

BCH4905 Science for Life seminar series, Spring 2015

<http://sfl.aa.ufl.edu/seminar/index.php>

Open to all students

In the spring semester this class will be online at the following site: to be added
one (1) credit.

Faculty Coordinator: Prof. Ben Dunn, Distinguished Professor of Biochemistry and Molecular Biology, email: bdunn@ufl.edu

This class will feature pre-recorded presentations from UF professors who are conducting leading-edge research programs in laboratories across campus. Each of these professors are interested in and committed to working with undergraduate students in their laboratories. The presentations are intended to introduce new students to the topics of the research underway in the professor's laboratories, to explain the approach to the research, and to offer opportunities to join the laboratories.

Overview

Students majoring in chemistry, biology, physics, microbiology, mathematics, and all other science majors will find this course of interest. However, you need not be a science major if you have a strong background in science from high school and you have a passion for research.

Funded by the Provost's Office and other campus sources, the UF Science for Life program will provide research opportunities and training for exceptional freshmen and sophomore undergraduate students and many students continue research throughout their undergraduate careers. Junior or senior students may also find research opportunities, but will not be eligible for financial support from the Science for Life program. Those students should check out the University Scholars Program.

The program will give students deeper insight and appreciation of how fundamental science concepts are used in emerging research and discoveries in the life sciences. Students who take this course will learn about the opportunities available in faculty laboratories. As part of the course, students will be expected to interview at least one professor to learn more information and to prepare a report. The reports will be due at intervals during the semester and will constitute the grading for the class.

Additional detail will be provided through a website <http://sfl.chem.ufl.edu/> that will list all the faculty members who will participate in the program through the Faculty Mentor List. Students will be encouraged to visit several laboratories to gain information and learn about the day-to-day operation of the laboratories in order to make an informed decision on the lab a student may wish to join for subsequent undergraduate research experience. Note: Joining a research lab is NOT a requirement for the BCH4905 Seminar Class.

For additional information, please contact Professor Ben Dunn: bdunn@ufl.edu

Student responsibilities and grading – All students will write a total of three short reports during the semester. One of these MUST be a summary about a professor at UF who can offer a research opportunity. These can be from among those who present during the semester, OR who the students identify through the program website and interview, OR, faculty at UF doing exciting research in tenured or tenure-track positions. Students MUST seek out the professor of their choice and ask follow up questions in a face-to-face interview. Students may NOT use information from the professor’s website in preparing their reports, but must conduct an interview with the professors in person. As there are more than 300 professors associated with the HHMI Science for Life program, it is anticipated that many students will identify interview/research opportunities with professors who do not present in the fall semester class.

The student should seek information about recent publications from the professor and about the field of research. A bibliography (see point #6 below) should be developed for the report on a professor and the written report should include a discussion of major open questions in the field of research. The text of all reports should be no less than 2 full pages nor longer than 3 pages, single spaced, with one inch margins on all four sides and 12 point font. The bibliography, required ONLY for a report on a professor, should not exceed one page, should follow the text of the report as an additional page. The first report will be worth 30 points toward the final grade; the second and the third reports will be worth 35 points each toward the final grade. The reports will be graded on completeness, explanation of the science involved, and analysis of the open questions of the science. Thus, there will be 100 total points available, with the grade cutoffs as shown in the table at right. These grades are “guaranteed”, i.e., 92% or above will always be an “A”.

Grade	Percentage cutoff
A	92%
A ⁻	90-92%
B ⁺	86-89%
B	82-85%
B ⁻	80-81%
C ⁺	76-79%
C	72-75%
C ⁻	70-71%
D	60%
E	59% or less

No exams will be given.

Six required elements for a report on a UF professor: Students should include in each narrative report on a professor the following elements:

1. Biographical information on the professor (where born, where educated, current title); How did the professor become interested in science?
2. Number of undergraduates, graduate students, and post-doctoral fellows currently in the professor’s laboratory.
3. A paragraph on each project that would be available for undergraduates with a description of the research. What questions is the lab trying to answer?
4. The experimental techniques that are used in the laboratory.
5. Names and affiliations of major collaborators of the professor.

6. Five most recent publications from the professor's laboratory, with full citation including authors, title, year, journal (or book), volume, pages, i.e., 1163-1172. THIS IS THE BIBLIOGRAPHY FOR THE REPORT.

Again, ONE of the THREE required reports MUST be based on an interview with a professor. This could be any one of the three reports.

