

Senior Seminar [BIOL 4600 – C01]

Syllabus (Spring 2016)

Type	Time	Days	Where	Class Type
Class	12:30pm-1:45pm	Thursday	Woodward 255	Seminar

Instructor: **Dr. Valery Grdzlishvili, Ph.D., Associate Professor**

Department of Biological Sciences (office: Woodward Hall 486B)

E-mail: vzgrdzl@uncc.edu

Course URL: UNCC Moodle: <https://moodle2.uncc.edu/>

Instructor's URL: <http://clas-pages.uncc.edu/valery-grdzlishvili/>

Office Hours: Monday 2 - 3 PM

Office Hours: Thursday 2 - 3 PM

E-mail: vzgrdzl@uncc.edu

Prerequisites: Biology major, Senior standing, BIOL 3111, BIOL 3144, BIOL 3166, and either BIOL 3272 or BIOL 3273. Student presentation of oral and written reports from pertinent biological literature. Course Attributes: *Oral Communication Requirement, Writing Intensive Requirement*

GOALS: Biology 4600 fulfills the senior seminar requirement for all Biology students.

There are 4 major goals for this class:

1. **To improve your skills related to interpreting data from PRIMARY research literature**
2. **To allow you to work throughout the semester on your oral communication skills**
3. **To work on your writing skills**
4. **To participate in the departmental assessment of our program**

The students will learn to critically read research articles, to give a scientific presentation that appropriately addresses/assesses both the topic and the audience in a most effective way.

REQUIREMENTS

Two oral presentations, a written summary, class participation, and taking our departmental assessment exam.

Guidelines for oral presentation and written paper (based on the original guidelines developed by Dr. Matt Parrow, Dept. of Biological Sciences, UNC Charlotte):

1. Oral Presentations: Each student will give two oral presentations on the same article from the ***primary research biological literature***. The ***first presentation*** will last 15 minutes plus 5 minutes for questions and should provide a general background to the scientific paper ***without going into the details of the paper***. The ***second presentation*** should also be 15 minutes plus 5 minutes for questions, and ***should be focused*** on the presented paper and must incorporate suggested comments from the peer critiques of the first presentation. **DO NOT REPEAT SLIDES FROM YOUR FIRST PRESENTATION!**

Required criteria for selecting a paper to present:

1. It must be a primary research paper, published in a good scientific journal – **the journal should have impact factor 3 or more**. Example: Virology has Impact Factor of -3.321 (<http://www.journals.elsevier.com/virology/>)

- Read about impact factor here - <http://wokinfo.com/essays/impact-factor>.
2. It must be on a biological topic that interests you!
 3. It must be “brand new” – **no older than 2015**.
 4. The paper you selected must have the following sections: **Title, Authors, Abstract, Introduction, Methods, Results, Discussion and Literature Cited** (or some variation thereof).

Outline of your presentation:

1) *Introduction/Background* - give background information on your topic sufficient to allow students to understand: what was **the goal** and **the objectives** of the study; why the experiments described in your chosen article(s) were done, the experimental system, and the significance of the results you will show. **Make it clear why we should be interested in this topic.**

2) *Results/Methods* - present the data and describe the techniques used to obtain the data. This is the most challenging section of a presentation for most students. You want to present the results in such a way that the audience can understand and interpret the data. As you present this section, keep in mind your level of understanding when you first read the article.

