Summary of Assessment Results
MS in Biological Sciences, Spring 2012

Note: the name of the degree was recently changed from “Biology” to “Biological Sciences” to be consistent with other degrees in the department.

1. Enrolment and degree recipients: during AY 2011-2012 52 students were enrolled in this degree, and 7 students graduated (plus one switched to the PhD program at the end of her successful defense). Number of graduates is essentially identical to FY10, and slightly lower than in FY07-09 (when enrolments were slightly higher). Graduation rates continue to be slow but steady.

2. All students who started within the past two years completed the initial assessment at the start of the degree program, and completed a defense of their proposal (the comprehensive exam) within the first two semesters. This is a marked improvement over previous years, when the comprehensive exam was frequently not completed until the second year or later. This may be the result of regular meetings (twice per year) of the chair with all students in their first year.

3. Supplemental information to the annual report was supplied by 23 students. Of these, 2 students had a paper accepted for publication in AY11-12. The 7 students who graduated prepared a total of 11 manuscripts for submission to journals (1.6 manuscripts per student), consistent with our expectation of 1-2 manuscripts per student for submission.

4. These 23 students presented oral presentations or posters on their research at 6 national (outside of Alaska) or international conferences and 13 local conferences, and they gave five additional presentations (e.g., as an invited speaker) during AY-11-12. This is a rate of 0.8 presentations per student per year, very reasonable given that new students are unlikely to present research results.

5. These same 23 students applied for 32 fellowships, scholarships and awards with 12 students submitting at least one (52%). They were awarded 12 fellowships, scholarship, and awards external to UAF (but including those in large federally funded programs such as EPScoR or CASE), and 13 fellowships, scholarships and awards from UAF (e.g., Global Change grant). This equates to 1.09 awards per student and a success rate of 78%. They also received 7 UAF travel awards and received 5.

Comments: overall, student success continues at a similar rate to previous years. While we do not have publication rates for this cohort yet, manuscript production is similar to the past and we anticipate the similar rates of publication as well (approx. 1 publication per MS student). We have not collected presentation or award data prior to this year, so we have no basis on which to make a comparison. Presentation rates are reasonable, and award rates are good, although participation rates could be improved from the current 56%. The introduction of a proposal writing course in Fall 2012 (see below) may increase application and award rates.

Assessment improvements to be made:
1. We need to implement the collection of assessment data from additional faculty members at defenses.
2. We need to initiate surveys of common employers of MS students.
3. We need to improve our ability to track student employment. This has been an issue for a number of years and is not easily resolved.

Program and Course Changes
The emphasis over the past year has been in increasing the number of courses available that provide training in professional skills such as writing manuscripts and proposals, strengthening teaching skills and improving statistical capacity. The following offerings reflect this:

1. Scientific Writing, Editing, and Revising was offered twice in 2011-2012. While we would like to be able to offer this every semester, currently the lack of faculty prevents us from doing so.
2. Research Design was offered twice in 2011-2012. We hope to be able to offer this every semester into the future.
3. A new seminar course in grant proposal writing will be offered in Fall 2012. We expect to develop this into a regular course. This will initially be an every other year offering but we will change to every year if possible.
4. A new seminar course on basic programming in R was offered in Spring 2012. This course was taught by an adjunct and currently we are not able to offer it regularly, but we are investigating opportunities for doing so.

Other program and course changes:

Program Changes
1. The name of the degree was changed from MS in Biology to MS in Biological Sciences to be consistent with the other degrees in the department.

Course Additions
1. Biol 488/688, Arctic Vegetation Ecology: Geobotany. This is part of a newly developed series in arctic vegetation that includes a summer field course.
2. Biol 457/657, Environmental Microbiology. This is a very popular course with interdisciplinary appeal that had been run as a trial course previously.

Course Modifications
1. Biol 689, Vegetation Description and analysis, increased from 2 to 3 credits to better reflect student effort required.

Course Deletions. These courses had not been taught in more than 5 years.
1. Biol 453/653, Molecular Biology
2. Biol 611, Fish Physiology
3. Biol 650, Fish Ecology