

BIOLOGY 200H (H01-H03): CONCEPTS IN BIOLOGY HONORS

INSTRUCTOR:	Dr. John J Yarotsky	EMAIL:	yarotsky@njit.edu
OFFICE:	340C Central King Building	COURSE WEBSITE:	http://moodle.njit.edu
OFFICE HOURS:	Wed: 1:00PM-3:00PM	LECTURE SCHEDULE:	W,F: 10:00am – 11:25am in CKB204
RECITATIONS:	M: 1:00PM – 2:25PM (H01) in CKB314 or M: 2:30PM – 3:55PM (H03) in CKB 220		

COURSE DESCRIPTION:

This course is review of a few select concepts in the biological sciences with an emphasis on understanding linkages across biological disciplines. The course will provide the basis for more advanced coursework and learning experiences in the biological sciences.

PREREQUISITE: Math 107 or 108 or equivalent.

TEXTBOOK: Articles and publications will be posted on Moodle the week before they are going to be used in class.

GRADING: Grades are based on exams (50%, 2 exams) and Presentations (30%). The final 20% of grades are based on assignments in the recitation sessions throughout the semester.

ASSIGNMENT	PERCENTAGE
Recitation Assignments	20%
Presentations	30%
Exams	50%
TOTAL	100%

ATTENDANCE, EXAM, AND PAPER DEADLINES:

Attendance for recitations is required. Exams may not be rescheduled. A penalty of 10% per day will be assessed for late assignments. Please contact the Dean of Student Affairs in case of medical or family emergencies.

ACADEMIC INTEGRITY:

The course expects the highest level of academic integrity and excellence from its students. The course and the University have a “zero tolerance” policy for academic dishonesty, including plagiarism and cheating. Instances of dishonesty will be punished by a zero on the assignment and consultation with the office of the Dean of Students to determine if further action is required. If you have any questions about what constitutes plagiarism or cheating, please ask us or refer to the [Academic Integrity Code](#).

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LEARNING OBJECTIVES AND GOALS

- 1) Students will be able to describe, engage in fact-based discussions, and conduct deeper academic study via reading of published literature for a select group of fundamental concepts in biology including:
 - a. Biological evolution.
 - b. Biodiversity.
 - c. Interactions between organisms and the environment.
 - d. Structure of biological organization from genes to populations.
 - e. Impacts of the properties of the biological world on medicine.
 - f. Impacts of the properties of the biological world on society.
- 2) Read and evaluate the quality and relevance of scientific publications and reporting.
- 3) Develop and implement strategies for obtaining and using scientific resources.
 - a) Discover and evaluate online resources
 - b) Make appropriate attribution of sources.
 - c) Integrate information from multiple sources
- 4) Students will improve their ability to communicate scientific information:
 - a. Use source materials with appropriate attribution and without plagiarizing.
 - b. Present information in written and graphical forms.
 - c. Explore writing and presentation strategies for different audiences.
- 5) Communicate scientific information effectively:
 - a. Use source materials with appropriate attribution and without plagiarizing.
 - b. Present information in written and graphical forms.
 - c. Explore writing and presentation strategies for different audiences.

Evaluation

- 1) Exams. The exams will be composed of short-answer questions. These questions typically require that the student write answers of 3 to 10 sentences that generally include a combination of memorized facts and interpretation or synthesis. There will be 2 exams during the semester.
- 2) Presentations: Students will be asked to give presentations during lectures. These presentations will be a minimum of 20 minutes long. Students will work in groups and choose the topic based on in class discussions.

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COURSE OUTLINE: TENTATIVE SCHEDULE

WEEK OF	LECTURE TOPICS
9/4	Introduction to course and Epistemology
9/11	Arguments: structures and types
9/18	Logical fallacies
9/25	Cognitive biases
10/2	Scientific arguments and real world examples
10/9	Scientific arguments and real world examples (cont'd.)
10/16	Midterm
10/23	Student presentations
10/30	Student presentations
11/6	Student presentations
11/13	Student presentations
11/20	Student presentations
11/27	Student presentations
12/4	Student presentations
12/11	Final Exam TBA
FINALS	FINAL EXAM WEEK: DECEMBER 15-21, 2017