for the entry-into-practice exam, NCLEX. When incorporated into a set of Medical-Surgical nursing courses (5 in all), these selected outcomes have been known to improve dramatically. The use of these tools is considered active-learning and student-centric.

**Challenge(s) this project will address:**

In the CSUSB Department of Nursing (DON), entry-into-practice exam scores administered by the state of California have hovered near 80% for over 10 years. Considered the minimally acceptable score by professional societies, it is noteworthy that comparable departments (other nursing schools within the CSU) tend to have yearly scores nearing 100% in the same time period. Use of tools from third-party vendors such as ATI has resulted in clear process and outcome improvement in the form of improved test scores on both teacher-made tests and NCLEX alike.

**Alternate solution(s) should this project not be funded:**

The alternate solution is to continue to employ the usual teaching processes which tend to be lecture-dependent with little active learning strategy involved.

**Impact(s) if this project is not funded:**

Without an intervention such as deployment of Real Life RN from ATI, the NCLEX scores and clinical outcomes of our core Medical-Surgical courses, our state scores will likely continue to hover at the margin and selected clinical outcomes are unlikely to improve.

**Cost: \$\$ (One time or recurring)**

\$35,000, one time cost to purchase "Real Life RN" from ATI for Medical-Surgical Nursing undergraduate students.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

With the use of this tool over 2 plus years of the student experience, the following outcomes will improve significantly: A. NCLEX scores B. Scores on teacher-made tests within the course C. Psychomotor skill of head-to-toe assessment

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

For effectiveness measures, we will use NCLEX scores (A): the scores reported by the Board of Registered Nursing (BRN) for the relevant quarter and year over three academic years. We will also use scores on teacher-made tests (B) within a two-group comparison non-equivalent control group design. Lastly, the rubric score (1-10) assigned by skilled evaluators on head-to-toe assessments (C) in Skills Lab will be used, respectively.

**Project Timeline** Start: 09/01/2016 End: 07/31/2018 **First Quarter of Student Use** Fall, 2016

**Budget:**  
[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-d6f6f98fae603c4ff460c2cff3064079\\_Copy+of+VETI\\_BUDGET\\_TEMPLATE.xls](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-d6f6f98fae603c4ff460c2cff3064079_Copy+of+VETI_BUDGET_TEMPLATE.xls)



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Natural Sciences  
Campus Division Tomasz Owerkowicz

**Total Amount Requested for FY 2016** \$79,940.00

**Project Title:** Superman's X-ray vision for CSU students: digital radioimaging in the biology classroom

**Project Abstract:**

The project will support acquisition of a mobile X-ray unit with digital video-imaging capability. This state-of-the-art equipment offers a non-invasive visualisation and precise measurement of internal anatomic structures in real time. It also allows for non-destructive analysis of rare fossils and other museum specimens, not necessarily of biologic provenance. By allowing students to "see through" objects, alive or inanimate, X-ray imaging is a powerful teaching tool for understanding the interplay of internal form and function (e.g., how jaws move during chewing, how a developing embryo rotates inside an egg). This technique will be incorporated into numerous courses focused on organismal anatomy: Biology of Organisms (BIOL201), Human Anatomy & Physiology (BIOL223&224), Human Physiology (BIOL324), Biology of Invertebrates (BIOL331), Biology of the Chordates (BIOL342), Comparative Animal Physiology (BIOL424), Comparative Biomechanics (BIOL555). When not used for teaching purposes, the X-ray unit will also be used by undergraduate and graduate students engaged in research projects in the laboratories of Drs Owerkowicz, Sumida and Horner. X-ray images and videos will also be incorporated into the curricula of large biology-based GE courses, such as BIOL100, to showcase modern imaging techniques available in biologic and medical sciences. Acquisition of the X-ray unit will support development of innovative teaching modules in the above courses, and establishment of an online library of X-ray images/videos. Incorporation of radiography in teaching A&P will place CSUSB at the forefront of using sophisticated imaging technology in biology education, with CSUSB as the only CSU campus with diagnostic-quality X-ray available for teaching and research.

