

Life Science Academic Unit Plan

Division: Science/F and CS

Academic Year: 2007-08

Division Chair: Joyce Parker

Executive Summary

We have made some progress in meeting our six-year program review targets. We have completed the creation of a new majors curriculum (Biology 101, 102, and 103), and created new Oceanography and Environmental Science labs (Ocean 4 and Environmental Science 21). We have also revised the Natural History (Biology 10) curriculum. We have not made progress in hiring additional faculty and staff nor improving facilities due to lack of funding.

Activities Description Narrative: please describe suggested activities, including grant proposals to be written, new course or program initiatives, or program viability studies in priority order.

1. Expand course offerings to meet student demand by hiring one full-time faculty member and 0.5 position laboratory technician.
2. Purchase a service contract for the microscopes in all of the science laboratories to maintain the quality and precision of the instruments. A number of new microscopes have been purchased over the last couple of years, but the effectiveness of these microscopes depends on maintenance.
3. Renovate or rebuild the existing Science building. Renovations would include replacing the lighting and wiring systems, installing air-conditioning, painting the interior and exterior, providing individual office space for faculty, installing new windows and window treatments, and installing new security doors. These renovations or complete rebuilding would depend on the college obtaining a third bond measure.
4. Replace the existing greenhouse and create a live specimen room to facilitate the use of live animal and plant samples in the curriculum. We are currently very limited in the number of live specimens that can be used as teaching tools.
5. Catalogue and evaluate the existing collection of anatomical models and bones and purchase the necessary replacement and additional specimens. We have increased the number of anatomy sections offered to students, but have not adequately increased the number of models and bones required to properly teach these sections.
6. Begin to track student success for entrance into the nursing program. A majority of our students are preparing for an allied health career, including entry into the Harbor College Nursing Program. Tracking their success in our nursing program would assess our ability to sufficiently prepare them in their prerequisites.
7. Research and develop an Associate Degree program in Biology and actively recruit new students to complete the degree program.
8. Purchase equipment and supplies to replace and supplement the general biology laboratories.

SLO Assessment Results Narrative: please describe assessment activities that support proposed unit initiatives.

1. This is the first year we have formally addressed the development of SLO assessment tools for individual courses. This year we will assess SLO's for Human Anatomy, Human Physiology, Biology 3 and Microbiology. Each year we will develop SLO assessment tools for three additional courses.

Staffing Implications: if any request will require additional classified support or training, please describe its extent.

1. In order to meet the demands created by the addition of several new lecture and lab sections of Human Physiology, Human Anatomy and Microbiology, one new full-time life science instructor is needed.
2. In order to coordinate and set up the enormous number of lab sections in Life Sciences, the creation and staffing of a full-time life science lab manager position needs to be undertaken.
3. A 0.5 assignment for a Life Science lab tech needs to be hired to set up and coordinate the large number of lab sections held in the evenings and on Saturdays.

Technology Implications: if any request involves technology, please describe its impact on the network, licensing, repair, training and support.

To continue delivering a competitive and challenging education to our students, our department needs the following:

- Convert VHS library with DVDs (50)
- Configure Gateway laptops for Internet access
- Continue maintenance of classroom and office computers

Discipline ID #	Department Priority (1 to 99)	College Strategy Supported (separate columns if two)		Student Success Initiative	Technology Access	Department Objective (link to Program Review)	Proposed Activity	Brief Summary of SLO Assessment Results (See attached forms)	List Other Supporting Documents/Links Attached (E.G., WSCH, Wait Lists, Retention, Environmental Scans)	Resources Required (list faculty, equipment, etc.)	Estimated Total Cost and Source (E.G., Program 100, VTEA, etc.)
80	2						Purchase photocopier machine.			Block Grant	\$15,000
80	1	1: 1.3 1.5 6.2				New Emerging need	Purchase a service contract for the microscopes in all of the science laboratories to maintain the quality and precision of the instruments.			Program 100	\$4000
80	3					New Emerging need	Polyscience 2L shallow Digital water bath Digital dual water bath 5.5L Cryo-safe cold boxes (6) Many labs require precise temperature control for reactions to take place and/or require measurements at different temperatures. To prevent temperature sensitive reagents from breaking down			Program 100	\$700 \$850 \$300 \$1850
80	5						Thermal Cyclor Examine DNA structure and replication. Prepare DNA isolation and amplification by polymerase chain reaction (PCR)			Program 100	\$4000

80	4					pH bench-top meter Many solutions and reagents must be prepared at an specific pH			Program 100	\$950
80	6					Incubator/Shaker Bellco orbital shaker to perform bacterial transformations. Preparation, isolation, and purification of proteins in bacterial cell			Program 100	\$4000
80	8	1: 1.1, 1.2, 2.1, 2.2, 2.3				New emerging need Develop an Associates Degree in Biology				
80	9	1: 1.1, 1.3, 1.5, 2.1, 7.4, 7.5				Increase number of labs to meet student demand by filling 0.5 lab tech position to prepare and set-up laboratories			Program 100	\$25,000
80	10	1: 1.1, 1.3, 1.5, 2.1, 7.4, 7.5				New, emerging need Continue expanding course offerings to meet community organization requests by hiring one full –time faculty member	N/A		Program 100	\$100,000

80	11	1: 1.3, 1.5, 2.1, 6.1, 6.2				New emerging need	Catalogue and evaluate the existing collection of anatomical models and bones and purchase the necessary replacement and additional specimens.			\$8000
80	12	1: 1.4					Begin to track student success for entrance into the nursing program	N/A		
80	13	1: 1.3, 6.2				New emerging need	Replace the existing greenhouse and create a live specimen room		To be determined by construction consultants	New bond measure
80	14						Cold-water aquarium To keep and maintain marine invertebrates for fertilization and embryology labs		Program 100	\$5000
80	15	1: 1.3, 2.1, 2.3, 3.4,				New, emerging need	Renovate or rebuild the existing Science building.	N/A	Program 100	New bond measure

		6.1, 6.2, 1.4, 1.5									
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Unit Plan Activity Summary Sheet

Division ___Life Sciences_____

Academic Year ___2008-09_____

Division Chair ___Joyce Parker_____