

Course Syllabus

Senior Seminar | BSC 4931 | U07 | Fall 2018



General Information

Instructor: Dr. Saldana

Class Meeting Time: Tue 2:00pm – 3:15pm

Class Location: OE 222

Office: OE 210

Email: [Canvas](#) (preferred), asaldana@fiu.edu (alternate)

Office Hours: Tue 3:30pm - 5:30pm & Thu 11:00am - 1:00pm, Fri 10:30am - 12:30pm, or by appointment



Course Description & Learning Outcomes

Senior Seminar is designed to help Biology and Marine Biology seniors incorporate the knowledge and skills they have obtained throughout their undergraduate studies. The goal of this course is to provide you with the skills necessary to research primary scientific literature and to effectively integrate and communicate research findings.

By the end of this seminar course, you will be able to:

- Effectively research the scientific literature.
- Distinguish between primary literature and review papers.
- Integrate the findings from various primary literature sources into a cohesive and thoughtful review.
- Deliver a professional presentation of your research topic, and address questions from the audience.
- Provide constructive criticism of a science talk.
- Write an effective CV, and understand the differences between it and a resume.
- Understand the importance of ethical conduct in research and professional settings.



Prerequisites

You are expected to have completed and passed:

- Genetics (PCB 3063)
- Cell Biology (PCB 4023)
- Ecology (PCB 3043)
- Evolution (PCB 4674)



Course Themes

Fact or Fiction? (Option 1)

Have you ever come across a biology-related claim and wondered whether there was any scientific evidence to support this claim? Scientific studies are often the topic of discussion in the news, social media, and even during family dinners. This semester, you can research the scientific validity of a biology-related headline or sound bite you have come across in the past. This theme offers flexibility in terms of the kinds of topics you can explore, so you can write about something you truly find interesting... As long as it is within the field of biology.

The Microbiome (Option 2)

Microorganisms, which include prokaryotes and some eukaryotes^[1], can be found in almost any habitat. Although invisible to the naked eye, these organisms greatly impact human, animal, plant, and environmental health. The microbiome, which is defined as the collection of microorganisms living in a habitat, makes important contributions to the system. Furthermore, changes to the microbiome have been associated with pathological conditions thus it is important to understand the relationships between microbiomes and their environments and the factors that can impact these relationships. In this senior seminar course, you also have the option of writing a literature review and delivering formal oral presentation on the microbiome of a given habitat (organ, organism (animal or plant), or ecosystem). In addition to describing the major species of the chosen microbiome, your review should also focus on the environmental factors that impact the microbiome and how changes to the microbiome can affect the host or be associated with disease.

[1] Although viruses are often considered microbes, these are not included in the description above because they are classified as noncellular entities; nevertheless, the effect of the microbiome on the susceptibility to viral infection and the potential effect of viruses on the microbiome of a system are suitable subtopics for discussion as long as these are within the scope of your review.



Course Materials

- No textbook is required for this course; however, I encourage you to invest in a writing manual. It will become a very useful resource not only for this course but also throughout your professional career.
 - **Please see this list of “[Writing Resources](#),” for recommended writing handbooks and free online resources.**
 - In addition to these resources, the [FIU Center for Excellence in Writing](#) offers free, personalized help and writing workshops.
- Links to assignments will be posted throughout the semester within weekly modules containing content presented in class during that week. In addition to being posted within weekly modules, all assignments and their associated instructions, rubrics, checklists, and/or templates can be found under “Assignments.” Finally, this syllabus also contains links to the rubrics that will be used to grade your final review paper and formal oral presentation.



Grading Policy

Grading Scale

Letter	Range
A	100% - 90%
B+	<90% - 87%
B	<87% - 80%
C+	<80% - 77%
C	<77% - 70%
D	<70% - 60%
F	<60%

Final grades will be assigned according to the scale indicated above and will not be rounded-up. Please do not ask whether you can get a grade bump as this would be unfair to the other students. The answer to that question is emphatically NO. Finally, please, do not ask whether you can turn in extra credit to increase your grade neither at the end of the semester nor at any time during the semester. You will be assigned the grade you earned for the course as per the scale specified above.