**Challenge(s) this project will address:**

The intuitive understanding of organismal anatomy and physiology depends, to a large extent, on the student's ability to "see" internal structures and their motion. Most of the material available to students relies on schematic and simplified diagrams found in textbooks and websites. This means students often do not receive visually accurate information (e.g., bones are often portrayed as solid, but are in fact highly porous), which may skew their understanding of structural composition and function (e.g., the lattice structure allows bones to quickly grow and remodel in response to applied loading). Poor grasp of organismal organisation is a major problem in large service courses, such as Human A&P, where anatomic jargon can be overwhelming, but visual resources are limited. Availability of an X-ray machine in the biology classrooms will give students a realistic perspective to observe how organs are built, move inside animals and even change their shape during normal behaviours – e.g., how leg bones articulate, translate and rotate during a jump. By making the invisible more tangible (visible and measurable), it will go a long way to clarify the relationships of anatomic structures, and provide superior preparation for technology-based careers, especially those in science and medical fields.

**Alternate solution(s) should this project not be funded:**

none

**Impact(s) if this project is not funded:**

stagnant student performance and pass rates in large A&P service courses, because of limited availability of anatomically-accurate (and course-relevant) resources from textbook publishers

**Cost: \$\$ (One time or recurring)**

\$79,940 (one time) for purchase, shipment, installation, calibration and training; plus three-year warranty

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Process outcomes: 1. students will be more enthusiastic about organismal anatomy and physiology courses when X-ray imaging is incorporated into the curriculum; 2. Biology faculty will establish an online X-ray image library as a learning resource for specified courses. SLO's: 3. students will understand the power and limits of radioimaging technology; 4. students will recognise benefits (diagnostic) and risks (radiation) of X-ray imaging technology; 5. students will better comprehend anatomic structure of animals, including humans; 6. students will develop an intuitive grasp of the interrelationship between organismal form and function; 7. student success rate in Biology courses will improve when imaging technology is integrated in respective course curricula.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

KPIs: 1. level of student enthusiasm will be assessed using anonymous questionnaires, and compared for lab sections with and without X-ray images/videos. We expect higher level of enthusiasm in the former. 2. number of visitors to the online X-ray library will be recorded every quarter by an automatic (and anonymous) counter. We expect a positive correlation between course material complexity and website popularity. Outcomes 3-6 will be assessed individually using appropriately phrased questions (pertinent to each SLO), interspersed between regular questions in lab and lecture exams. We predict student performance to show significant improvement once the X-ray system is up and running. 7. Student pass rate for each Biology course using X-ray images/videos will be compared with pass rates in the last three years. Considering that the course material and instructors have remained the same, a direct pre/post-implementation comparison is possible. In each course, we predict student pass rate to show a statistically significant increase after implementation of new technology. This should be particularly noticeable in large service courses, such as Human A&P.

**Project Timeline** Start: 01/01/2017 End: 01/01/2027 **First Quarter of Student Use** Winter 2017

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Business and Public Administration  
Campus Division Ian Jacobs

**Total Amount Requested for FY 2016** \$35,000.00

**Project Title:** JB Collaborative Spaces

**Project Abstract:**

As part of a redesign of the Jack Brown Hall - JB123 Open computer lab (lab is open to campus) and other areas in Jack Brown Hall, we would like to create some collaborative areas for student use. We would like to create five (5) pods or working areas in the open lab area and two enclosed conference rooms that students can use on the second floor. We are looking for funding for the 5 (Pods) collaborative areas that students could use to work on classroom projects in the open lab. These would be in a public area, not enclosed. Each pod would have a single display and supporting technology that students could connect their laptops/device to for research and presentation development. We would also have similar technology in the two conference rooms on the second floor. The second floor area would include webcams for collaboration with those off campus.

**Challenge(s) this project will address:**

Students currently come to the open lab and crowd around a computer designed for one student to work on projects together. Students will be able to schedule a collaborative area to work on projects

**Alternate solution(s) should this project not be funded:**

Currently looking for funding within college. Purchase some tables for student use without technology to support collaboration.

**Impact(s) if this project is not funded:**

Students will continue to crowd around computers designed for an individual.

**Cost: \$\$ (One time or recurring)**

One time Furniture Cost: CBPA \$15,000 One time Technology Cost: \$35,000 Mediascape collaboration station is \$9183.14. This includes furniture and technology to support it.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Students will have an area that they can use to collaborate and innovate with each other. Students, through a scheduling software, can easily find areas to work in groups.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Track initial usage and follow-up each quarter with reports of usage. By using a scheduling software, we can track usage of collaborative areas. Through consultation and surveys with students we can adjust the future needs of collaborative areas.

