

## Course Outcomes Guide (COG)

**Course Title:** Bio114 Sp14

**Date:** 5/11/14

**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 correlates with course grades.

## Results

# students	%A	%B	%C	%D	%F	Average Course Grade
13	54	46	0	0	8	86.8

## 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. It was a very select and competitive group. There was a large number of highly motivated Middle College, Biology majors, and STEM students enrolled. Many weaker students did not continue into Bio114. There was only one walk-away F.

Students taking this course as a pre-requisite for entrance into professional and graduate school understand the necessity of earning an A. These students 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.

More challenging and difficult content could be introduced at the risk of reducing the number of students earning A's and B's and opting to take Bio102, a less challenging course, instead.

## Budget Justification

Students will rely heavily on SLC services for:

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

<b>SP14</b> COURSE-section instructor	BIO114-01 Nickerson					
Number of students in section (on roster)	14					
Number of students completing Common Final Exam (graded scantrons)	13					
% Withdrawn	0					
% Walk-away F	7					
% Student success	96					
Average % score Common Final Exam	89					
Average % score Critical Thinking / Gen. Ed. Skills	84.6					
Average Course Grade	86.8					
Weakest Content Area (from Item Analysis)						
Course Grade Distribution (%)	A	B	C	D	F	W
	53	43	0	0	7	0