2011-2012 Funded Instructional Equipment Request Justifications

All Life and Earth Science, Physical Science and Math Disciplines

Updated computers for the Science Center Computer Lab - OptiPlex 390, w/ 4 GB RAM and 19 inch monitor x 50 seats
$42,508.53

Our new science center will have fifty seats. We currently have 30 outdated machines to populate that lab. It is necessary to have an adequate quantity and quality of computers if the lab to be a useful resource for our students. Students will be able to use the computers to work on their assignment and class work. Many classes and students utilize the Science Center Computer lab. In fall semester, there are 7 regularly scheduled classes: COMP 130, COMP 135, COMP 160, COMP 220, GEOG 125, ENGG/COMP 111, ENGG 125; several intermittent classes: Geog 101 labs, Biol 224 labs, Chem 131 for excel; and Comm Ed on weekends. In spring semester, there are 6 regularly scheduled classes: COMP/MATH 117, COMP 130, COMP 232, COMP 235, ENGG/COMP 150, GEOG 127; several intermittent classes: Biol 224 labs, Chem various for excel; and Comm Ed on weekends. The lab is also serving approximately 3,600 walk-in students from various disciplines, including outside the Math/Science departments, per semester.

Students will have a viable computer lab to support their learning. This is also provides social equity and allows computer access for all our students whether or not they can afford the hardware and/or software needed to succeed in their studies.

Library

15 new, additional E-unisol computers for KTD library.

Library computers are open for use by all students, faculty, and staff at COM. The library is not currently meeting the access needs by students at COM. Adding 15 additional computer terminals will meet student needs. Using the new, E-unisol terminals will simplify IT support and greatly reduce library staff time that is currently expended in trying to resolve problems on old computers.

Reference desk instruction relies very heavily on these computers, since reference librarians often teach students how to access databases in hands-on ways that also assist students in learning online skills. The current computers are inadequate and require almost constant repair.

Currently, students often must wait for a working free computer. Instruction given at the reference desk often must be implemented online in order to reinforce learning. Thus, access will be enhanced. See also above.

By providing an additional 15 terminals, the library faculty expects improvement in all three of the library SLOs, especially the SLO related to student access.

The proposed SLOs for Information Literacy are available at:
http://www.marin.edu/WORD-PPT/COMInfoLiteracyRubric_Proposal2.0.pdf

We are currently assessing three SLOs at the reference desk:
1. Student ability to access information,
2. student ability to evaluate information and
3. student ability to use information.

Our assessment instruments are available at

The library currently has some of the oldest computers on campus. The library computers are heavily used and provide the primary access point for students to conduct research on campus. We ask that priority be given to not only replace old computers, but add additional E-unisol computer terminals just as soon as possible.
English

**PC Computers for the Computer Classroom in BC 101 (35) and in the English Writing Center (10) (45 total) $54,000.00**

The machines in BC-101 will be 5 years old in April. Upon the recommendation of the Computer Specialist, Steve Dodson, in charge of technology for this computer classroom, it is time to start thinking of replacing them.

This classroom is a shared resource. The room is used by the college at large - as it is treated by OIM as another "schedule-able classroom". It has also been used for placement testing, orientations, counseling classes, FLEX activities and training.) It is also used as a schedule-able classroom - because it fits 35+ students and at the point when they do NC ESL (LAST) - it is still available at night. Instructors in ESL, Basic Skills and English find it useful for students to learn to use the internet resources to learn English and writing skills, making online dictionaries, websites for doing guided research accessible to students in real time.

This computer classroom enhances instruction by allowing students to work on essays and writing assignments in real time with the instructor present. Students use the computers for learning research skills related to writing, for learning how to write on the computers using a specific format, for learning how to compose and organize thoughts using technology to enhance their writing. The BC 101 classroom is used by 8-10 classes every semester by English, Basic Skills and ESL. Approximately 250 students use it twice weekly in these courses. In addition, the Testing/Assessment office is now holding placement exams in this room. Approximately 500 students are tested each semester.

The use of technology in the classroom supports teaching in different modalities to support student needs.

The BC 101 classroom is used by 8-10 classes every semester by English, Basic Skills and ESL. Approximately 250 students use it twice weekly in these courses. In addition, the Testing/Assessment office is now holding placement exams in this room. Approximately 500 students are tested each semester. Additionally, with the adoption of Moodle campus-wide, working in a computer classroom gives students access to their class materials and other online tools to enhance their learning.

Importantly, furnishing computers and keeping them up-to-date allows students to work with technology and to learn how to use up-to-date software and hardware that will allow students to be competitive in today's job market. Becoming comfortable with technology, with working on computers and with writing on a computer is now a necessary skill that the college must foster and support to best prepare the student for the business world.

