

Biology 7020, Special Topics in Cell and Molecular Biology, 2 credits
Dept. of Biology, Valdosta State University
Maymester 2011 Syllabus

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Office hours: TWR 3-3:50pm or by appointment (please make appointments via email)

Class: MTWRF 4-5:50pm Bailey Science Center Rm. 2022

Course description: This course is a graduate level course emphasizing concepts, questions and techniques in cell and molecular biology through the reading, presentation, and discussion of various peer-reviewed articles in the broad field of cell and molecular biology. In addition, at the end of this course, students should be more proficient in analyzing and interpreting cell and molecular data. Educational outcomes associated with this course include numbers 1 and 2 as specified by the VSU Biology Department for its Master's program, and general outcomes numbers 3, 4, 5, and 7 as specified by the University.

Course requirements:

I.) Each student will present one scientific article. When presenting the article, the student must prepare their presentation at the appropriate level, keeping in mind that the audience is composed of graduate students and professors. Presentations must include

- complete background information (for example, the biology of the system, the overarching biological question, and the importance of the biological question)*
- specific purpose of the study presented
- In cell and molecular articles, the results of the experiments are displayed in the figures, thus the substance of the articles is in the figures. The presenter should explain the article figure by figure (or experiment by experiment). The best way to do this is to state the question or the purpose of a figure/experiment, briefly explain the method used to answer the question (include how the results are analyzed), and then walk the audience through the data figure. Do not merely put the data up and state the result. You must point to specific aspects of the figure to show us how the data led to the conclusions. Repeat this process for each figure.
- This class will be discussion-oriented so anyone in the class can interrupt the speaker at any point to ask a question or make a comment. I expect the bulk of the discussion to be centered on data analysis. Do not just take the author's interpretation of the data. You must look at the data as if it were your own and analyze it critically. The presenter and the instructor are responsible for keeping the presentation focused and on-track so that the presentation of the article can be completed during the allotted time.
- Please, please do not read your presentation and do not lift statements from the article. You will be teaching the class, and reading is not an effective teaching method. Further, your grade will be based on demonstrating that you understand the material and on effective communication of the material. Plagiarism will not be tolerated and will result in an F on the assignment.
- Power-point slides are recommended for the presentation, but other media are also welcome. Quite often, some concepts and methods are too dynamic to explain using a fixed power-point slide. In these cases, I recommend drawing on the board. Figures from the text can usually be pasted into Power-point by right-clicking on the html version of the figure. If, upon copying, any text is too small to read, you should re-type it using an appropriate font size (18 pt is usually the minimum for slides). In general, slides should contain bullet-points rather than paragraphs of text. The audience cannot read a dense slide and listen to the speaker.
- Finally, you all have seen enough presentations to know what makes a good presentation. Please use good judgement and common sense when preparing your talk. Grades for presentations will not be point-based, but will be A(+/-), B(+/-), C(+/-), D or F.

* I will only provide you with the main article that you are presenting. It is your responsibility to find supplementary resources (primary articles, review articles, books) to help you understand your article. You will definitely need additional resources because the introduction of a primary scientific article is always brief and provides limited information. PubMed (www.ncbi.nlm.nih.gov), Google Scholar and Galileo are good places to search for additional articles; search all of these sites before coming to me for assistance. Since this is a three week course, interlibrary loan is not very practical. If a particular article is crucial and you cannot access it, email me and I may be able to get it and send it to you. Please do not abuse this option or I will stop offering it.

II.) Each student is required to submit paper write-ups on two of the articles (excluding the articles that they will present). Each write-up should include

- an introduction that addresses the goals, outcomes, and significance of the study (approximately one page, 10 or 12 pt font, double-spaced)
- for each figure, discuss the question addressed, the method used to answer the question (include analysis) and the results. Use specific pieces of data on the figure to substantiate your discussion of the results. (10 or 12 pt font, single or double-spaced)
- only one figure analysis per page, be sure to include the figure on the page
- a final paragraph summarizing the key points that you took away from the reading of the article (maximum of one page, 10 or 12 pt font, double-spaced)
- Do not lift statements from the article. You must put your analysis in your own words. Plagiarism will result in an F for the assignment.
- Write-ups are due the day the article is presented, and they are due at the beginning of class. Grades for write-ups will not be point-based, but will be A(+/-), B(+/-), C(+/-), D or F.

III.) Since this class is presentation and discussion-based, attendance and participation is critical.

Please let me know as soon as possible if and when you will miss a class. Absences will (or will not) be excused on a case-by-case basis. Three or more absences will result in failure of the course. I would like to see even participation among the students of the class. Students who monopolize the discussion will be asked to curb their enthusiasm, and I will request comments from students that are not participating. The degree of valuable class-participation will be factored into the final grade. For all assignments, I request that you do your best, be thorough, go "above and beyond" and do not go for minimalism.

Class schedule:

R 5/12	select article and presentation date
F 5/13	?
M 5/16	presentation 1
T 5/17	presentation 2
W 5/18	presentation 3
R 5/19	presentation 4
F 5/20	presentation 5
M 5/23	class cancelled – Bhasin will be at a conference
T 5/24	class cancelled – Bhasin will be at a conference
W 5/25	presentation 6
R 5/26	presentation 7
F 5/27	presentation 8
M 5/30	no class – Memorial Day Holiday
T 5/31	presentation 9
W 6/1	presentation 10
R 6/2	presentation 11
F 6/3	wrap-up

Schedule with articles and presenters to follow