**Project Timeline** Start: 09/01/2016 End: 06/30/2017 **First Quarter of Student Use** Fall 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Natural Sciences  
Campus Division Mary Anne Schultz

**Total Amount Requested for FY 2016** \$375,000.00

**Project Title:** The Use of Dosage/Calculation Digital Tools for Student Success

**Project Abstract:**

Use of a digital tool called "Dosage-Calc RN" from Assessment Technologies Institute (ATI) has been known to improve scores on both teacher-made tests and standardized exams in the undergraduate nursing student population. A set of modules with visual analogues and active digital participation assists users with the critical thinking skills necessary to perform complex dosage -calculation math in the applied science of nursing. Thought to improve selected student outcomes such as better clinical performance and improved test scores, use of the tool in Technical Assessment I and Technical Assessment II as well as in Health Assessment core courses has met with student and faculty satisfaction, alike. At an approximate cost of \$ 150/user licensing software fee (for use over 3-5 years), the student user is likely to use the tool to its fullest throughout the term, the nursing program and post-graduation in preparation for the entry-into-practice exam, NCLEX. When incorporated into a set of Technological Assessment courses & a Physical Assessment course (3 in all), these selected outcomes have been known to improve dramatically.

**Challenge(s) this project will address:**

In the CSUSB Department of Nursing (DON), entry-into-practice exam scores administered by the state of California have hovered near 80% for over 10 years. Considered the minimally acceptable score by professional societies, it is noteworthy that comparable departments (other nursing schools within the CSU) tend to have yearly scores nearing 100% in the same time period. Use of tools from third-party vendors such as ATI has resulted in clear process and outcome improvement in the form of improved test scores on both teacher-made tests and NCLEX alike. The use of these tools is considered active-learning and student-centric.

**Alternate solution(s) should this project not be funded:**

The alternate solution is to continue to employ the usual teaching processes which tend to be lecture-dependent with little active learning strategy involved.

**Impact(s) if this project is not funded:**

The entry-into-practice scores (NCLEX scores) will likely continue to hover at the margin of 80% in this major which receives the best students on campus. We could only project that 8 out of 10 of our proud graduates will succeed to become a nurse and gainfully enter the profession (a job!).

**Cost: \$\$ (One time or recurring)**

\$37,500

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

With the use of this tool over 2 plus years of the student experience, the following outcomes will improve significantly: A. NCLEX scores B. Scores on teacher-made tests within the course C. Psychomotor skill of head-to-toe assessment

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

For effectiveness measures, we will use NCLEX scores (A): the scores reported by the Board of Registered Nursing (BRN) for the relevant quarter and year over three academic years. We will also use scores on teacher-made tests (B) within a two-group comparison non-equivalent control group design. Lastly, the rubric score (1-10) assigned by skilled evaluators on dosage-calculation exercises (C) in Skills Lab will be used, respectively.

**Project Timeline** Start: 09/01/2016 End: 07/31/2017 **First Quarter of Student Use** Fall, 2016

**Budget:**

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**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

|                 |                                     |               |   |
|-----------------|-------------------------------------|---------------|---|
| <b>Division</b> | Academic Affairs<br>Campus Division | <b>Connie</b> | College of Education<br><b>McReynolds</b> |
|-----------------|-------------------------------------|---------------|---|

**Total Amount Requested for FY 2016**      \$58,417.00

**Project Title:**      College of Education Assistive Technology Lab

**Project Abstract:**

The new COE Assistive Technology Lab will augment and enrich the knowledge and use of assistive technology (AT) by faculty and students at CSUSB. AT from this grant will enhance graduate and credential students' knowledge base and clinical skills in the application of AT in a supervised lab setting under academic supervision. Students will be better trained in the use of AT as they enter into community and educational settings that serve individuals with disabilities who are pursuing educational opportunities, employment or improved quality of life. Given the increased focus by accrediting bodies on the use of AT in curriculum programs, graduate and credential students in the College of Education will soon be required to have training in the use and application of AT for K-12 programs. In addition, federal grants require the rehabilitation counseling program to strengthen the academic focus on AT applications. Rehabilitation counseling students are required to develop knowledge and clinical skills in the assessment and appropriate application of AT across a wide range of limiting conditions. By providing access to additional supportive AT, individuals with learning disabilities, physical disabilities, and communication limitations will have greater access to accommodations specific to their unique needs. This project will enhance the instructional and learning experiences of faculty and students through the incorporation of devices/instrumentation into graduate level curriculum. By exposing graduate students to the use of AT for a wide variety of disabling conditions, graduate students will be better prepared to work with individuals with disabilities in community agencies.

