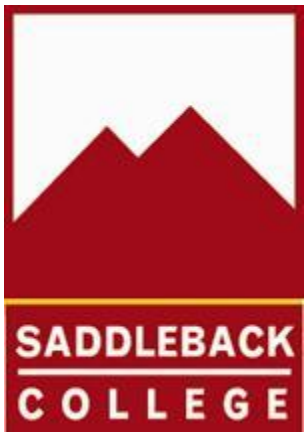
Saddleback College
Annual Update for Aquarium and Aquaculture Science



Submitted on May 17, 2010

A. Statement of Current Situation

At the beginning of the year, it was recommended to the Academic Senate that the Aquarium and Aquaculture Science program be discontinued due to lack of administrative support. In a last attempt, it was recommended that ATEP take over the program. There are three major areas that are absolutely necessary and identified as crucial to the success of the program: Fulltime faculty member, senior laboratory technician, classroom, and deterioration of an adopted instructional facility.

B. Human Resource Needs

A fulltime faculty member is needed to strengthen the Program and continue to build on the momentum of a new program. The Program's success relies on a leader for the program and is an absolute must to build strength and develop cohesiveness within the instructional delivery. It is amazing that the program has come to fruition without a fulltime faculty member to take lead. A fulltime faculty member is needed to coordinate the efforts currently performed by informal meetings between part time faculty members and advisory board members in reviewing curriculum, improving existing courses, adding additional courses and developing learning outcomes.

A Senior Lab Technician and budget to support 20 hours of student help is also greatly needed. The level of support staffing is completely and absolutely inadequate for the nature and scope of the Program, the laboratory facility and the scientific lab courses that are offered.. The courses are intensive and use the Aquarium Science Lab facility. This 43,000 square foot facility with 2,5000 gallons of recirculation water and numerous aquatic organisms, is the heart of the Program's intensive training center, *and is not to be confused with the lab classroom*. These organisms require daily care and, must meet the Use and Care of Animal Plan required by the Public Health and Safety Code for the State. In addition to all of that described above, the investigative and experimental nature of the laboratory curriculum involves instrumentation, solutions, media, glassware, and supplies. The 20 hours of student help are critical with the myriad of tasks that must be coordinated with the daily maintenance of the aquatic systems and of the lab supplies and equipment used in the various courses taught each day.

C. Instructional Needs

The supply budget for the AAS Program is insufficient for the nature of the program. We are requesting an immediate augmentation of this 36% cut to the supply budget, with yearly increases for inflation and student growth. The current budget is not sufficient to run the full load of courses for the Spring of 2007. This program has been strongly supported by corporate sponsors with donations of supply items; filters, water pumps, seawater mix, chemical test kits and lighting fixtures, bulbs and tanks. We continue to solicit donations for a variety of items, but we still require a basic operating budget to cover the cost of food, medication, tools, and supplies more intimately associated with investigative nature of lab activities. The increased need for materials, reagents, medications, to supply laboratory exercises and workshops and the increased number of course offerings has considerably strained the supply budget.

D. Research Needs

Even after this program review, the Department will continue to research its institutional effectiveness and identify needed improvements or areas of concerns. In addition, the Department will continue to maintain and further

develop Student Learning Outcomes and use this information to help with future program reviews.

More research will also need to be done in order for the programs and classes to remain current. As issues continue to evolve and new issues emerge, it will be important that the Department incorporates those changes into the curriculum. It is also essential to continue to research the needs of businesses and the community in general. Finally, continual research is necessary to help with the recruitment process of associate faculty and students.

E. Technical, Equipment and Other Resource Needs

The current equipment in the Aquarium and Aquaculture Science Program is improving for our current course offerings, but since we are a new program, we have little to no space for housing equipment, we request equipment on a priority need basis, we "borrow" the refrigerator and freezer space, and we bring in our own specialized tools in order to accommodate the needs of the Program. The College and equipment budget, as well as grant and fund-raising monies, and donations from private and corporate partnerships have allowed us to purchase various equipment, materials and supply items to support our student laboratory investigations and instructional operations in the Aquarium Science Lab facility. We anticipate a strong need for continued funds to replace and repair heavily used equipment, provide redundancy for backup life support systems, purchase additional equipment items to allow for the increasing numbers of students, as well as equip courses and new exercises that will be developed by faculty collaborating with the industry as new technologies emerge, especially if we move into a lab classroom equipped with auxiliary space to fully implement the Program to its potential.

F. Facilities Needs

Suitable lab-style classroom: A classroom that can also serve as a lab class is needed. It should be equipped with tables designed for comfortable seating for lecture, but suitable to perform lab work, (i.e. low tables, chairs with backs, computer projection system, chalkboard and instructor table.) The standard science issues of sinks fume hood, gas, vacuum and water, including de-ionized water, hot/cold tap water, safety eyewash, fire extinguisher, storage for microscopes, instrumentation and other supplies and display cases for models, skeletons, specimens.

Three auxiliary rooms: These rooms will be needed to facilitate; dry storage of large items and bulk quantities of items and secure for storage tools, a room which will house special equipment and instrumentation and lastly a preparation room for preparing and dispensing of solutions, cleaning glassware and equipment, preparation of micro-media, an office-station for storage and retrieval of data management (inventory and animal use and care records), ordering supplies, vendor communications and related, and possibly an area that can be curtained-off to also serve as a quarantine area for new or ill aquatic animals that cannot be placed with the others for bio-secure reasons.

Aquarium Science Lab facility: If the current facility is to be used: Replace the plastic dome roof with other more suitable material to reduce the amount of sunlight and therefore "heat" into the facility. Remove the large fan, and replace/relocate the inefficient swamp coolers to an H/VAC unit to reduce the moisture levels. Reseal and replace the corroded door and window frames. Add an additional door at the other end

to improve safety accessibility. Add an additional deep sink and counter space with cabinets. Provide additional electrical outlets for counter area for instrumentation and in areas along the far side. These areas are also used as “work and tool areas” where mechanical tools and power tools are used to build things. Provide network line to upgrade current phone to that which occurred campus wide. Cover the open patio area with roofing material from one end to the other to provide and move existing gates to enclose and secure a larger area of the unused patio.

G. Marketing and Outreach Needs

A full-time faculty member, staff, student help, and money are needed to market the Aquarium and Aquaculture Science program.