

BS Degree, Biology Major

Learning Outcome <i>What should a graduate in this major know, value, or be able to do at graduation and beyond?</i>	Data Collection and Analysis <i>What assessment tools and/or methods will you use to determine achievement of the learning outcome? Describe how the data from these tools and/or methods will be collected. Explain the procedure to analyze the data.</i>	Results of Evaluation <i>What were the findings of the Analysis Team? List any specific recommendations.</i>	Use of Evaluation Results <i>What changes in curriculum, courses, or procedures were made as a result of the program learning outcome assessment process?</i>
<p>Students should be able to identify and apply the basic concepts taught in the core major courses</p>	<p>A “senior exam,” designed by faculty who teach core biology courses, has been given for the past several years for all biology majors. The exam items are categorized so the weaknesses in core concepts can be identified.</p>	<p>Administration of the senior exam has suggested that improvement is needed in several core content areas, notably cell and molecular biology.</p>	<p>Course syllabi are being reviewed and will be adapted where necessary.</p>
<p>Premedical and pre-dental students majoring in biology should have a firm foundation in basic concepts covered on the MCAT and DAT national exams.</p>	<p>Practice MCAT exams are given yearly to premedical and pre-dental students who take our MCAT/DAT preparation course. The results of these practice tests can identify content areas that need improvement.</p>	<p>MCAT scores have not been at the level we would like in recent years. Pre-health advisors are analyzing recent score data to attempt to identify how course content and/or curriculum could be changed to improve scores.</p>	<p>The division has designated a pre-health advising committee composed of faculty who advise any pre-health students. One of the duties of this committee will be to study MCAT and other admission test data and make recommendations for changes in course content, curriculum structure, and advising methods aimed at improving scores.</p>
<p>Students should be able to analyze scientific data, develop hypotheses, interpret experimental results, draw conclusions, and present outcomes to an audience.</p>	<p>Selected majors engage in internships, course-based field and laboratory projects, and present their results. Students involved in internships are generally required to submit a summary report of their projects. We encourage students to present research results at poster presentations of regional or national meetings of scientific societies.</p>	<p>Several students have attended scientific meetings with faculty to present posters or presentations. Evaluation by involved faculty members have critiqued student performance. Evaluation is done on an individual basis involving all faculty who have overseen the projects.</p>	<p>Division curriculum committee has been discussing how to involve more students in these kinds of activities. The recommendation is that we add to the curriculum a portfolio mechanism that will require all students in all majors to take part in a two-year process that will lead to individual studies and presentations to fellow students.</p>

<p>Students in the biology major will be able to understand and apply a cross section of concepts in their freshman year that will lead to adequate preparation of mid-level core courses and upper-level elective courses.</p>	<p>The division curriculum committee has collected data on the current structure of BIO 100, 102, and 103, the introductory courses with regard to concepts covered, order of presentation, and suitability for first-year biology majors. Syllabi of current courses have been compared and discussed.</p>	<p>Careful analysis of these courses has led biology faculty to question the length of time students should be required to spend on introductory concepts before advancing to mid-level core courses. Analysis indicated that the concepts covered in the present 3-semester curriculum could be redesigned as a 2-semester sequence. This would reduce duplication and enable students to advance to mid-level core courses more rapidly.</p>	<p>The curriculum committee has recommended that the division convert the current 3-semester introductory sequence to a 2-semester general biology sequence, merging the now separate botany and zoology courses in to the general biology sequence. This change is being proposed to begin in fall of 2007.</p>
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