

Sabbatical Proposal for Lorraine Buckley, 2011-2012

1. Statement of Purpose

This sabbatical will allow me the time to learn how to deliver online instruction, research best practices in online science education, and develop a distance education course in life science for Oxnard College.

2. Rationale

A. Professional Development

Since I have never taught online before, the first phase of this project will be to learn how to deliver education online. The second phase will be to learn best practices in online science education. In the final phase, I can help colleagues begin distance education and share the best practices in online instruction that I learn during the project.

B. Value to Students

As evidence of the need for life science seats for our night students, data below demonstrates a threefold higher BIOL enrollment in the day than at night. Addition of online BIOL classes would meet the needs of these night students as well as students currently unable to attend at traditional times because of work, childcare, or disability.

Student Sub-population	Fall 2010 BIOL enrollment	Fall 2010 Total enrollment	% BIOL enrollment
Night Classes	134	3688	3.6%
Day Classes	343	2464	13.9%
All Classes	477	6152	7.8%

C. Value to Department or Discipline

With an aggregate WSCH of over 2000/semester and a growth over 9% in the last four years, biology continues to be one of the two extra-large disciplines in the department of twelve disciplines. The Science Department is subdivided into life sciences and physical sciences. Biology is, by far, the largest of the life science disciplines

(Chemistry is the largest physical science). Our department has only one discipline with an online course in GEOG, a physical science, and one course in progress in CHEM, also a physical science.

Value to College and/or District

Developing an online course in my discipline would be the next logical step toward developing diversity in our distance education college offerings.

D. Value to Community

In addition to the value of increased diversity of courses available in each community home equipped with internet, the value of this project to the community would be to highlight Oxnard College student research within the online course to increase community awareness of the opportunities for science education at Oxnard College.

3. Implementation

A. Implementation Procedure

A1. Implementation Sequence

1. Explore distance education pedagogy
2. Select a course (BIOL 101, BIOL 102, or ESRM 100)
3. Research other online courses
4. Review and select a textbook
5. Develop online questions/activities for textbook chapters
6. Develop online activities for course topics not in textbook
7. Find online reading assignments on current topics
8. Sequence topics/activities for a 18-week course
9. Write a grading rubric for online course
10. Write a course outline and syllabus for online course
11. Report to the department
12. Offer the course

A2. Implementation Logistics

1. Exploration:
 - a. Online courses at other schools
 - b. Conference attendance
 - c. Peer learning

- d. OC Instructional Technology staff – Bolla Rushing-King
 - e. OC Distance Ed Committee – Teresa Bonham
 - f. OC Curriculum Committee Member and the only experienced instructor of science online – Chris Mainzer
2. Course selection will be in collaboration with our departmental faculty.

3 – 9. These steps will be completed in collaboration with experts on campus (Rushing-King, Bonham) and in my discipline at other institutions

10. I will rely heavily on curriculum committee support for writing the course outline.

11. I plan to relay the best practices that I learn during the project to my science colleagues. In addition, I plan to share with them the pros and cons of the project, its challenges and its rewards.

B. Projected Results

1. Increase diversity of OC distance education offerings
At this time, only one science course has been developed for distance education in physical science. No life science courses are offered online. This project will add a second science course and a second experienced faculty member to OC's distance education.

2. The resulting course will provide improved access to science education for students with limited campus access such as those with work, transportation, and child care limitations. Since the proposed course will not include a lab, the students will have to come to campus for the laboratory section; but this project will effectively cut their required on-campus time by half to fulfill this science requirement

3. In the case of ESRM R100, we could double or triple the enrollment which makes it a strong candidate for this project.

Biology R101, an introduction to cellular biology, experiences high enrollment, but is severely impacted by the recent cut in section numbers. The effectiveness of the proposed online course to increase enrollment is dependent on management decisions regarding number of approved sections, etc.

Biology R102 would be a new course. This option is considered to increase the diversity of our course offerings, to match those offered at other institutions, and to provide an introductory organismal biology

course for students preparing for the majors Biology (120/122) or for Anatomy and Physiology.

4. This course represents an opportunity to develop modular, self-paced learning activities to be housed at OC's new STEM center (and ultimately may be moved to the new LRC during the STEM center renovation). Students enrolled in the online course may need more hands-on, visual learning activities beyond the online work. Learning modules, linked by chapter and topic to the online course, could include work with models that were purchased with STEM grant funds. At another institution I supervised a self-paced, modular laboratory where students studied Human Biology (BIOL R102) as a general education, non-laboratory life science requirement. The addition of a self-paced, modular study component to online education would provide the flexibility of student-directed scheduling in an academic environment where tutors and faculty are present to assist students resulting in the best of two worlds (online and on-campus).