Grade Breakdown:

Attendance	12%
Review Paper	
Tentative Title & Short Description	3%
Outline & 10 References	10%
Review Paper* (Re-submission allowed, see details below)	30%
Oral Presentation	
Mini Presentation	4%
Formal Presentation	25%
Participation	6%
Curriculum Vitae	5%
ETS Major Field Test (Graduation Requirement)	5%
TOTAL	100%



Attendance & Participation

You are expected to attend class regularly, to arrive on time, and to remain in class until the end of the period. Given the nature of this course, attendance and participation are important. You will get the most out of Senior Seminar if you are actively engaged in class discussions. Doing this will help you in the process of writing your review and putting together your presentation. Attendance is mandatory and constitutes 12% of your grade. Two percentage points (2%) from your final grade will be deducted for the first unexcused absence, 3% for the second one, and 5% for the third. **If you miss more than 3 classes, your grade will automatically be an F.** You will only be excused for missing class if you have an emergency (please see the section titled "Emergencies" below).

On days during which you are discussing a paper with the rest of the class, your successful completion of the discussion will be counted as your attendance/participation grade for that day. This means that if you are asked, for example, to discuss a figure from one of your sources, and you show up to class, but do not participate, you will not receive any participation credit for attending class that day. If you turn in your slides for the class discussion, but fail to show up to class, this will be considered an unexcused absence.



Assignments

All resources, assignment instructions, rubrics, and templates will be posted on Canvas. **All Submissions will be collected through Canvas (i.e. there are no paper submissions in this course).** In addition to in-class announcements, students will also be notified of any changes to the schedule via Canvas. Please note that although assignments related to your review paper (i.e. outline, review paper and revision) are shown as Turn-It-In assignments, these must be submitted using the assignment link posted on **Canvas**. If you submit an assignment directly to Turn-It-In, it will not display as submitted on Canvas, thus you will not receive credit for it. **USE ONLY the assignment links posted on Canvas to submit ALL assignments.** Please refer to the [Canvas Student Overview](#) and [Canvas Student Guides](#) for more information on how to submit assignments using Canvas.

Review Paper

Below, you will find general information on each of the assignments associated with your review paper. Checklists/rubrics will be provided for each assignment under the "Assignments" link within the module for the week when the assignment is due.

Tentative Title & Short Description (3%):

- Provide a specific and concise tentative title for your review paper.
- Include a 150-250 word description of your topic (background information, the focus/aim of your review (see *assignment link for a more detailed description*)). **Please note** that in order to receive full credit you must adhere to the minimum word count requirement.
- Provide a reference formatted following American Psychology Association (APA), 6th edition style guidelines for a review paper that is related to your topic.
- **Submit via discussion post** (thread: Tentative Title and Short Description) by 11:59 PM of the due date.

Outline & List of 10 References (10%):

- Please refer to the template provided (*see assignment link*).
- Submit 2-3 pages, double-spaced, not including references.
- Use 12 pt. font (Times New Roman or Garamond ONLY).
- Must include 10 references. Of the 10 references, at least 7 must be primary research papers, 3 can be a review papers.
- Must use full sentences (please refer to instructions & template)
 - The papers you select should not be older than 10 years.
- Format references according to APA guidelines (more information provided under "Final Review Paper" below).
- Submit by 11:59 PM on the due date.

Review Paper (10-12 pages) (25%):

A review of the literature on your chosen topic. Your paper should serve as a synthesis of what is currently known about your topic, and what is being investigated. Do not simply summarize each of your primary sources; rather, integrate the information presented, and come up with your own interpretation of the data. If the data on your topic is controversial (i.e. some articles support one view, while others take a different stance), you must address both arguments. Information on how to properly format your paper and references is provided below as well as in the Assignment link for the review paper. Papers will be graded by **rubric**. Please take time to review the **rubric** so that you are aware of the expectations for the review paper.

- Format your paper according to the template provided (*see assignment link*).
- Submit 10-12 pages, double-spaced, not including figures and references.
 - NOTE: Figures are optional
- Use 12pt font (Times New Roman or Garamond ONLY).
- Must include in-text citations.
- Must include 10 references. Of the 10 references, at least 7 must be primary research papers, and up to 3 can be review papers.
 - The papers you select should not be older than 10 years.
- Include an appendix with the abstract from each paper used in your review. PLEASE NOTE: This is a separate submission (*see assignment link for instructions*).
- Submit by 11:59 PM on the due date.
- Format references and citations using APA guidelines.
 - Examples of formatted references are provided below but are also be provided in the template document for the paper (NOTE: The examples below do not have the correct indentation because custom indentation is not an option on Canvas). Please make sure you format your citations and references per APA, 6th guidelines to avoid having points deducted from your paper. You will be taught how to use freely available citation managers to help you automate this process.

