

Course Outcomes Guide (COG)

Course Title: Bio114 SP18

Date: 5/10/18

Course Team: R. 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 apply the scientific method and use critical thinking skills in order to generate, graph, analyze and interpret scientific data and reports.
- Students will communicate biological concepts verbally and in writing and/or presentations.
- Students will apply computer and information literacy skills in the preparation of lab reports and written assignments.

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) / See Masteringbiology.com
- 10 online lecture quizzes (high ten, worth 10 points each) / See Moodle
- 10 lab quizzes/assignments (20 pts. each) (sample attached)
- 2 independent online learning assignments (50 pts. Each) / See Moodle
- 1 scientific research paper: Ecology of a Freshwater Stream (250 pts.) / See Moodle

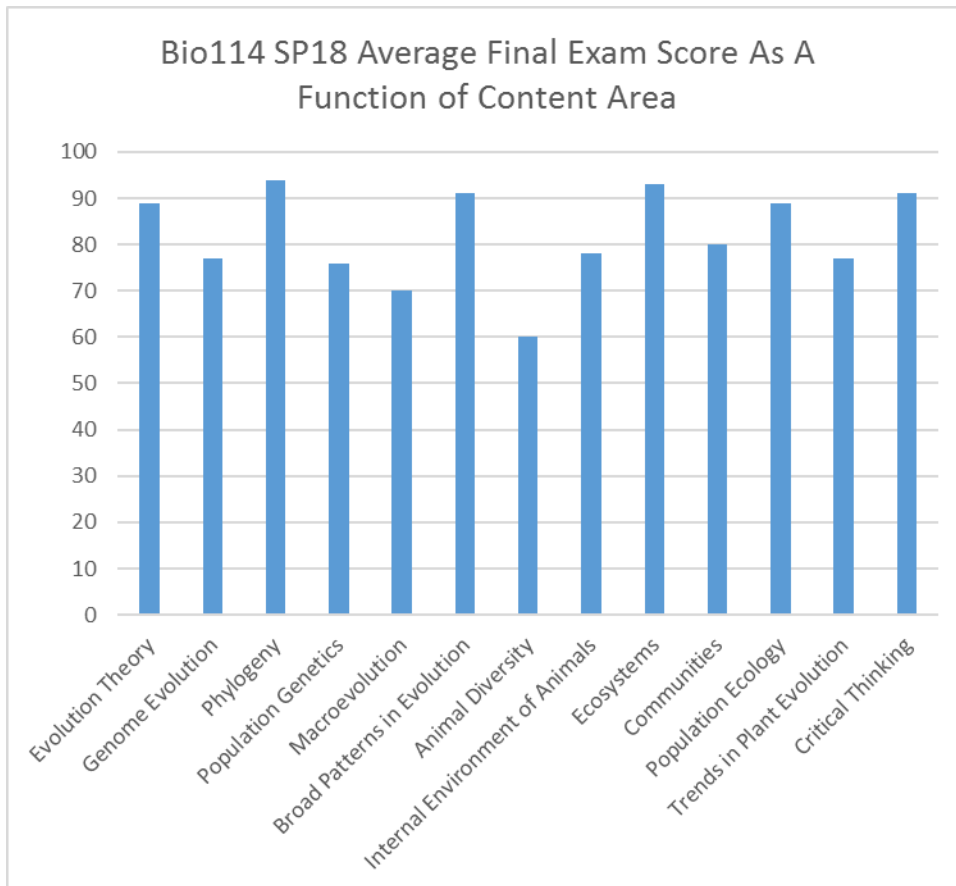
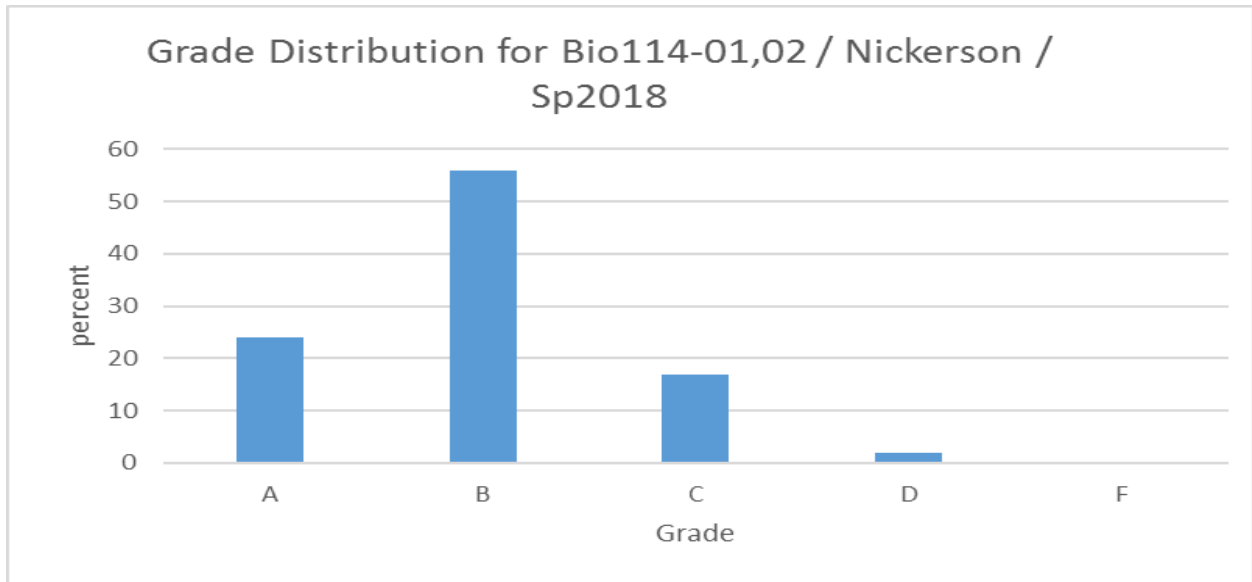
Validation

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



Follow-up

The average grade in Bio114 is high because all students passed the pre-requisite course of Bio113 with a C or better, making this a highly selected and competitive group which included 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 to achieve this goal. Course content has been developed to be rigorous and provide a strong background in the biological sciences.

Item Analysis of content areas assessed on the Final Exam shows that student scores are lowest for Animal Diversity. This topic is covered only as an independent study module with no lecture. To improve student learning outcomes, at least one lecture class should be devoted to this topic.

Budget Justification

Successful delivery of the course content relies on the continued supply of lab reagents and lab equipment required to perform laboratory investigations. The purchase and preparation of these materials depends on the Science Laboratory Coordinator.

Students rely heavily on Student Learning Center and Testing Center services for:

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