A good way of presenting data in the results section is, for each graph/table/figure:

- Indicate what question the authors want to answer;
- Describe the plan and methodology they chose to answer the question;
- Describe the type of data they anticipate obtaining;
- Show the data (describe any headings/axis coordinates; allow time for the audience to assimilate the data before focusing attention to specific data points);
- Interpret the data, and give the author’s conclusion;
- State what next question the data led the author’s to ask

3) *Discussion/Conclusion* – this is where you tie everything together, where you communicate what the results mean, what conclusions can be drawn from the results, how the results further our understanding of biology, whether the goals of the study were met, and whether there were any problems in the study. **Provide your own critique of the study**

2. Written Paper: Within **5 business days** following your second presentation you must submit (**please, both e-mail me your MS Word file AND give me a print of your paper**) a summary (**4 pages; 1.5 line spacing; 1 inch margins; 12 point Times New Roman font**) explaining the paper. The same goals as exist for the PowerPoint presentation applies here – present/explain the topic/article. The following should be covered in the paper:

- **Background:** What were the questions that led to this study? How does this study fit into the overall literature on the topic?
- **Hypothesis:** What is the specific biological hypothesis that was tested in this study?
- **Experimental design:** What was the experimental strategy that was used to test the hypothesis? Do not just list the procedures. Why did the authors use these procedures and how do the procedures allow the investigators to specifically test the proposed hypothesis?
- **Statistical analysis:** How were the data analyzed? Why were these tests chosen and are they appropriate?
- **Results:** Summarize the findings succinctly. Explain why the authors did a particular experiment. What result led them to do the next experiment? If you want to introduce methods in your paper, it is usually best to do so when you discuss the results that that method was used to generate.
- **Interpretation and conclusions:** How did the author interpret the results? What conclusions were drawn relevant to the original hypothesis? Do you agree that these conclusions are valid?

- In addition to citations you include from the article, you must also include at least 2 references that are primary research articles that were **not** cited in your presented article. Please note that this does NOT mean that you should have a total of only 3 references (your primary article + 2 articles not cited in your primary article); you will likely cite some of the same papers cited in your primary article
- This writing assignment will be graded and returned within two weeks. You will then revise the report, taking instructor comments into account, and resubmit it within two weeks.

General Guidelines.

- Know the difference between primary and secondary literature sources. The citation to accompany a relevant fact is the article that first reported that fact (primary source), not a subsequent article that mentions that same fact (secondary source).
- **Be familiar with plagiarism guidelines. You never use someone else's words verbatim with attribution. Furthermore, you should rarely quote directly text from another article, even when properly cited. You should not simply compile text from various sources; use your own words.**

3. Class Participation: Attendance and class participation are mandatory. Participation will be evaluated based on 3 criteria:

1. *Attendance.* Unexcused absence will lower your grade in this class!
2. *Participation in question and answer period.* Pay attention to the presentation so that you can ask questions.

Grading and Other Course Policies:

1. Letter grades will be assigned on a 5-point scale (90-100% = A; 80-89% = B; 70-79% = C; 60-69% + D; < 60% = F)
2. GRADING FORMULA:
 - **Oral Presentation #1:** 15% of Final Grade
 - **Oral Presentation #2:** 25% of Final Grade
 - **Written Paper:** 40% of Final Grade (initial submission = 10%, resubmission = 30%)
 - **Class Participation:** 15% of Final Grade
 - **Departmental Assessment Exam:** 5% of Final Grade (all students must take the departmental assessment exam, which will test material and skills from BIOL 2120, 2130, 3111, 3144, 3166, and 3273)

Please note that any course averages that Moodle tries to calculate for you will not be accurate because the system cannot manage a complex grading formula. To calculate your class average, you should always consult grading policy for the class and compute your averages using those formulas.

1. **Attendance is required! If you missed a class without serious illness (or another reason specified by UNC Charlotte policies) - a detailed physicians' note will be required for illness), you will lose 5 points (per each missed class) from your final grade.**
2. **You should give your presentation on time! Make-up presentations will be permitted ONLY for serious illness and mandatory UNC Charlotte policies. A physician's note will be required for illness. If you missed your presentation without a physician's note, you will lose 10 points from your final grade and your tests and Final Exam will have higher contributions.**
3. **Each presentation must last 15 minutes +/- 1 minute (plus 5 minutes for questions). Each extra minute (shorter or longer presentation) will result in a 5 point deduction from your grade for the presentation (maximum: 10 point deduction).**

