CELL & MOLECULAR BIOLOGY MAJOR

LEARNING OUTCOMES, PERFORMANCE INDICATORS & MEASURES FOR

Learning Outcomes *Students will be able to*:	**Performance Indicators**	**Measures**	**How is the information used?**
1. Demonstrate a broad knowledge of biology and develop competency in specific areas of interest.	**A.** Understanding of the basic chemical principles, cell structure and organization, and metabolism of living organisms. **B.** Understanding of plant and animal anatomy and physiology, with an emphasis on form and function. **C.** Understanding of the principles of molecular, transmission, quantitative, evolutionary, and population genetics. **D.** Understanding of cell signaling, regulation of protein function, eukaryotic cell cycle control, and cancer. **E.** Understanding of gene and genome analysis, genome organization, transposable elements, chromosome structure, replication and expression of genetic information in eukaryotes.	**A.** Performance on 10 questions on exams that measure the Performance Indicators for BL155/157. **B.** Performance on 10 questions on exams that measure the Performance Indicators for BL156/158. **C.** Performance on 10 questions on exams that measure the Performance Indicators for BL213. **D.** Performance on 6 questions on exams that measure the Performance Indicators for BL459. **E.** Performance on 6 questions on exams that measure the Performance Indicators for BL465.	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.
2. Use an empirical approach to evaluate biological phenomena.	Demonstrate ability to design experiments and interpret experimental results.	Instructors from BL213, 215/L, 301, 302, 310/L, 399, 410, 459, 465, 470, 417, and 475 will report results from at least one assignment or essay question in which a student is required to design an experiment to examine a biological problem. The results	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.

		will be reported as "exceeds expectations", "meets expectations", or "doesn't meet expectations".	
3. Analyze biological data and communicate its importance through effective oral and written performance.	Ability to accurately present and communicate biological data information (data, concepts, phenomena, etc.).	Instructors in BL213, 215/L, 301, 302, 310/L, 399, 410, 459, 465, 470, 471, and 475 will report results from an assignment (e.g., essay, lab report, manuscript, oral/written report, or critiques of manuscripts) in which a student displays scientific communication skills. The results will be reported as exceeds expectations, meets expectations, or deficient.	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.

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