

## BIOLOGY MAJOR

### LEARNING OUTCOMES, PERFORMANCE INDICATORS, & MEASURES

Learning Outcomes/Objectives Students will be able to:	Indicators of Performance	Measures	How is the Information Used?
<p><b>1.</b> Demonstrate a broad knowledge of biology and develop competency in specific areas of interest.</p>	<p><b>A.</b> Understanding of the basic chemical principles, cell structure and organization, and metabolism of living organisms.</p> <p><b>B.</b> Understanding of plant and animal anatomy and physiology, with an emphasis on form and function.</p> <p><b>C.</b> Understanding of the diversity of organisms, systematic biology and phylogeny, and biological interactions over geological time.</p> <p><b>D.</b> Understanding of the principles of molecular, transmission, quantitative, evolutionary, and population genetics.</p> <p><b>E.</b> Understanding the theory of evolution by natural selection.</p>	<p><b>A.</b> Performance on 10 questions on exams that measure the Performance Indicators for BL155/157.</p> <p><b>B.</b> Performance on 10 questions on exams that measure the Performance Indicators for BL156/158.</p> <p><b>C.</b> Performance on 10 questions on exams that measure the Performance Indicators for BL159/160.</p> <p><b>D.</b> Performance on 10 questions on exams that measure the Performance Indicators for BL213.</p> <p><b>E.</b> Performance on 10 questions (at least 2 questions per class) on exams that measure the Performance Indicators relating to the theory of evolution by natural selection.</p> <p><b>F.</b> Appropriate subscores from the MFT will be reported.</p>	<p>The Biology Assessment Coordinator will collect the evidence from instructors each year. This evidence will be provided to Biology faculty and discussed at a departmental faculty meeting. A biennial report of evidence will be submitted to the university's Director of Assessment.</p>

<p>2. Use an empirical approach to evaluate biological phenomena from primary literature.</p>	<p>Application of critical thinking to assess and accurately interpret scientific data from the primary scientific literature or that has been generated by others.</p>	<p>In 300- and 400-level courses instructors will report results from at least one signature assignment (e.g., essay questions, lab report, manuscript, oral/written report, or critiques of manuscripts) on which students must design an experiment or evaluate biological data. The results will be reported as “exceeds expectations”, “meets expectations”, or “doesn’t meet expectations”.</p>	<p>The Biology Assessment Coordinator will collect the evidence from instructors each year. This evidence will be provided to Biology faculty and discussed at a departmental faculty meeting. A biennial report of evidence will be submitted to the university’s Director of Assessment.</p>
<p>3. Communicate biological knowledge effectively.</p>	<p>Ability to accurately represent and communicate biological information (data, concepts, phenomena, etc.) from the primary scientific literature or that has been generated by others.</p>	<p>In 300- and 400-level courses instructors will report results from at least one signature assignment (e.g., essay, lab report, manuscript, oral/written report, or critiques of manuscripts) on which students must communicate about biological data. The results will be reported as “exceeds expectations”, “meets expectations”, or “doesn’t meet expectations”.</p>	<p>The Biology Assessment Coordinator will collect the evidence from instructors each year. This evidence will be provided to Biology faculty and discussed at a departmental faculty meeting. A biennial report of evidence will be submitted to the university’s Director of Assessment.</p>

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