

## Common Course Outline

- A. Course Prefix, Number, and Title:** BIOL 2230 Directed Research in Biology  
MNTC: No
- B. Semester Credit Value:** Variable 1-6
- C. Prerequisites (grade of C required in the courses):** Permission of the instructor
- D. Recommended Skills, Abilities, or Coursework:** College level Mathematics, Reading and Writing. BIOL 1100 or BIOL 1106 recommended.
- E. Catalog Description:**  
Advanced concepts in biology applied to real-life research problems. Under faculty direction, students will learn to analyze research problems, analyze data, and will use equipment and procedures typical of laboratory or field research in order to help address ongoing research problems. Specific topics will vary from semester to semester. Students will be expected to present their research orally or in writing. Students may take the class more than once.
- F. Course Information**
- Total classroom hours per week: Variable hours (commensurate w/credits), according to credit load that semester
  - Total laboratory hours per week: Variable hours
  - Total clinical hours per week: 0 hours
  - Other (rehearsals, studio, etc.) hours per week: 0 hours
  - Additional fee to student: Yes
  - Course is required for No degree
  - Specific degree or certificate name: n/a
- G. Learner Outcomes**
- Demonstrate an understanding of science as a process.
  - Participate in guided laboratory or field research.
  - Develop and hone laboratory skills critical for advanced biology research.
  - Analyze relevant reports and data.
  - Evaluate and analyze student-generated data.
  - Develop and demonstrate communication skills appropriate for undergraduate research.
- H. Minnesota Transfer Curriculum** N/A
- I. Major Areas of Course Content**
- Research and evaluate relevant published reports/data that pertain to the scientific research project.
  - Develop essential skills appropriate to advanced biology topics.
  - Demonstrate comprehension of the selected topic by engaging in discussions.
  - Develop and demonstrate scientific communication skills using appropriate scientific style and format.
  - Present research results to peers and/or faculty.
- J. Credit for Prior Learning Options:**

Option	Availability (Yes or No)	If "Yes," Procedure for Granting Credit
Course-Specific Exam	No	
Credit by Portfolio Review	No	

- K. Proposed Implementation Date:** Spring 2014
- L. Common Course Outline Review**

Reviewed by:	Date:
Department/Division/Dean	September 2013