This report should have at the top of the text the statement "Narrative Report on Professor NNNNN" with the name of the professor entered replacing the "NNNNN". Students should put their name at the top and/or the bottom of the report.

The report should be saved on the student's computer with a filename that has the student's name included, e.g., SmithA_Report#1 would be the filename for Adam Smith's first report. Subsequent reports would just have a different number. Reports submitted with non-standard filenames will not be scored and the student will lose credit.

Instructions for submission of the reports will follow below.

For the other two reports, follow the same parameters of more than two pages and less than three pages, 12-point font, single spaced, one inch margins on all four sides. Reports should be saved with the student's name as given about and uploaded on the course website (see below)

AS AN ALTERNATIVE FOR ONE OF THE OTHER TWO REQUIRED REPORTS, students are encouraged to do one of their reports on one of the publications available on-line at:

<http://opa.faseb.org/pages/Publications/breakthroughs.htm>

These publications are written in layman's language and describe cases where the results of biomedical research have resulted in advances in treatments for diseases. A report on one of these publications should be a simple 2-3 page summary, in the student's own words, of the document. At the start of the report, put "Breakthroughs Publication Summary", give the authors names, the title of the paper, the year of publication, the journal or book, the volume, and the pages. The student's name should appear at either the top or the bottom of the report. **No bibliography is needed.** Only ONE of this type of report is allowed.

AS AN ALTERNATIVE FOR ONE OF OTHER TWO REQUIRED REPORTS, we will allow another alternative. This one can be done on one of the many HHMI Investigators (see: <http://www.hhmi.org/research/investigators/>) or HHMI International Scholars (see: <http://www.hhmi.org/research/scholars/>). No interview will be conducted, but the report should be based on information found from the websites AND from data obtained by doing a GOOGLE search on the investigator's name. At the start of the report put "HHMI Investigator Summary". These reports MUST be written in the student's own words, NOT copied from the website. Each report should be 2-3 pages and **does not require a bibliography.** Only ONE of this type of report is allowed.

AS AN ALTERNATIVE FOR ONE OF OTHER TWO REQUIRED REPORTS, students may also view an on-line video from the collection found at <http://www.ascb.org/iBioSeminars/> and then write a 2-3 page summary of the topic. This series, presented by the American Society for Cell Biology, features some of the leading

scientists around the USA. At the top of a report of this type, put “iBioSeminars Summary”. Again, the summary must be written in the students own words. Only ONE of this type of report is allowed and **no bibliography is required**.

AS AN ALTERNATIVE FOR ONE OF OTHER TWO REQUIRED REPORTS, students may also view an online movie at

<http://www.asbmb.org/uploadedfiles/Interactive/video/obsessed.swf>

and write a 2-3 page summary of the topic in the student’s own words. At the top of a report of this type put “Obsessed Summary”. As part of the report, discuss how this movie made you think about your future as a research scientist. This report can only be used for ONE of the three required reports. **No bibliography is required for this report**.

In summary, there are five options for writing the required reports. However, each student ***MUST*** do ONE report on a UF professor based on a face-to-face interview. Each student is allowed to submit ONLY ONE report on each of the four alternative choices, and only a total of two alternative reports. However, the student can submit as many reports on potential UF mentors as he/she wishes.

Reports will be spaced out during the semester. Details of the due dates will be provided at the start of the semester and are usually spaced out by 4-5 weeks each. Reports in MS Word for Windows format will be submitted electronically by uploading a file to the course website. Reports submitted past the deadline will have 1 point deducted for each 24 hours past the deadline. Mac users should be sure to save their files in Windows format before uploading.

Submission of reports will be done through the course website at <http://sfl.chem.ufl.edu/> No reports will be accepted in any other fashion, i.e., no paper copies, no email submission.

During discussions with the professors, students should learn about opportunities in the professor’s lab for the following semesters when the students may begin their research experiences. Again, a research experience is NOT a requirement for this course.

Special Needs - Students with documented special needs should notify the instructor (Prof. Dunn) as soon as possible so that necessary arrangements can be made.

Academic Integrity - All work in the class must be your own. **Copying from any source (e.g., classmates, published sources, internet), without appropriate citations, for any assignment is plagiarism. This is a serious offense and can result in a grade of 'E' for the course as well as disciplinary action from the university.** Specifically, students may NOT copy information from a professor’s website to put into their reports. All reports should be written in the student’s own words.