Grichnik, J. M. (2008). Melanoma, Nevogenesis, and Stem Cell Biology. *Journal of Investigative Dermatology*, 128(10), 2365–2380. <https://doi.org/10.1038/jid.2008.166>

Parkitny, L., & Younger, J. (2017). Reduced Pro-Inflammatory Cytokines after Eight Weeks of Low-Dose Naltrexone for Fibromyalgia. *Biomedicines*, 5(2), 16. <https://doi.org/10.3390/biomedicines5020016>

Pedersen, L., Idorn, M., Olofsson, G. H., Lauenborg, B., Nookaew, I., Hansen, R. H., ... Hojman, P. (2016). Voluntary running suppresses tumor growth through epinephrine- and IL-6-dependent NK cell mobilization and redistribution. *Cell Metabolism*, 23(3), 554–562. <https://doi.org/10.1016/j.cmet.2016.01.011>

Format in-text citations as follows:

- For one author: (Grichnik, 2008)
- For two authors, both last names are used: (Parkitny & Younger, 2017).
- For 3 or more authors: (Pedersen et al., 2016)

Please note that 5% will be deducted from your raw score (i.e. out of 100 points) for each day an assignment is late (See more information on late assignments below).

Papers and outlines will be checked for plagiarism through Turnitin integration via Canvas. **Plagiarism will NOT be tolerated and will result in a failing grade for the course. Please refer to the Academic Honesty section below for more information on plagiarism.**

Review Paper - OPTIONAL REVISION (25%):

Must revise and incorporate feedback. With significant improvements, this will override the original grade.

Incorporating feedback. I will give you thorough feedback on every item that you submit or present in class. Since the course is structured so that each item builds on to prior ones, you must incorporate my feedback into your new assignments. Failing to incorporate feedback can result in point deductions.

Extra Credit

Take your review paper to [The Center For Excellence in Writing](#) and email me a receipt of your visit (provided by the Center for Excellence in Writing) to receive **5% extra credit toward the grade of your final paper.**

Oral Presentation

Mini Presentation (4%):

A 3-5 minute presentation of 4 slides from your presentation which present key concepts of your chosen topic. You are to present:

- One Background Slide
- Your Question or Hypothesis slide OR a slide stating the purpose of your review
- Two data slides (NOTE: Do not title the slides "Data Slide"; write titles that are descriptive of the information shown on each slide). These slides **MUST contain a figure, graph, or table** from 2 of your primary sources and include a citation.
 - Figures and graphs are preferred over tables

Formal Presentation (25%):

- A 10-12 minute presentation of your research topic with a 3-5 minute Q&A.
- Your presentation **must contain data from at least 3 of the primary sources you used for your review paper** (figures and graphs are preferred over tables).
- The presentation must be uploaded to Canvas by the date you signed up to present (the calendar will be updated once presentation dates are selected). Additionally, please bring your presentation on a memory stick the day you are scheduled to present.
- **PLEASE NOTE: Audio will be recorded for ALL presentations.**
- Your presentation will be graded using the [Southern Association of Colleges and Schools \(SACS\) Rubric for Oral Communications](#) (please note that only the Oral Communications Rubric (page 3) will be used for evaluating the oral presentation).
- **Professional attire is required for your presentation.**

Participation (6%):

In addition to presenting you will also be required to ask at least 4 thoughtful questions throughout the course of the formal presentations.

Curriculum Vitae (CV)

A professional-looking, well organized 1-2 page CV. **Instructions and a Sample are provided within the module for the week and under the "Assignments" link.** Please make sure to save this document as a pdf file to avoid loss of formatting.



