

# Course Syllabus

**BSC 4931 | Senior Seminar | Fall 2017 | RVC & RVD**

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**Office Hours:** Th 3:00pm – 4:30pm OR by appointment.

**NOTE:** For a list of assignments (with due dates) click "[Jump to Today](#)" at the top of the page. Assignments are also shown in the course calendar and under the Assignments link.

## Course Description

Senior Seminar is designed to help Biology and Marine Biology seniors to 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.

## Course Objectives

To write a clear and articulate **review paper** that synthesizes current scientific findings, starting with choosing a topic to completing a properly cited paper. You will then share your findings with the class in the form of an **oral presentation** worthy of a scientific meeting or job talk. In addition, you will write, or improve upon, your **Curriculum Vitae (CV)**.

## Learning Outcomes

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.

## Course Themes

This semester you will have the choice of one of two themes for your review and presentation (the review and presentation must be on the same topic). These themes are "[The Microbiome](#)" or "[Fact or](#)

*Fiction? Discussing the Validity of a Biology-Related Claim".* Please see a short description of each theme below:

### **The Microbiome**

Microorganisms, which include prokaryotes and some eukaryotes<sup>[1]</sup>, 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 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). You will describe the major species of the given microbiome, their contributions to the system, and the environmental factors that impact the composition of the microbiome and/or its relationship with the host.

<sup>[1]</sup> 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.

### **Fact or Fiction?**

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 also have the option of writing your review and delivering a presentation examining the scientific validity of a biology-related headline or sound bite you have come across in the past.

### **Pre-requisites**

PCB 3043, PCB 3063, PCB 4023, and PCB 4674.

### **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 (<http://writingcenter.fiu.edu> ([Links to an external site.](#))[Links to an external site.](#)) offers free, personalized help and writing workshops.
- In addition to being posted within weekly modules, all assignments and their associated instructions, rubrics, checklists, and/or templates can be found under "Assignments." Details for each assignment will display once the module unlocks; nevertheless, this syllabus contains links to the rubrics that will be used to grade your review and presentation.

## Grade Distribution

<b>Participation Assignments</b>	13%
<b>Review Paper</b>	
• Tentative Title and Short Description	2%
• General Outline (2 pages, double-spaced) & 5 References	5%
• Detailed Outline (4-5 pages, double-spaced) & 10 References	10%
• Final Paper (10-12 pages, double-spaced) & References	25%
<b>Oral Presentation</b>	
• Mini Presentation	4%
• Presentation	25%
• Participation (questions & evaluations during formal presentations)	6%
<b>Curriculum Vitae</b>	5%
<b>ETS Major Field Test in Biology</b>	5%
<b>TOTAL</b>	<b>100%</b>

### Participation Assignments (13%)

Given that this is a fully online course, and as such does not require attendance or face-to-face interaction, your participation in the course will consist of discussion posts, short videos, or worksheets. Each assignment will be worth 1% of your final grade and will vary depending on the week (please see the assignments labeled in blue in the schedule provided below). These assignments will be short and designed to help you prepare for writing an effective review paper and delivering a successful presentation. Although the participation assignments will not be graded (i.e. will not be assigned a letter grade), you must follow the specifications provided for the assignment to receive credit for completing it. Please make sure you review these specifications and use them as a checklist.

### 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 within the module for the week when the assignment is due and under the "Assignments" link.

#### Tentative Title & Short Description (2%):

- 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). **Please note** that in order to receive full credit you must adhere to the minimum word count requirement
- Submit via discussion post (thread: Tentative title and short description) by 11:59 PM of the due date

#### General Outline & List of 5 Annotated References (5%):

- Please see template provided
- 2 pages, double-spaced, not including references
- 12 pt. font (Times New Roman ONLY)
- Must include 5 references. Of the 5 references, at least 4 must be primary research papers, 1 can be a review paper
- Format references according to the American Psychology Association (APA), 6<sup>th</sup> edition style (more information provided under "Final Review Paper" below)
- References must include annotations.
- Submit by 11:59 PM on the due date

#### Detailed Outline & 10 References (4-5 pages) (10%):

- 4-5 pages, double-spaced, not including references
- 12 pt. font (Times New Roman ONLY)
- Use full sentences (template is provided)
- Must include in-text citations
- Must include 10 references. Of the 10 references, at least 7 must be primary research papers, 3 can be review papers
- Format references and citations using the American Psychology Association (APA), 6<sup>th</sup> edition style (more information provided below)
- Submit by 11:59 PM on the due date

#### Final 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 about how to properly format your paper and references is provided below and 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. In addition to this rubric, the [Southern Association for Colleges and Schools \(SACS\) rubric on Written Communications](#)  (page 2) will also be completed for department accreditation purposes.

