

BIO 392 – Senior Projects II
Course Syllabus – Spring 2017
Dr. Kenneth Klemow

OBJECTIVES

Primary Course Objectives:

To serve as the second part of a capstone sequence for Senior Biology majors that will allow them to conduct an open-ended problem-based project, enabling them to integrate information gained during their careers at Wilkes, and discover something new to science. Students will communicate their new information orally, in poster format, and in writing.

By virtue of completing this course, students will:

1. Continue to work as a team under the direction of one or more faculty mentor(s) to carry out the study problem that was the subject of the proposal prepared for BIO 391.
2. Continue to identify and master existing literature that bears upon the study problem.
3. Learn best practices relating to presenting research findings through different modes, including oral presentations, posters, and manuscripts.
4. Apply best practices to presentation of project findings by way of:
 - a. Three oral reports discussing the project: two being progress reports earlier in the semester, and the last being a summative report at the end of the semester.
 - b. A summative poster describing project findings, presented at Biology Research Night in late April or early May.
 - c. A summative manuscript in the format of a journal article describing project findings. The first draft will be submitted in early April and reviewed. The final draft will be due at the end of the semester.

Important consideration:

Many students enrolled in BIO 392 will likely present their findings at local, regional, national, or international conferences. Therefore, this course will help those students prepare effective posters or oral presentations for outside audiences.

COURSE SCHEDULE

(subject to change, students will be given ample notice of any changes)

- 30 Jan. – Course introduction
 6 Feb. – Team reports on status and plans for semester (15 min. each)
 13 Feb. – Team reports on status and plans for semester (15 min. each)
 20 Feb. – How to prepare an effective poster I
 27 Feb. – How to prepare an effective poster II
 6 Mar. – *Spring Break (no class)*
 13 Mar. – How to prepare an effective manuscript
 20 Mar. – Student presentations: Progress report (20 min. each)
 27 Mar. – Student presentations: Progress report (20 min. each)
 3 Apr. – How to attend a meeting. Draft manuscript due (5:00 P.M.)
 10 Apr. – *No class*
 17 Apr. – *No class*
 24 Apr. – Student presentations: Final semester report (20 min. each)
 1 May – Student presentations: Final semester report (20 min. each)
 2 May – Student presentations: Final semester report (20 min. each)
 3 May – Research Night
 12 May – Final manuscript due (5:00 P.M.)

GRADING

Presentation 1:	10 points (5 team, 5 individual)
Presentation 2:	30 points (15, 15)
Presentation 3:	30 points (15, 15)
Poster:	40 points (30, 10)
Final manuscript:	40 points (40, 0)
<u>Mentor recommendation:</u>	<u>50 points (0, 50)</u>
Total:	200 points

Grade assignment:

180 - 200 points = 4.0	170 - 179 = 3.5	160 - 169 = 3.0
150 - 159 = 2.5	140 - 149 = 2.0	130 - 139 = 1.5
120 - 129 = 1.0	<110 - 179 = 1.0	

Note: Schedule and grading are subject to change. Students will be given appropriate notice of any changes that are implemented.

Required reference : Pechenik, J.A. 2016. *A Short Guide to Writing about Biology* (9th Edition. Pearson. (Available at Wilkes U. Bookstore)

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BIO 392 – COURSE POLICIES

Attendance Policy:

Attendance is mandatory and will be taken at each session. Absences will be excused with a note from a physician or Student Dean. Since most sessions will involve presentations by class members, it is common courtesy to show up and be respectful. If you arrive late, please slip in during the break between one group and the next. More than two unexcused absences will result in automatically failing the course.

Academic Honesty Policy:

As with all courses at Wilkes, students are expected to adhere to the academic honesty policies outlined in the Wilkes Student Handbook. Any student found to be in violation of any policy will be subject to disciplinary action that may involve a reduced grade or expulsion from the course. Since many students will be taking this course during their last semester at Wilkes, such disciplinary actions may impact graduation status.

Since students will be carrying out work that may be disseminated to a wider scientific or lay audience, students will be expected to adhere to appropriate scientific conduct. In particular, students will properly cite all published sources (including those in print and online media), collect and analyze data with scrupulous honesty, and honestly report their findings. In no case should students fabricate results, merely to “have something to present.” Students found to be in violation of those standards will receive disciplinary action as determined by the Wilkes Biology Department. Should any falsification be discovered after presentation to an outside audience, students would then be subject to disciplinary action under Wilkes’s Research Misconduct Policy.

About teamwork:

Students will normally participate in their project with 1-3 other classmates. Working as part of a team reflects changes in the culture of science over the past twenty years. At a professional level, team members often have complementary experience that allows them to tackle questions that no single scientist can address.

In BIO 391-392, participants in a team will likely have differing skills that they can bring to the effort. However, as students, each member will have his / her own aptitude and motivation for the project at hand. Often, challenges will arise regarding responsibilities and accomplishments. Recognizing those dynamics, students will be graded both on their own performance and on the quality of the group effort.

Should a dispute arise among members of a team, all participants will be encouraged to resolve the issue on their own. Should efforts to solve the issue internally not be successful, students should see the faculty mentor. In those cases where the mentor cannot successfully resolve the issue, the course instructor will intervene as a last resort and apply a remedy, which may involve reconstituting the team.

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Working with your mentor:

All students will pursue projects with one or more faculty mentor(s). A successful relationship will involve open and clear communication with your mentor(s), typically achieved through regular meetings.

The primary role of the mentor is to provide guidance during all phases of the project, based on his / her expertise. To that end, they serve as consultants. While some mentors are more hands-on than others, the ultimate responsibility for the success or failure of the project lies with the student team. Students will be expected to meet regularly with their mentors. However, mentors will not be expected to be materially involved in the day-to-day execution of the project.