ETS Major Field Test

The ETS Major Field Test in Biology is a nationally-scored exit exam for Biology and Marine Biology majors. It is a two-hour, multiple choice (150 questions), online test graded by the Educational Testing Service that allows you to see how you rank nationally against your peers (this exam is a graduation requirement). For the purposes of this class, scoring is as follows:

- 1-29 percentile: 3pts
- ≥ 30 percentile: 5pts

Links for more information:

[Detailed description](#) and [sample test questions](#)



Make-Ups & Late Assignments

The policies for Make-ups and late assignments are as follows:

- Formal Presentation: You will not be allowed to make-up your oral presentation unless you can provide official documentation (For example: doctor's note, court summons, police report) that your inability to be present was the result of an emergency (**see what constitutes an emergency below**). In light of this, please make sure you select your date to present carefully, as you will not be allowed to reschedule your presentation.
- Other assignments: Although late assignments will be accepted, 5% will be deducted from your raw score for each day your assignment is late. **Please note** that the maximum number of days an assignment may be submitted late will be indicated for each individual assignment (i.e. each assignment has a "close date"); **late assignments will not be accepted after the assignment closes.**
- ETS Major Field Test: If you have a scheduling conflict for the ETS exam (i.e. you have another exam at the same time), you will be allowed to make-up the exam in a different senior seminar section. Please note that you will be asked to provide proof that your inability to take the exam at the schedule time is the result of a scheduling conflict related to the university's exam schedule.



Emergencies

Emergencies are unforeseeable and unavoidable events that preclude you from being able to attend class.

Emergencies include:

- Serious illness/hospitalization
- Car accident in which you were directly involved
- Death of an immediate family member

You will be required to provide documentation (e.g., doctor's note [Note: NOT an R.N.'s note], copy of death certificate, police report) in order to be excused and be able to make-up an exam or assignment. The documentation provided must be a valid and verifiable written letter signed by a professional or some other type of irrefutable proof.

Examples that do not constitute an emergency:

- Having a cold or the flu
- Getting stuck in traffic
- Scheduling a routine doctor's appointment (i.e. not related to an emergency) during class time

Although some of these are unfortunate circumstances, they are not emergencies and will not be treated as such.



Incomplete Grades

In the case of extreme circumstances arising from reasons beyond your control (please, see description of emergencies above), an incomplete (IN) grade may be given at the instructor's discretion. Please Note:

- Official documentation will be required (NO EXCEPTIONS).
- **IN grades will not be given prior to the drop date or after the course has ended.**
- In order to receive an IN grade, you must have completed at least half of the assigned course work and have a passing grade at the time the IN grade is requested.
- An unfortunate event, such as the death of a family member, does not automatically guarantee that you will be granted an incomplete for the course. Each case will be carefully evaluated, and your overall performance will be taken into account when making a decision.
- If granted an incomplete, the course must be completed within two terms; otherwise, you will receive the grade you would have earned without being given credit for any incomplete assignments (this will likely be a failing grade).



Class Rules

In order to promote an environment conducive to learning, please adhere to the following common-sense rules:

- **Cell phone use:** Cell phones are not allowed during class; please keep them silenced/off. If you are expecting an emergency phone call/message, you must notify me BEFORE class begins.
- **No computers:** Unless we use it during class.
- **Audio/video recording & photography:** Audio recording is allowed, but please NO video recording or photography, as all material will be posted on Canvas.

- **Disruptive Behavior:** It is everyone's responsibility to maintain a professional environment that promotes learning, minimizes distractions, and protects students'/instructor's rights. Students who fail to adhere to the standard code of conduct set forth by the instructor and the [FIU Student Handbook](#) may be subject to disciplinary action.



Academic Conduct

Conduct: It is everyone's responsibility to maintain a professional environment that promotes learning, minimizes distractions, and protects students'/instructor's rights. Students who fail to adhere to the standard code of conduct set forth by the [FIU Student Handbook](#) and the FIU Policies webpage may be subject to disciplinary action in accordance with university policies.

Sexual Harassment: Sexual harassment violates student and faculty rights and will not be tolerated. FIU's sexual harassment policy can be found in the [FIU Student Handbook](#). [ⓘ \(http://hr.fiu.edu/uploads/file/EOP/Sexual_Harassment_Policy_as_of_02-10.pdf\)](http://hr.fiu.edu/uploads/file/EOP/Sexual_Harassment_Policy_as_of_02-10.pdf)

Academic Integrity: Florida International University has a strict, no-tolerance policy against cheating and plagiarism. The purpose of this course, and of a college education in general, is to provide you with the knowledge you will need as a professional, and to empower you to think independently. Cheating and plagiarism are counterproductive to this purpose, disrespectful to your colleagues, and will not be tolerated. How you conduct yourself now is an indication of the kind of professional (physician, dentist, pharmacist, nurse, scientist, etc.) you will be in the future.