**Challenge(s) this project will address:**

The project is designed to address the academic and clinical skill needs of graduate and credential students in the College of Education as well as the individual learning needs of students with disabilities. By providing access to upgraded assistive technology, COE students and students with disabilities will have opportunities for quality learning and practical experiences.

**Alternate solution(s) should this project not be funded:**

Due to the costs of establishing a new Assistive Technology lab, alternative funding sources are not available. [consider adding text re: RSA grant]

**Impact(s) if this project is not funded:**

Graduate and credential students will not receive the benefit from access to upgraded assistive technology and subsequently will not receive appropriate training in a burgeoning field. Compliance with accrediting agencies and federal grant funding sources could be in jeopardy.

**Cost: \$\$ (One time or recurring)**

\$58,417 The use of the proposed assistive technology purchased through this grant will be an on-going activity within the College of Education. In addition, collaborations between faculty, students and ACRC will extend the knowledge of and expertise in the use of assistive technology across the institution resulting in a positive cost/rate of return on investment. The new COE Assistive Technology Lab (designated space has been allocated in the COE building for this lab) will generate innovative teaching opportunities for faculty, increased research opportunities for students and faculty, as well as ultimately serve the extended community as graduate students move beyond the academic setting into employment opportunities. Graduate and credential students will be better situated to serve individuals with disabilities in the larger community as they are better prepared in the use of assistive technology. Individuals with disabilities include returning veterans, transition aged youth, returning workers and K-12 students, as well as the general public who may seek assistance with assistive technology needs.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

1. Provide enhanced training in the use of assistive technology for graduate and credential students 2. Provide enhanced technology resources for students with special needs or disabilities 3. Enhance student access to assistive technology across the institution  
**Process Outcomes** As a result of the establishing of the new COE Assistive Technology lab, graduate and credential students will have greater access to AT relevant to age groups from K-12 through adulthood. This will result in increased student access to the COE AT lab. In addition, faculty will have a viable means of measuring student knowledge and clinical skills about AT as part of the students' academic programming. Access to this level of AT training will help ensure that COE academic programs are in compliance with state and federal requirements regarding assistive technology training. **Student Learning Outcomes** Through the AT lab, graduate and credential students will be provided with enhanced training in the use of AT as it relates to individuals with disabilities.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

1. Graduate and credential students will have access to the assistive technology lab as part of their academic programming with faculty supervision. Student assistive technology knowledge and skill development will be assessed as part of the evaluation of academic competence. 2. By the number of students with special needs served. Service requests logged by technical staff.

**Project Timeline**      **Start:** 08/01/2016      **End:** 06/30/2019      **First Quarter of Student Use**      Fall 2017

**Statements of support by collaborating organization(s) or department(s) (if applicable)**

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[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-31a22524af7022066e6def2f3af01a07\\_VTI+letter+of+support+from+Leon+2016.pdf](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/47-31a22524af7022066e6def2f3af01a07_VTI+letter+of+support+from+Leon+2016.pdf)

**Budget:**

[http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-68a6a77f561cd5ff7b4203512a29bdf5\\_VETI\\_BUDGET\\_2016.xls](http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-68a6a77f561cd5ff7b4203512a29bdf5_VETI_BUDGET_2016.xls)





**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Business and Public Administration  
Campus Division **Ian Jacobs**

**Total Amount Requested for FY 2016** \$101,000.00

**Project Title:** Online Labs for Learning

**Project Abstract:**

This project will design and develop a virtual infrastructure that will support the courses in Information & Decision Sciences (incl. Cyber Security), Public Administration, Criminal Justice, and National Security Studies. This would include, online, hybrid, and regular classroom courses. This would include undergraduate and graduate course work. The infrastructure will be built so that any student with an internet connection and client software will be able to perform sophisticated hands-on labs that relate to information technology and cyber security. Based on the success of similar initiatives at universities across the country, this hands-on component will be critical to the success of our graduates.

