Course Outcomes Guide (COG)

Course Title: Bio114 Sp15 **Date:** 5/11/15

Course Team: Nickerson

Expected Learning Outcomes

- Students will access, process, analyze and synthesize scientific information.
- Students will apply knowledge of specific course content to enhance understanding of personal and societal scientific issues.
- Students will be able to understand and apply the scientific method and use critical thinking skills in order to generate, graph, analyze and interpret scientific data and reports.
- Students will use verbal and writing skills to clearly communicate biological concepts in a comprehensive scientific report.
- Students will apply computer and information literacy skills in the preparation of a scientific report.

Assessment

- 3 multiple choice / short answer exams (100 pts each)
- 1 cumulative final exam (100 pts)
- 15 lecture homework assignments (P/F, 10 pts each)
- 10 online lecture quizzes (high ten, worth 10 points each
- 6 lab quizzes/assignments (20 pts each)
- 2 independent online learning (50 each
- 1 scientific research paper: Ecology of a Freshwater Stream

Validation

Homework assignments and quizzes are assessed automatically by online educational programs designed by the publishers of the course textbook. Each assessment item is linked to a specific learning objective and ranked by difficulty level 1-5.

All assignments that are not automatically graded are assessed for correct information using a common rubric.

The Common Final Exam has been developed in house by the instructor. The scores on the Common Final exam are highly correlated with course grades.

Results

SP15 Bio114 M01-M02 Nickerson						
Number of students in	18					
Number of students completing Common Final Exam (graded scantrons)	17					
% Withdrawn	1					
% Walk-away F	1					
% Student success	77					
Average % score Common Final Exam	86.9					
Average % score Critical Thinking / Gen. Ed. Skills	86					
Average Course Grade	87.4					
Course Grade Distribution (%)	A	B	C	D	F	W
	41	12	24	6	6	1

Follow-up

The average grade in this class is high because all students enrolled passed the pre-requisite course of Bio113 or Bio101 with a B or better, making this a highly selected and competitive group which included a large proportion of highly motivated STEM Middle College biology majors.

Students taking this course as a pre-requisite for entrance into professional and graduate school understand the necessity of earning an A. These students are highly motivated and spend a lot of time engaging course material and studying to achieve this goal. Course content has been developed to be rigorous and provide a strong background in the biological sciences.

Following a state wide meeting of biology instructors and program directors it was determined that this course curriculum is in general alignment with all other MD community colleges in both scope and difficulty for a majors level introductory (100 level) biology course. The exception seems to be that we are the only college who includes advanced topics in cell communication, gene regulation, and molecular biology in addition to a capstone research project.

Budget Justification

Students will rely heavily on LSC services for:

- access to course materials, physical and online
- printing of course handouts and notes
- private tutoring
- group study