- **Plagiarism** is the act of passing another person's work, whether or not the work is published, as one's own. Examples of plagiarism include:
 - Paraphrasing someone else's ideas without the use of appropriate citations.
 - Copying verbatim without the use of quotation marks (NOTE: **quoting, even when quotation marks and citations are used, is strongly discouraged in scientific writing**. In order to demonstrate understanding you must be able to synthesize the information in your own words (and remember to always cite the author(s)).
 - Changing a few words in a sentence without actually writing the sentence in your own words.
 - Turning in someone else's work as your own (i.e., copying your classmates' work).
 - **Giving the incorrect citation (i.e. using fake citations, or using citations haphazardly)**
 - Turning in work you have already turned in for another class.
 - Please visit <http://www.plagiarism.org/> [ⓘ](#) for more information on what constitutes plagiarism and how to avoid it.

Cheating and plagiarism will not be tolerated. Any instances of cheating or plagiarism will be dealt with according to FIU's plagiarism and academic misconduct policies, which can be found at:

<http://academic.fiu.edu/polman/sec2web.htm#two-forty-four>



ADA Accommodation Statement

Students with documented disabilities, as per the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973 (PL 933-112 Section 504), may request accommodations (physical or academic) by contacting the Disability Resource Center (tel. 305-348-3532, TTY/TDD 305-348-3852). The student is also responsible for contacting the instructor as soon as possible such that reasonable accommodations can be made.



Email Etiquette

Please feel free to email me (**Canvas email preferred**) if you have any questions or concerns. I will try to respond within 24-48 hours, but please keep in mind that I may not be able to respond right away if I receive your email during the evening or over the weekend. If you have a general question about due dates or assignments, you can also post your question to the Canvas Chat (see course menu) or the **Open Forum Discussion Board** (https://fiu.instructure.com/courses/6634/discussion_topics/21869). If your question/concern is of a personal nature (i.e. illness, grades), please contact me directly. In order to ensure that your email receives a timely response, please make sure to:

- **Use Canvas email whenever possible.**
- **Include your name in your signature** (This is particularly important if you are not contacting me through Canvas as I may not see your name associated with your email address. Additionally, this is common courtesy when sending an email).
- Include a relevant subject heading (*Please DO NOT just hit reply to the last email you received from me*).
- If not using canvas, please include BSC 4931 in the subject heading to ensure your email does not end up in my spam/junk folder.



Schedule

Date	Topic	What's Due
Aug 21	Introduction & Theme	
Aug 28	Electronic Databases & Resources Primary vs. Review Papers Citation Managers	Topic Ideas Bring Laptops
Sep 4	Reading & Interpreting Scientific Papers Outlining & Writing a Review Paper I Plagiarism & Ethical Conduct	Tentative Title & Short Description
Sep 11	Preparing & Delivering a Science Talk Death by Power Point	Deadline to Select Presentation Dates through Canvas
Sep 18	Writing a Review Paper II: Pitfalls to Avoid	Outline & 10 References
Sep 25	Oral Discussion of a Primary Source	Slide with Figure from PRIMARY Source

Oct 2	Writing a Review Paper III: Good & Bad Examples	
Oct 9	Mini-Presentations (9)	Mini Presentation Slides (Group 1)
Oct 16	Mini-Presentations (9)	Mini Presentation Slides (Group 2)
Oct 23	Writing the Review (Pitfalls to Avoid) Curriculum Vitae vs. Resume	Review Paper
Oct 30	Formal Presentations (4)	
Nov 6	Formal Presentations (4)	Curriculum Vitae
Nov 13	Formal Presentations (4)	
Nov 20	Formal Presentations (4)	
Nov 27	Formal Presentations (2)	
Dec 4	ETS Major Field Test (TIME TBA)	Review Paper Revisions (OPTIONAL)

PLEASE NOTE: This syllabus and schedule are subject to change