**Challenge(s) this project will address:**

This project will address numerous challenges, some of which are critical, especially as it relates to technology and cyber security programs. Similar to a research program called RAVE (Remotely Accessible Virtual Environment) started at West Point, University of Alaska and CSUSB, this proposal seeks to create a more permanent infrastructure to benefit a large pool of students. The RAVE project was an excellent starting point and showed the potential for how technology students could work on technical problems beyond when "lab hours" and classroom space was available. In this case, 24 hours a day. The benefits of this approach, and scaling it to the bulk of technology students in Information Systems & Technology, Cyber Security, Public Admin and others, gives students a keen competitive edge. Specifically, in order to have technology programs that will be competitive and will provide an educational experience that will properly prepare students for success in the field, it is imperative that we include a significant hands-on component to the program. The list of benefits are long but here are more than a few. Accessibility and Availability – students would have 24/7 access to the labs computers increasing time on task and improve student outcomes. Central Administration – all computers could be accessed by the instructor to ensure that they are functioning correctly. If machines become corrupted or misconfigured, machines can quickly and easily be reverted to an earlier state to correct the problem. Computer and Software Isolation – Many of the tools and techniques that may be used in this course (such as network and vulnerability scanning) can cause disruption on campus or home networks if not properly configured. In the virtual environment, the computers can be isolated so that none of the actions taken in the environment impact the non-virtual environment. Reduced Cost – dollar for dollar, installing, configuring, updating, upgrading and maintaining of the virtual machines is less expensive than the cost of doing the same for physical machines on a campus. Uniform Experience by Students – Every virtual machine is identical, bit for bit. That means if procedures work for one student, they should work for all. This reduces that chance of a student failing to complete an assignment because they did not have as good a computer or if a lab machine malfunctioned. Ecologically Sustainable – The amount of electricity is significantly reduced and as such reduces the carbon footprint of maintaining a traditional lab environment. Scalability – The environment for the virtual machines can be easily be increased without regard to size of the classroom or geographic location. Improved Instruction – instructors and grad assistants assisting in a course can access all student machines at anytime from any location with an Internet connection. This means the assistance that can be provided at just about any time or day significantly increases. Saved States – When students work on their lab machines, if they are unable to finish at a particular time, their work can be saved with a snapshot so that they can return to it again later. In a traditional environment, if unable to finish, they may have to start over to do it in one sitting. Customization – The lab environments can be customized to the specifications of the instructor within the limitations of the hardware purchased. The platform can be used to accommodate numerous classes with different levels of complexity and sophistication. Labs can be a single machine with specialized software, or multiple machines that make up a network.

**Alternate solution(s) should this project not be funded:**

If the project is not funded, we will need to seek alternative funding sources and grants. If we are unable to find an alternative funding source, some things we might do is to have students install virtual machine software such as VMware workstation or virtualbox. We could then have them install and configure machines for labs. The big draw back on this is a great deal of time gets spent on configuring rather than learning the necessary skills.

**Impact(s) if this project is not funded:**

As stated earlier, the virtual infrastructure is critical to the success of the aforementioned program. Without it, the value of the program will suffer significantly. It will likely make us less competitive and we will be less likely to get future students via word of mouth from satisfied students. Probably the biggest drawback is that students would have to bring their own (high-end, expensive) technology to class or be limited to set classroom or lab hours to complete the work needed for success in the field. Access to technology for ALL STUDENTS is critical for this field.