4. You should be able to answer all reasonable answers coming from the instructor or students. Each unanswered question will result in 2 point deduction from your grade for the presentation (maximum: 10 point deduction).
5. Within 5 business days following your second presentation, you must submit (I need a hard copy and an e-mail with your MS Word file) a summary explaining the paper (see above). Every 2 day delay in submission will result in a 5 point deduction from your grade for the presentation (maximum: 10 point deduction).
6. I may modify the standards, requirements and dates set forth in this syllabus at any time. Notice of such changes will be by announcement in class, or by written or email notice.
7. If I am late in arriving to class, you must wait a full 20 minutes after the start of class.
8. The use of cell phones, beepers, or other communication devices is disruptive, and is therefore prohibited during class.
9. No walking in/out during the class (unless an emergency).
10. **Students are permitted to use computers during class for note-taking and other class-related work only. Those using computers during class for work not related to that class must leave the classroom.**
11. Please, use only official UNCC e-mail address for all our communications.
12. It is your responsibility to check your e-mail periodically in case there are some changes

Code of Student Academic Integrity: *Students have the responsibility to know and observe the requirements of the UNC Charlotte Code of Student Academic Integrity. This code forbids cheating, fabrication or falsification of information, multiple submission of work, plagiarism, abuse of academic materials, and complicity in academic dishonesty. <http://legal.uncc.edu/policies/up-407>*

Disability Resource: *If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from Disability Services in the beginning of the semester. For more information regarding accommodations, please contact the Office of Disability Services at 704-687-4355 or stop by their office in Fretwell 230 <http://ds.uncc.edu/sitemap>*

UNC Charlotte Sexual Harassment Policy: *All students are required to abide by the (<http://www.legal.uncc.edu/policies/ps-61.html>) and the policy on Responsible Use of University Computing and Electronic Communication Resources (<http://www.legal.uncc.edu/policies/ps-66.html>). Sexual harassment, as defined in the UNC Charlotte Sexual Harassment Policy, is prohibited, even when carried out through computers or other electronic communications systems, including course-based chat rooms or message boards.*

Religious accommodations: *Students will be provided reasonable accommodations for religious obligations in accordance with University Policy #409: Religious Accommodation for Students (<http://legal.uncc.edu/policies/up-409>). This policy (1) authorizes a minimum of two excused absences each academic year for religious observances as required by the faith of a student; and (2) provides students the opportunity to make up any missed work. Students are asked to submit their request for religious accommodation to faculty prior to the census date of each semester.*

UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity, which includes, but is not limited to, disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

Syllabus changes. *The standards and requirements set forth in this syllabus may be modified at any time by the course f such changes will be made by announcement in class, or by written or email notice, or by changes to this syllabus posted on the course website*

SCHEDULE:

Date	Topic	Student Name
Jan 14	Introduction Topic: “<i>How to Find and Read a Primary Research Paper?</i>”	
Jan 21	Topic: “<i>How to Give a Great Presentation?</i>”	
Jan 28	Student 1 – First Talk Student 2 – First Talk	
Feb 4	Student 1 – Second Talk Student 2 – Second Talk	
Feb 11	Student 3 – First Talk Student 4 – First Talk	
Feb 18	Student 3 – Second Talk Student 4 – Second Talk	
Feb 25	Student 5 – First Talk Student 6 – First Talk	
March 3	Student 5 – Second Talk Student 6 – Second Talk	
March 10	Spring Break – NO CLASS	
March 17	Student 7 – First Talk Student 8 – First Talk Student 9 – First Talk	
March 24	Student 7 – Second Talk Student 8 – Second Talk Student 9 – Second Talk	
March 31	Student 10 – First Talk Student 11 – First Talk	
April 7	Student 10 – Second Talk Student 11 – Second Talk	
April 14	Student 12 – First Talk Student 13 – First Talk	
April 21	Student 12 – Second Talk Student 13 – Second Talk	
May 12 11am- 1:30pm	Final Exam	Departmental Assessment Exam