- Format your paper according to the template provided
- 10-12 pages, double-spaced, not including figures and references
  - NOTE: Figures are optional
- 12pt font (Times New Roman ONLY)
- Must include in-text citations

- Must include 10 references. Of the 10 references, at least 7 must be primary research papers, 3 can be review papers.
- Include an appendix with the abstract from each paper used in your review.
- Submit by 11:59 PM on the due date
- Format references and citations using the American Psychology Association (APA), 6<sup>th</sup> edition style.
  - Examples of formatted references are provided below but will also be provided in the template document for the paper (NOTE: *This do not have the correct indentation as it is not an option on Canvas*). Please make sure you format your citations and references per APA, 6<sup>th</sup> guidelines to avoid having points deducted from your final 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, p. 2366).
- For two authors, both last names are used: (Parkitny & Younger, 2017, p. 3).
- For 3 or more authors: (Pedersen et al., 2016, p. 558)

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

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.**

## 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.

#### 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 4 of the primary sources you used for your review paper** (figures and graphs are preferred over tables).
- The presentation must be uploaded to Canvas on the afternoon (by 5PM) prior to the date you are scheduled to present (please see calendar (or click on the link under Course Summary below) to sign up for a presentation slot). Additionally, please bring your presentation on a memory stick the day you are scheduled to present.
- **PLEASE NOTE: Video 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**
- **IMPORTANT NOTES:**
  - **Presentations will take place on campus (WC 130) on November 11th and November 18th from 8:45am-1:45pm.**
  - **Please use the calendar feature on Canvas to select a date and time slot for your presentation by 9/11/17.**
  - **PLEASE NOTE that your attendance is required for the entire session (8:45am-1:45pm) during which you are presenting (not on both dates, only on the date you are presenting).**
  - **In the event that you are unable to attend in person, you must virtually attend the entire session and deliver your oral presentation to all your classmates. If you are unable to attend in person and need accommodations to attend and present virtually, you must inform me during the first week of class (by 8/28/17, 11:59PM).**

#### Participation (6%):

In addition to presenting you will also be required to ask at least 4 thoughtful questions and to complete a short evaluation for 3 classmates over the course of the presentations.

#### **Curriculum Vitae (CV) (5%)**

A professional-looking, well organized 1-2 page CV. Samples 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 in Biology (5%)**

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 \(Links to an external site.\)](#)[Links to an external site.](#) and [sample test questions \(Links to an external site.\)](#)[Links to an external site.](#)

The ETS exam will be administered on-campus on Saturday, Dec 9<sup>th</sup> (as per the University's Academic Calendar for on-campus final exams for online courses). The exam will be administered during 2 time slots, which are specified in the schedule below. There are 22 seats available for each time slot. Students from both online senior seminar sections may sign up for either time slot; if you have a preference in regards to the time, please make sure you make your selection as soon as possible.

**Please check the schedule to make sure you will be on campus for the exams.** If you cannot attend the on campus ETS exam, notify the instructor before the end of the add/drop period (first week of classes).

If you need to be tested off-campus, ETS's online service will be used to have your ETS exam proctored for you instead of coming to campus; you are responsible for paying any fees associated with using this service to take your exam.

### Grading Scale

Final grades will be assigned according to the following grading scale:

Letter Grade	Range
A	90 - 100
B+	< 90 - 85
B	< 85 - 80
C+	< 80 - 75
C	< 75 - 70
D	< 70 - 60
F	< 60

**There is no curving and no rounding-up.**

## Make-Ups/Late Assignments

- 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**)
- 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; late assignments will not be accepted after the "last day to submit late assignment date".

## Emergencies

Emergencies are unforeseeable and unavoidable events that preclude you from being able to submit an assignment in a timely manner or to attend a required exam or presentation.

Emergencies include:

- Serious illness/hospitalization
- Death of an immediate family member
- Car accident

You will be required to provide documentation (i.e., doctor's note, certified copy of death certificate, or police report) in order to receive an extension or make-up in case of an emergency. It is your responsibility to contact the professor as soon as possible. Examples of unacceptable excuses: common cold, family problems, transportation problems, etc.

## Incomplete (IN) Grades

In the case of extreme circumstances arising from reasons beyond the student's control (examples include: accident, death of an immediate family member, serious illness), an incomplete (IN) grade may be given at the instructor's discretion (official documentation will be required).

Please note:

- IN grades will not be given prior to the Drop date (i.e. last day to drop with a DR).
- In order to receive an IN grade, a student must have completed at least half of the assigned course work and have a passing grade.
- The course must be completed within two terms; otherwise, the student will receive the grade he/she would have earned without being given credit for any incomplete assignments (this will likely be a failing grade).

**PLEASE NOTE:** 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 when making a decision.

## Technical Requirements

Please refer to [Canvas Student Guides \(Links to an external site.\)](#)Links to an external site. as well as [Canvas Video Guides for Students \(Links to an external site.\)](#)Links to an external site. to get yourself familiarized with the interface.

This course utilizes the following tools:

1. Adobe Reader ([Privacy Policy \(Links to an external site.\)](#)[Links to an external site.](#))
2. Adobe Flash Player
3. Quicktime plug-ins

PLEASE NOTE: Other online meeting tools, such as Google Hangouts, may be used in case of technical difficulties.

Should you encounter any technical problems, contact information for support staff can be found at the FIU canvas login page ([canvas.fiu.edu \(Links to an external site.\)](#)[Links to an external site.](#)).