**Communication/Speech**

**2 new computers - one for HC-171 and one for HC-173 because the current computers often malfunction. $2,120.00**

The current computer in HC-171 is 070854 and the current computer in HC-173 is 070851. Both these computers are believed to be seven years or more and probably at the end of their lifespan.

A number of different disciplines/programs use both these classrooms. These programs/disciplines include: Nursing, Modern Languages, English, Philosophy, Real Estate, Social Sciences and numerous Community Education (including ESL) classes.

Many of our students are "at risk" or are with learning disabilities. Reinforcement of the oral message with visual illustrations helps reinforce the learning process.

With new computers there will be less loss of down time for both instructors and students due to the computers being slow to "boot up," the computers "freezing" or the computers "crashing".

Speed in deliverable presentations will increase. 1080 Speech students as well as numerous students across the college-wide spectrum who utilize these classrooms will benefit.
Listed below are the Student Learning Outcomes with a brief description of the measured effectiveness of implementing these new resources.

Communication degree SLOs:

**Oral Communication/Performance Skills:**
- Manage communication apprehension to build confidence while communicating with others.
- **The computers play DVDs** that illustrate different forms of communication apprehension.
- Select, prepare and deliver presentations that employ techniques specific to the context and occasion.
- **The computers will play software** that allows faculty and students to visualize information.

**Critical Thinking:**
- Demonstrate understanding of the relationship between culture and communication.
- **The computer allows faculty and students to** demonstrate knowledge and understanding of the relationship between culture and communication.
- Interpret media messages to create meanings based on personal experience
- **The computer programs help to** explain and exemplify different forms of mediated messages.
- Describe obstacles to competent intercultural communication, including prejudice, discrimination, stereotyping and ethnocentrism.
- **The computer programs help to** provide numerous communication theories of the obstacles to competent intercultural communication, including prejudice, discrimination, stereotyping and ethnocentrism through showing various DVDs and live-internet programs.

**Problem Solving:**
- Recognize the role of perception and perceptual barriers when communicating with others
- **A faster, better-functioning computer will run DVDs that** describe and illustrate the role of perception and perceptual barriers when communicating with others.
- Identify prominent Communication Theories and apply them to appropriate contexts.
  - **This is exactly what the two new computers will allow our Department to accomplish in the two-noted classrooms!**
- Recognize gender and cultural differences in analyzing communication environments.
- **New computers with new software will help** to exemplify and illustrate current communication theory on gender and cultural differences in communication environments.

**Information Literacy:**
- Use evidence and rhetorical strategies to support a claim.
- **The new computers will play DVDs and provide live-internet access** that provides current examples and illustrations of rhetorical theory in communication.
- Research historical and social influences in the development of cultures.
- **The new computers will play DVDs that** illustrate historical and social influences in the development of cultures.

**Business and Information Systems (BIS)**

**Replace existing Laserprinter in LC 35 with HP LaserJet 5200dtm Printer. $2,762.50**

The existing HP 8150 Laser printer in the LC 35 lab is more than ten years old and not compatible with Windows 7. Costly periodic maintenance and repair has been required a number of times in the past three years.

The LC 35 BIS computer lab is an open lab (never exclusively used by a single class) which is used by CIS, BUS and BOS students. The equipment is required to keep the CIS, BOS and BUS courses viable for printing necessary laboratory and homework assignments. The equipment is essential for the success of students in the CIS, BOS and BUS disciplines that are training for entry level jobs or improving their business computer skills to hold the jobs they currently have.
Approximately 600 students are enrolled in courses each year that will use this lab. Since the LC 35 lab is an 'open lab' and not scheduled to be exclusively occupied by any one class, student access is the highest level on the campus. Five days a week it is available to student use from 8 a.m. until 10 p.m. and from 9 a.m. until 2 p.m. on Saturdays. One mainstay of the computer lab is the ability to produce quality black and white hardcopy listings and is essential to attract and retain students through the program.

All student learning outcomes associated with the manipulation of data and production of reports and presentations using the MS Office application software are effected by the ability to quickly produce high quality listings. The consistent class enrollments and completion rates are a good measure of how well the equipment is being utilized to meet student needs. Ultimately the number of certificates awarded in each of the application areas measures the success of the program.

BIS has maintained student computer labs for over 30 years. Equipment is the foundation for BIS courses. Providing reliable high quality speedy printing is essential for program success. Replaced printer can be recycled to a less demanding lab.

**Electronics Technology**

**Renewable Energy Supplies for teaching solar thermal, wind and dc motors. Includes:** Motor kit @ $70  Thermal kits @ $70 each and Wind Kits @ $75 each. **Total:** $1,703.00

These parts are required to teach the basics of renewable energy. They will be used to reinforce the lecture portion of the class.

