Annual Report May 2012
Bachelor of Science in Biology and Marine Biology
Bachelor of Arts in Biology

The Biology faculty developed the curriculum for the Bachelor of Science in Marine Biology/Biology that provides a solid foundation for students in biology with a strong core in either marine biology or general biology. It is a rigorous program that produces graduates ready to gain employment or pursue graduate study in biological fields. The B.S. in Marine Biology/Biology is designed to serve the needs of three groups of undergraduate students. First, it is directed toward students preparing to enter graduate school in the fields of oceanography, marine biology, ecology, evolutionary biology, and fisheries. Second, it is designed to serve students seeking entry-level employment in the fields related to marine biology, including positions at state and federal agencies. Third, it is designed to serve students preparing to enter the M.A.T. program in secondary education at UAS and thus reflects the requirements for certification in science. The B.S. in Marine Biology/Biology is designed to capitalize on the unique natural setting and natural resources in Southeast Alaska. Many of the courses involve hands-on field and laboratory exercises. Research with a faculty mentor is encouraged.

We also have developed curriculum for a Bachelor's in Arts of Biology that provides a broader liberal arts background and less analytical courses. This degree was designed to inspire students interested in the biological sciences who may not perform well in the more classic science curriculum or who wish to take a broader array of liberal arts courses. The degree is designed to serve students entering the M.A.T. program in secondary education.

Program Assessment Components

1) Selection and meeting of Biology Advisory Committee
2) Number of enrolled and graduating program students
3) Calculation of average GPA of graduates
4) Exit interviews with our graduates
5) Review of course competencies

Data Collected for FY 2010-2011

Program Students

Academic Year	BA Biology	BS Biology	BS Marine Biology	Total
2010/2011	9	53	45	107
2011/2012	7	51	42	100

Average GPA of Graduating Students

Academic Year	# of Students		BA Biology	BS Biology	BS MarineBiol
2010/2011	17 students	3.05	2.89	3.04	3.24
2011/2012	10 students	2.78	NA	2.79	2.76

Exit Interviews

Academic Yea	# Graduates	# Completed Interviews	Return Rate
2010/2011	17	2	11.8%
2011/2012	10	7	70.0%

Data from Exit Interviews

Number of respondents 7
Research Experience 4
Satisfied with Program 7 either agree or strongly agree

Faculty Evaluation of the Data

UAS is an open enrollment university and most of our students do not maintain high grades through their academic career which can be seen by analyzing the graduates' Grade Point Average (GPA). There is sufficient variation in the data within and between years and the most recent group of graduates (n=10) were not the strongest students academically (GPA = 2.78). Students who opted for a BA in Biology tended to be academically weaker than those receiving Bachelor of Science degrees in either Biology or Marine Biology. We did not have any students graduating in 2012 with a BA in Biology.

In 2012, we met personally with each of the graduates to ask them specific questions about our programs. By meeting personally, we were able to get a significantly higher response rate when compared to AY2010/2011 in which only 2 of the 17 graduates responded. It was because of this low response rate that the Biology faculty chose to interview their graduating advisees in person. Most of our graduating students in 2012 felt that the Biology/Marine Biology program was strong and that it more than adequately prepared for a career in the biological sciences. They unanimously felt that our program provided them strength in analytical, oral communication, critical thinking, and computer skills. Some of the students felt that our program could improve if we were to offer our classes more often or provide upper division courses during the summer.

It appears from the 2012 data that those students who had ambition towards professional or graduate schools maintained higher GPAs (3.14; n=6) than those who wanted to begin a career, not necessarily in biology, immediately upon graduation (2.24; n=4). We do not have enough data to analyze this trend from 2011.

Students who responded to the exit interview expressed interest in more access to statistical classes. Two students expressed interest in courses in evolution and developmental biology, polar biology, and tropical biology.

2012 Biology Advisory Meeting

On April 25th, the 5 biology faculty met with our new Biology Advisory Committee (BAC) to discuss our programs. The BAC is composed of external professionals from diverse agencies who have hired UAS students and are excited about our program. We formed the BAC in order to acquire external recommendations with respect to future faculty hires, curriculum changes,

and any changes in program delivery. Our goal is to meet on an annual basis to provide updates of our programs. The following people serve on the BAC.

1) Ginny Eckert: University of Alaska Fairbanks (SFOS)
2) Ron Heintz: National Oceanic and Atmospheric Administration
3) Forest Bowers: Alaska Department of Fish and Game
4) Bill Hanson: US Fish and Wildlife Service

Review of the Data and Potential Changes

The biology faculty have been tracking our graduates for over 10 years and we are satisfied that we provide a curriculum that prepares our graduates for diverse career choices. Feedback from students who have entered graduate school confirms that our courses are rigorous and relevant. It would be helpful if the Alumni Association had a mechanism in place to track UAS graduates better.

We have offered all of our courses listed in our 6-year plan. All of our required courses are offered on an annual basis and all of our Biology electives are offered every other year. Our enrollments in our required courses are strong with some courses maintaining a wait list. There is variation in the enrollments in our elective courses. The faculty decided to remove Behavioral Ecology from our catalog as this course has not been offered in 3 years, we do not have faculty to teach this course, and much of the material is covered in our Animal Behavior course. We are initiating a course in Experimental Design (Bergstrom) that we think will enhance our students' exposure to statistics used in the biological sciences. We added a faculty member who is a marine mammalogist (Pearson) and this area of expertise is critical for our marine biology program.

We will need faculty expertise to teach Genetics and we will propose a faculty recruitment this year to cover Genetics (Biology 362), Microbiology (Biology 240), and Oceanography (Biology 100 or an upper division course).

We did not have any students graduate this year with a BA in Biology and we will keep tracking these data in order to determine the value to the University of offering a BA in Biology.