## Adobe Connect

Adobe Connect is an online meeting room where you can interact with your professor and fellow students by sharing screens, sharing files, chatting, broadcasting live audio, and taking part in other interactive online activities. We will be utilizing this tool for virtual office hours.

Requirements for using Adobe Connect:

- Disable any window pop-up blocker.
- Adobe Flash Player is required to successfully run your Adobe Connect meeting. You can [test your computer \(Links to an external site.\)](#)[Links to an external site.](#) to make sure your computer and network connections are properly configured to provide you with the best possible Adobe Connect meeting experience.
- Use of a combination headset and microphone with USB connection is recommended to ensure quality sound and reduce technical difficulties.

You can access Adobe Connect within Canvas. Please review the Adobe Connect section within Canvas to learn about the tool, how to access your meeting rooms and recordings.

## Policies and Academic Integrity

**Policies:** Please review the [FIU Policies \(Links to an external site.\)](#)[Links to an external site.](#) webpage. The policies webpage contains essential information regarding guidelines relevant to all courses at FIU, as well as additional information about acceptable netiquette for online courses.

**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 at: [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) ([Links to an external site.](#))[Links to an external site.](#)

**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'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 quotes 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 write 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 (copying your classmates' work).
  - Giving the incorrect citation
  - Turning in work you have already turned in for another class.
  - Please visit <http://www.plagiarism.org/> ([Links to an external site.](#))[Links to an external site.](#) 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> ([Links to an external site.](#))[Links to an external site.](#)**

Learn more about the university's [resources and policies on academic integrity](#) ([Links to an external site.](#))[Links to an external site.](#), particularly as it pertains to online courses.

### **ADA Accommodation Statement**

Students with a documented disability 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](#) ([Links to an external site.](#))[Links to an external site.](#) (tel. 305-348-3532, TTY/TDD 305-348-3852). The student is responsible for contacting the instructor as soon as possible so that reasonable accommodations can be made.

## Schedule

Week	Topics	What's due?
Aug 21 <sup>st</sup> – Aug 27 <sup>th</sup>	Introduction & Theme Electronic databases & resources Primary vs. review sources	Video introductions (3 minutes) Categorize the source
Aug 28 <sup>th</sup> – Sep 3 <sup>rd</sup>	Reference managers Crafting a title	Tentative Title and Description
Sep 4 <sup>th</sup> – Sep 10 <sup>th</sup>	Reading and interpreting scientific papers Writing a review paper – The general outline Classes Canceled Sep 5 <sup>th</sup> (11:00 PM)	Response to topic selections ( <b>Extra Credit</b> ) Paper Summary assignment moved because of Hurricane Irma
Sep 11 <sup>th</sup> – Sep 17 <sup>th</sup>	Classes Canceled	
Sep 18 <sup>th</sup> – Sep 24 <sup>th</sup>	Readable writing Reading and interpreting scientific papers Writing a review paper – The general outline NOTE: The material for Week 3 was copied to this module since classes were canceled on 7/5 by 11:00 PM	Readable writing worksheet (9/25)
Sep 25 <sup>th</sup> – Oct 1 <sup>st</sup>	Plagiarism	General Outline & 5 Annotated References (10/2) Discussion Post & Response – Plagiarism (9/28 & 10/2)
Oct 2 <sup>nd</sup> – Oct 8 <sup>th</sup>	Writing a review paper – The detailed outline	Short written summary of a review source on your topic (10/9)
Oct 9 <sup>th</sup> – Oct 15 <sup>th</sup>	Preparing a science talk I Death by Power Point Virtual Biology Department Seminar	Discussion Post - Death by Power Point (10/16) Seminar Reflection (10/16)
Oct 16 <sup>th</sup> – Oct 22 <sup>nd</sup>	Preparing & critiquing a science talk II	Detailed Outline & 10 Formatted References (10/23)

Week	Topics	What's due?
Oct 30 <sup>th</sup> – Nov 5 <sup>th</sup>	Writing a review paper – Tips & pitfalls to avoid	Mini-presentations (11/2) Mini presentation critiques (2) (11/6)
Nov 6 <sup>th</sup> – Nov 12 <sup>th</sup>		Formal oral presentations (Group 1) (Nov. 11 <sup>th</sup> )
Nov 13 <sup>th</sup> – Nov 19 <sup>th</sup>		Formal oral presentations (Group 2) (Nov. 18 <sup>th</sup> )
Nov 20 <sup>th</sup> – Nov 26 <sup>th</sup>	Happy Thanksgiving	No assignments due
Nov 27 <sup>th</sup> – Dec 3 <sup>rd</sup>		Final review paper due Dec. 4th
Dec 4 <sup>th</sup> – Dec 10 <sup>th</sup>	Careers in Science Curriculum Vitae vs. Resume	Curriculum Vitae (12/10) USAJOBS Assignment (12/10)
Dec 16 <sup>th</sup>	ETS Major Field Test in Biology Location: OE 309	9:00am – 11:00am 11:30am – 1:30pm

***This syllabus and schedule are subject to change if it is determined that a change is needed to facilitate your learning.***