Students will gain the practical knowledge of how wind, solar thermal and solar pv system work. Students will be able to see these basic principles in action. Student outcomes will be hard to meet without these items. Students need the hands-on to emphasize the lecture portion of the class.

**Medical Assisting**

**Intramuscular injection model, lower extremities**  $4,251.00

This is the second of a four part request for equipment designed to prepare students injections and injection techniques. By state training regulations, students must practice injection skills in a supervised lab setting prior to care of patients. This equipment is necessary to meet that regulatory standard.

To administer medications by intramuscular, subcutaneous and intradermal injections, to perform skin tests, or to perform venipuncture or skin puncture for the purposes of withdrawing blood, a medical assistant shall complete the minimum training prescribed in the regulations. Training shall be for the duration required by the medical assistant to demonstrate to the supervising physician, podiatrist, or instructor, as referenced in 16 CCR Section 1366.3 (a)(2), proficiency in the procedures to be performed as authorized by section 2069 or 2070 of the code, where applicable, but shall include no less than:

- 10 clock hours of training in administering injections and performing skin tests, and/or
- 10 clock hours of training in venipuncture and skin puncture for the purpose of withdrawing blood, and
- Satisfactory performance by the trainee of at least 10 each of intramuscular, subcutaneous, and intradermal injections and 10 skin tests, and/or at least 10 venipuncture and 10 skin punctures.
- For those only administering medicine by inhalation, 10 clock hours of training in administering medical by inhalation.

Training in (a) through (d) above, shall include instruction and demonstration in:

- pertinent anatomy and physiology appropriate to the procedures;
- choice of equipment;
- proper technique including sterile technique;
- hazards and complications;
patient care following treatment or tests;
emergency procedures; and
California law and regulations for medical assistants

This equipment will provide an opportunity for students to practice injection techniques in a safe and supervised manner. The model provides visual internal and external landmarks to aid in identification of site for safely administering injections.

Meeting this request will benefit a minimum of 80 students each year under the current curriculum. Anticipated curricular changes will include an open lab course which will increase access to all program students. Providing the community with well-trained graduates adept at the skills and use of industry-standard equipment and supplies will promote overall patient safety and act as an effective marketing tool to attract new students to the program.

Access to the requested equipment and following successful completion of program laboratory courses, students will be prepared for completion of the program capstone clinical course which is an externship experience in community health care facilities.

The Student Learning Outcomes for MEDA 210L are as follows:
1. Students will practice, under supervision, in a medical office assisting in the care of patients.
2. Activities will include: documentation on patient charts; assisting with patient histories; performing common laboratory procedures within the medical assistant scope of practice; and performing common office procedures within the medical assistant scope of practice.

As noted above, access to industry-standard equipment and supplies to allow supervised practice is required to meet patient safety needs when students are assigned to community health care facilities.

Students are evaluated during and at the conclusion of their externship course. The evaluations include demonstration of skills introduced in the lab courses.

Satisfactory evaluations from the facility preceptor and clinical instructor will validate appropriate preparation for this experience.

The program will be seeking accreditation. Accreditation standards include access to appropriate equipment for training experiences.

**Biology**

**Microbiology Equipment to replace old, failing equipment. Includes:**

1. Shaking Water Bath; 4 Basic Stirring Hot Plates (11x11cm) - $1664.00
2. Basic Stirring Hot Plates (18x18cm) - $880.00
3. Laboratory Blenders - $724.38
4. Case of 48 Dilution Bottles - $390.07

Sharing will occur with the Allied Health and Natural History Programs.

These items are necessary to teach to set up and run our microbiology labs and have students achieve student learning outcomes as per the course outlines.

Our current equipment to run our microbiology labs is over 30 years old and failing. We are reaching the point where we can't keep our current equipment running any longer and we won't be able to run our microbiology labs without replacing it.

Microbiology is a required class for students applying to nursing and is an impacted class with high enrollments and waitlists. It would reflect poorly on the college and results in a strong negative student reaction if we lost the ability to continue offering these classes due to lack of functioning equipment.
Sharing will occur with the Allied Health and Natural History Programs.

Many old slides have jagged glass edges which could cut students' hands.

Students will benefit from being able to see the tissues that they need to study. This is not the case with the old sets where many are broken or have shattered coverslips. If they do not see anything, they cannot study it.

Many students become discouraged when they cannot see anything in the old slides now in use, some of which date from 1950 and have been in use ever since. This could lower our rates for student success.

Ability to identify cells and tissues is a key student learning outcome of all of these courses. Each course has laboratory practical exams to test mastery of this skill.

These courses are critical to student success in achieving goals of transfer and certificate completion.