**Cost: \$\$ (One time or recurring)**

The estimated cost for the first year will be \$100,000. There will be a recurring cost of about \$4,000 for licensing of the virtual machine software. The recurring cost will be covered by college funds. The equipment we are looking to purchase will be a 2 Host Cluster @ 104 Ghz with 768GB Ram and 21.6TB Raw Storage. On average this will allow us to host 200 "pods" concurrently. A pod being 3 virtual machines with 3 vCPUs, 500Mhz across the pod and 3 GB of Ram. So if we had 30 students per class, we could have 6 concurrent classes and still not at capacity. Also classes that would need only one or two machines per student would allow us to allocate more resources to other more intensive deployments. 89,000- This equipment will cost about (Itemized list attached) 8,000 - redundant switches 4,000 vCenter licenses (recurring cost annually) Total cost 101,000

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

**Process Outcomes** More Classes to Support Online Having the virtual lab will allow us to essentially have a computer lab in the cloud that we can customize to the needs of each course. Some of the classes that will depend heavily on these lab environments include IST 511, IST 525, IST 648, IST 475, IST 275, IST 215, IST 274, IST 474, IST 282, IST 647 and IST 483 (classes are shared among the IST, Cyber Security, Public Admin, National Security Studies and Criminal Justice programs). There are other classes that could benefit from the use of the environment such as the programming, database and policy related classes. **Online Open Lab** We could also offer an online "open lab" where machines with needed software, licenses, and configurations can be accessed by students much like the open lab on campus. Online students will not have access to the labs since they are in some cases unable to make it due to distance or timing. **Student Learning Outcomes** The list here is long of learning outcomes. While we do not have any data to compare with for demonstrating an improvement of outcomes, we can measure success of the use of the labs, in part, by comparing the number of hands-on exercises that are completed by the traditional classes as compared to the online classes. We should hope to have as much hands-on activities for the online courses as with the in house courses.

**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS****Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

As the program is starting, hands-on labs are at zero. Getting this infrastructure in place will allow us to start assessing that the exercises we are creating are as good if not better than the in class labs .The key performance indicator will be: 1 - number of classes with any hands-on labs 2 - the number of labs required/completed by students of the online program compared with the traditional program 3 - student satisfaction with the labs 4 - a comparison of the student satisfaction with online labs with those that did labs in the traditional environment

**Project Timeline****Start:** 08/31/2016**End:** 08/31/2017**First Quarter of Student Use**

Winter 2017

**Budget:**[http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-3950193f457acd09b257d4c70f8f922a\\_VETI\\_BUDGET\\_Virtual+Lab.xls](http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-3950193f457acd09b257d4c70f8f922a_VETI_BUDGET_Virtual+Lab.xls)



**VITAL/EXPANDED TECHNOLOGIES INITIATIVE FY 2016-2017 PROPOSALS**

**Division** Academic Affairs College of Business and Public Administration  
Campus Division Ian Jacobs

**Total Amount Requested for FY 2016** \$20,000.00

**Project Title:** Online Specific Course Platform

**Project Abstract:**

This project will support online teaching in specific areas. We would like to partner with online sources to teach specific topics. Online content with specific course can benefit students and supplement our online programs and traditional programs.

**Challenge(s) this project will address:**

The world of Cyber security and Technology is changing rapidly. This supplemental resource will fill in the areas adjunct faculty may have in a related field or course. Students can learn additional material not being offered in traditional and Online courses. In order to have technology programs that will be competitive and will provide an educational experience that will properly prepare students for success in the field, we need to include other areas or resources for students to benefit.

**Alternate solution(s) should this project not be funded:**

We will need to seek alternative funding sources and/or grants. Students can review the internet for possible areas of knowledge.

**Impact(s) if this project is not funded:**

Students may have a relevant/updated area to review information and knowledge outside the normal coursework.

**Cost: \$\$ (One time or recurring)**

\$25000 Recuring cost. Requesting first year funding. IDS department would pay for additional years of usage.

**What are your intended Process Outcomes and/or Student Learning Outcomes?**

Students will be better prepared to enter the workforce and make an impact for their employer. They will have better knowledge and ability that they receive from this supplemental online area.

**Assessment Plan and Key Performance Indicators (KPI) (Measurable/Verifiable)**

Through student evaluations and surveys, supplemental course or knowledge base would be evaluated for relevance for future usage.

**Project Timeline** Start: 09/01/2016 End: 08/31/2017 **First Quarter of Student Use** Fall 2016

**Budget:**

[http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-49f3827260f23ee2c6d96445006836b5\\_VETI\\_BUDGET\\_courseSup.xls](http://surveyqizmoresponseuploads.s3.amazonaws.com/fileuploads/196359/2054997/107-49f3827260f23ee2c6d96445006836b5_VETI_BUDGET_courseSup.xls)