

**BIOLOGY 200: CONCEPTS IN BIOLOGY**

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<b>OFFICES:</b>	Colton Hall 4th Floor (NJIT)	<b>COURSE WEBSITE:</b>	<a href="http://moodle.njit.edu">moodle.njit.edu</a>
<b>OFFICE HOURS:</b>	Dr. Trimby (Rm. 442) - M/Th 1-330pm ▪ Dr. Stanko (Rm. 434) – M: 2-4:00pm		
<b>COURSE SCHEDULE:</b>	Lecture: Mon/Wed 1130am-1pm [GITC 1100] OR Tue/Th 1130am-1pm [GITC 1400] Recitation: Various Th or Fri ( <a href="#">by section</a> )		

**COURSE DESCRIPTION:** This course will introduce students to the study of biology at the beginning of their course of study. Central ideas in the biological sciences will be highlighted, with an emphasis on the process of scientific discovery and investigation. The course will provide the basis for more advanced coursework and learning experiences in biological sciences as students delve into the curriculum of study. This is a required course for all NJIT and Rutgers-Newark Biology majors.

**REQUIRED MATERIALS:** Course has no textbook. Materials will generally be provided via [Moodle](#), or the student will be responsible for using the internet/library to find them. An **iClicker** is also required for this course. You can purchase one from the NJIT or Rutgers campus bookstore. **Please ensure you can access the Moodle as soon as possible!**

**ATTENDANCE, MAKE-UP, AND LATENESS POLICY:** Lectures and recitations are linked, and attendance at all course sessions is important to doing well in the course. Attendance at recitations is required. If you must miss recitation for a valid reason, please discuss making up the missed material with your recitation instructor as soon as possible. Attendance and participation in lecture will be assessed using the iClickers. **Be sure you bring your iClicker to every lecture! Late assignments will be deducted 10% of the points available for each 24 hours after the assignment was due.** This is true for ALL assignments.

**ACADEMIC DISHONESTY:** The course has 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 or refer to the [Academic Integrity Code](#).

**GRADING POLICY & SCALE:** Your grade for this course will be determined based on the following components:

ASSIGNMENT	POINTS
Recitation Attendance & Participation	65 points
Lecture Participation	50 points
Assignments	115 points
Exams	80 points
Projects	100 points
<b>TOTAL</b>	<b>410 points</b>

GRADING SCALE			
A	> 90%	C	70-75%
B+	85-90%	D	60-70%
B	80-85%	F	< 60%
C+	75-80%		

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### **LEARNING OUTCOMES:**

#### **1. LEARNING HOW TO LEARN**

- Students will develop personal learning strategies based on recognition of their own learning processes.
- Students will identify their learning style and develop a learning plan that is aligned with that style.
- Students will reflect on the note taking and study process and self-monitor their habits throughout the semester.
- Students will develop a plan for their continued learning beyond this course.

#### **2. APPLICATION**

- Students will develop hypotheses to explain observed phenomena.
- Students will design a basic experiment to test a hypothesis, taking into account the ethical and methodological considerations for proper experimental design.
- Students will read and evaluate data critically:
  - identify and describe patterns in raw data.
  - interpret statistical analysis of others' results.
  - draw conclusions based on graphical presentation of data.
- Students will communicate scientific information effectively:
  - present source material without plagiarizing.
  - convey information in written and graphical form.
  - target delivery appropriately to audience.

#### **3. INTEGRATION**

- Students will synthesize ideas from multiple areas in order to develop complex concepts.

#### **4. HUMAN DIMENSION**

- Students will feel confident in their ability to apply knowledge to solve problems.
- Students will cooperate with their peers to solve problems as part of a team.
- Students will take responsibility for their learning process and academic success.

#### **5. CARING/VALUING**

- Students will get excited about the value of course material within their personal and professional lives.
- Students will commit to being a good learner in this course and beyond.

*Individual class sessions will likely have more specific content outcomes, based on what is being discussed that week and how it relates to the larger goals of the course. Look for those to be posted to Moodle and contained in the lecture slides for that topic.*

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**COURSE OUTLINE:** \*Dates listed are a rough plan; Approximate weekly dates for assignments are listed, but please take this as a rough outline.

WEEK OF	TOPIC	NOTES
Sept 1	<b>Monday – Labor Day No Classes</b> Intro	CLASS Survey ( <a href="#">Moodle</a> ) Journal Entry – Learning Styles
Sept 8	Graphing & Figure’s “This is Biology”	<b>Pre-Quiz</b> ( <a href="#">Moodle</a> ) Journal Entry – Goals/Expectations
Sept 15	Science Writing Ethics	Journal Entry – Interesting Things
Sept 22	What is the Flu? DNA Discovery/Structure	<b>Quiz 1</b> ( <a href="#">Moodle</a> ) Journal Entry – Relate to your life
Sept 29	Heritable Material Transcription/Translation	Journal Entry – Note Taking
Oct 6	Mutations Fitness/Natural Selection	Journal Entry – Progress in class
Oct 13	Selection/Evolution Adaptation	Journal Entry – Pre Exam Feelings? <b>PROJECT 1 DUE 10/16</b>
Oct 20	<b>EXAM 1</b> What is DFTD?	Journal Entry – Post Exam Feelings
Oct 27	DNA Replication Cell Division	Journal Entry – Expectations reflection
Nov 3	Cancer Population Genetics	Journal Entry – Notes reflection <b>Quiz 2</b> ( <a href="#">Moodle</a> )
Nov 10	Inheritance Pedigrees	Journal Entry – Plan to Learn
Nov 17	Life History Strategies Competition	Journal Entry – Relate to life
Nov 24	Trophic Cascades <b>No Class Wed/Th/Fri</b>	Journal Entry – Explain topic to family. Reflect.
Dec 1	Biodiversity Other Examples	<b>Quiz 3</b> ( <a href="#">Moodle</a> ) Journal Entry – Class Wrap
Dec 8	Monday – Other Examples <b>Wednesday – No Class</b>	Journal Entry – Pre Exam Feelings <b>PROJECT 2 DUE 12/11</b>
Dec 15	<b>EXAM 2 during Final Exam Week</b> ( <a href="#">Exact date/time TBA</a> )	Final Survey
<b>FINALS</b>	<b>FINAL EXAM WEEK: DECEMBER 15-19, 2014</b>	