C. Reporting Methods

1. Hard copy of syllabus, course outline, topic outline, weekly schedule, and assignments.
2. Verbal report to Science Department Faculty
3. Written report to curriculum committee

D. Timeline Estimate

Jan: Explore distance education pedagogy

Jan: Select a General Education science course in my discipline

Feb: Research other online courses

Feb: Review and select a textbook

Feb/Mar: Develop online questions/activities for textbook chapters

Feb/Mar: Develop online activities for course topics not in textbook

Mar: Find online reading assignments on current topics

Apr/May: Sequence topics/activities for a 18-week course

Apr/May: Write a grading rubric for online course

Fall 2012: Develop course outline and syllabus for online course

Fall 2012: Report to Science Department faculty

Fall 2013: Offer the course

4. Past Contributions - most recent seven years

A. Department/Discipline

Co-developer: Collaborative projects for Environmental & Marine Studies' students to work with the Nature Conservancy, the California Coastal Conservancy, U. S. Fish and Wildlife Service, Channel Islands National Marine Sanctuary, and CSUCI; 2010

Author: Coastal Environmental Studies Degree Program App, 2009

Co-author: Supplemental Instruction curriculum

Tenure Review Committee Co-Chair (& Hiring Committee Co-Chair) for Jim Harber

Hiring committee chair and member for numerous part-time faculty

Co-Negotiator: With the Channel Islands National Park for No-Cost Training of OC students with the National Park Dive Team (~\$100,000)

Co-Negotiator: With the National Marine Sanctuary for No Cost use of the 87-foot R/V Shearwater for five years (~\$48,000), 2005-2010

B. College/District

District-wide Minimum Qualifications Committee for Life Sciences 2009-2010

Tenure Review Committee Member for Teresa Bonham (English Dept)

Co-Charter Advisor: Phi Theta Kappa Honor Society, 2008

Coordinator: Annual OC Student Research Poster Session

Prin Investigator and co-author: NOAA MSI-EPP Grant
NA050AR4811021 for \$500,000, 2005 - 2010

Liaison: Donation from BHP \$25,000 in 2004

Negotiator: No cost lease for the Marine Education Center with Lyn Krieger and Lydia Ledesma-Reece at the Channel Islands Harbor; 2003

C. Community

Current Chairman of the Board of Directors (and Co-founder, 1994) for the Channel Islands Marine Resource Institute providing research and education in environmental restoration for Ventura County

Native oyster restoration project co-manager – collaboration among Nature Conservancy, U. S. Navy, and Channel Islands Harbor 2009 – present

Native plant restoration coordinator at Ormond Beach coastal dunes and wetlands – collaboration with California Coastal Conservancy, California Native Plant Society, and U.S. Fish and Wildlife Service

5. Scholarly Achievements

A. Publications:

T. MCCORMICK, L. M. BUCKLEY. 2010. LARVAL COMPETENCY AND SURVIVAL OF RED ABALONE IN MARICULTURE. Proceedings of the 2010 Western Society of Naturalists Annual Meeting AND IN PROGRESS FOR PUBLICATION IN JOURNAL OF THE NATIONAL SHELLFISHERIES ASSOCIATION.

T. MCCORMICK, L. M. BUCKLEY, J. BROGAN, AND L. PERRY 2008. Drift macroalgae as a dispersal mechanism for the white abalone (*Haliotis sorseni*, Bartsch 1940). *Mar Ecol Prog Ser* 362: 225-232.

B. Posters/Presentations of Supervised Undergraduate Research

Comparison of plant communities in four zones of the coastal dunes at Ormond Beach

Community-level effects of eradication of introduced plants and transplanting native species in coastal dunes at Ormond Beach, California

Halophyte growth and survival relative to salinity in hydroponic mariculture

Growth of herbivores in mariculture relative to macroalgal diet

Wound treatment for broodstock abalone

Flavor and growth of purple sea urchin relative to macroalgal diet

Abalone behavior in Y-mazes relative to type of algal extract

Recruitment of benthic invertebrates relative to location in Channel Islands Harbor

6. Length of Service & Past Sabbaticals Awarded, if any

A. Length of service: 18 years (hired May, 1992)

B. Past sabbatical: Fall, 2000

C. Consecutive service of at least seven years: Fall, 2003 – present

7. Past Contributions – highlights prior to first sabbatical

Author: Section of OC Master Plan 1993 for Natural Resource Management and Environmental Restoration highlighting our local coastal resources

Author: Marine Studies Program Application; 1993

Co-Founder/Lab Manager - OC Marine Studies Lab Facility 1994-98 & 99-2001

Negotiator:

- With US Navy Facilities Engineering Section and Judith Valles (OC) for concurrent use of warehouse and adjacent land for OC
- With the City Council and Mayor of Port Hueneme for a No-Cost lease for laboratory space with running seawater for OC Marine Studies' use
- With the US Navy & Port of Hueneme for Student access to restricted Naval and Industrial space at Port Hueneme; 1994 - 98

Author: Successful Proposal to Fish and Game Commission
\$50,000 in 1994 to renovate marine lab building

Coauthor: Successful Proposal to Fish and Game Commission for
\$50,000 in 1995 to install the seawater system