

2009

Biology Discipline Assessment Plan 2009

Biology Discipline

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DISCIPLINE GOALS

1. to provide students a broad base of fundamental biological knowledge and an appreciation of relevant safety and ethical considerations in evolution, genetics, cell and molecular biology, the diversity of life, and ecology
2. to provide students in our upper-level electives detailed knowledge in specific fields including experience collecting and interpreting data both in the field and in the laboratory
3. to provide students opportunities to apply knowledge of chemistry, statistics and mathematics to biological systems
4. to advance student skills in written and oral communication of biology
5. to prepare and encourage students to conduct original undergraduate research at UMM or at other institutions
6. to prepare students for postgraduate education, and/or a variety of careers in the fields of biology, including secondary education
7. to provide discipline-specific courses for non-majors to serve UMM's general education requirements

MEASURES

- assessment meeting(s) late in spring semester
- assessment report written late spring/early summer
- assessing goals 1, 2 and 3
 - assess cell and below and organism and above cores and electives in alternating years
 - CORE (goal 1): design questions on mid-terms and/or finals to assess student understanding of fundamental concepts (e.g. natural selection, central dogma processes)
 - ELECTIVES (goal 2): design questions on mid-terms and/or finals to assess student understanding and competence in application of core concepts, field-specific concepts and laboratory skills
 - design questions on mid-terms and/or finals to assess student ability to apply chemistry, statistics and/or mathematics to biology when appropriate (goal 3)
 - design exams so that assessment questions are easily photocopied/scanned without identifying information
 - discuss successes and challenges in student retention of core concepts through upper-level curriculum
- assessing goal 4
 - all faculty will participate each year
 - record a few general positive and negative comments for each BioComm II paper and Senior Seminar presentation
 - discuss common successes and problems and suggest changes to earlier curriculum (e.g. class presentations, class papers, BioComm I)
- assessing goal 5
 - use senior survey results to track the number of students who participate in undergraduate research at UMM and elsewhere
 - discuss strategies to optimize student involvement in undergraduate research
- assessing goal 6
 - THIS INFORMATION SHOULD BE AVAILABLE SYSTEM-WIDE FROM ALUMNI RELATIONS AND/OR CAREER CENTER
- assessing goal 7
 - entirely course-embedded and individual unless an all-campus committee focused on this topic is formed some time in the future

2008-09 plan:

Assess cell and below as a starting point.

Fundamentals (Waye S09)

Cell (Gooch F08)

Microbiology (TWyckoff S09)

Genetics (Myers S09)

This spring we have already been discussing BioCommI. We will meet formally to discuss details of BioCommII and Senior Seminar and to continue the previous discussion.

We recently revised the Senior Survey. TWyckoff and PWyckoff will compile results (unless Waye and Mumford want to take over?). This assessment will always lag a year (or we can discuss it in the fall?).

Only a single non-majors course was offered this year. Perhaps we can phase this goal/measure in next year?