

JOHN JAY COLLEGE OF CRIMINAL JUSTICE
THE CITY UNIVERSITY OF NEW YORK

Biology 104: Spring 2013

Lecturer:

Adjunct Lecturer **Amie Whigham-Roberts, MS**

Email: awhigham@jjay.cuny.edu

Room: 03.62

Office hours: T/Th 12:15 -1:15

Course Instructors:

Adjunct Professor **Ronald Pilette, PhD**

Email: rpilette@jjay.cuny.edu

Room: 5.61.00

Office hours: Thurs 1:30-2:30

Professor **Diana Pettit, PhD**

Email: dpettit@jjay.cuny.edu

Room: 5.66.18

Office hours: T/Th 12:10-1:30

Adjunct Instructor **Leonid Sukala, BS**

Email: lsukala@jjay.cuny.edu

Room: 03.62

Office hours: TBA

Adjunct Instructor **Darcy Ronan, BS**

Email: dronan@jjay.cuny.edu

Room: 03.62

Office hours: TBA

Lecture: 3rd Period Tu/Th, **Instructor:** Amie Roberts, **Room:** L63

Section 01: Lab – 3rd & 4th Period, Tuesday, Rm 03.64. Recitation – 3th Period, Thursday, rm 3.78

Section 02: Lab – 3rd & 4th Period, Thursday, Rm 03.64. Recitation – 3th Period, Tuesday, rm 3.78

Section 03: Lab – 5th & 6th Period, Tuesday, Rm 03.64. Recitation – 5th Period, Thursday, rm 3.79

Section 04: Lab – 5th & 6th Period, Thursday, Rm 03.64 Recitation – 5th Period, Tuesday, rm 3.81

Section 05: Lab – 7th & 8th Period, Thursday, Rm 03.64 Recitation – 6th Period, Thursday, rm 8.72

Section 06: Lab – 7th & 8th Period, Tuesday, Rm 03.64 Recitation – 6th Period, Tuesday, rm 1.105

Course description: Biology 104 is the second half of the modern biology sequence. It continues the in-depth exploration of the basic properties of living systems on the molecular, cellular, and organismal levels. In addition, evolution and ecology are introduced. Representative organisms from the plant and animal kingdoms are studied in detail. The laboratory portion of the course emphasizes phylogeny and teaches basic microscopy and dissection skills.

Learning Goals of Bio104:

Students will understand the basic concepts in the field of modern biology:

- genetic and cellular basis of development
- tissue structure and function
- anatomy and physiology of the digestive, circulatory, respiratory, excretory, reproductive, nervous and motor systems, innate and acquired immune systems
- evolution; ecology
- plant anatomy and physiology

Students will learn laboratory skills and experimental techniques:

- dissection techniques
- phylogenetic classification

Text and Laboratory Manuals

Available in the Bookstore:

Campbell, N. & Reece, J. (2008). *Biology* (8th ed.) New York: Pearson- Benjamin Cummings. Volume 2: John Jay College Custom Edition

Available on Blackboard:

Laboratory Manual for Biology 104 at John Jay College.

Accommodations for Students with Disabilities: Students with hearing, visual, or mobility impairments; learning disabilities and attention deficit disorders; chronic illnesses, and psychological impairments may be entitled to special accommodation under the Americans with Disabilities Act (ADA). In order to receive accommodation, students must register with the **Office of Accessibility Services (O.A.S.,** Room 1233-N, 212-237-8031, <http://www.jjay.cuny.edu/2023.php>) which will define, for both students and faculty, the appropriate accommodations. Faculty are not allowed to work directly with students to attempt to accommodate disabilities. Accommodations cannot be applied retroactively (after-the-fact).

Statement of the College Policy on Plagiarism: Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's own creation. Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism. It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentations) and restatements of the ideas of others. Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited. Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has free guides designed to help students with problems of documentation.

Grading Scale: The grade for the Bio104 course is a composite of lecture (60%), laboratory (30%), and recitation (10%). The grading scale here (→) is the official grading scale for this course. There will be no exceptions to this scale and grades will not be rounded up, except as explained here. Following all computations, the grade will be rounded to the nearest tenth of a point in Microsoft Excel (one decimal place, e.g., 97.2%). This is the final grade and no further manipulations will be made. The scale here (→) will then be strictly used. This means that a 72.949% is a "C-" and a 72.950% is a "C." These calculations are done by the computer so there are no judgment calls or "leniency."

93.0 and above	A
90.0 - 92.9	A-
87.0 - 89.9	B+
83.0 - 86.9	B
80.0 - 82.9	B-
77.0 - 79.9	C+
73.0 - 76.9	C
70.0 - 72.9	C-
67.0 - 69.9	D+
63.0 - 66.9	D
60.0 - 62.9	D-
below 60.0	F

Blackboard: Important course announcements, lecture notes, homework assignments, review questions, a discussion forum for Q and A, and other resources will be posted to the course on Blackboard. Please check regularly. Furthermore, **students are responsible** for checking their **John Jay e-mail account** regularly for important announcements. Contact DoIT, **not** your Bio instructor, for help with e-mail or Blackboard.

Lecture Attendance: You are required to attend the lectures. An attendance sheet will be circulated during class. It is your responsibility to sign the sheet *during* class. You will be allowed three absences with no required documentation. However, beginning with the fourth undocumented absence, your final course grade will be penalized by two points (2%) for each undocumented absence. Arrivals later than five minutes after the start of class will count as a one-half absence. Attendance is also required for recitation and lab.

Lecture Exams: There are four in-class lecture exams, the last of which, although not cumulative, will occur during finals week at the scheduled time. All exams are of equal weight (15% of the course grade each) and all will count. **NO** dropped test in this class.

If you miss an exam (or foresee that you will miss an exam) for any reason, you **MUST** contact the instructor **as soon as humanly possible**. You may be allowed to take the exam late (or early). However, you are **ONLY** eligible for this one-time consideration if you contact the instructor immediately and you arrange to take the exam **BEFORE** the corrected exams are handed back to the class. In all other cases, the missed exam **WILL** count as a ZERO. (Exception: a documented medical or family crisis may result in being excused from an exam, but this will only be allowed **ONCE**. Further missed exams will count as a zero, regardless of reason.)

You must check Blackboard and your John Jay E-mail account regularly.

You are responsible for any and all course information, assignments, announcements, and communication that occurs through blackboard and/or your email account.

Tutoring :Tutoring is available free of charge for this course in the Mathematics & Science Resource Center (MSRC). The center also has a computer lab with internet access and a room for quiet study.

How do you get the most out of a tutoring session?

1. Start right away. Students who begin tutoring from the beginning of the semester typically do better than those who wait.
2. Book your appointments early. During peak times, you may need to book at least a week in advance to get the times you want. To book your own appointments over the web, first read the instructions on the MSRC web site, then log on to TutorTrac at the URL below.
3. Come prepared. Please bring your class notes and textbook. Look over the reading and try the problems. If you can, bring a list of specific questions. The more you prepare, the more you will get out of the session.
4. If you miss a class, please get notes from a classmate before your session. Tutoring is not a substitute for attending class.
5. If you are repeating the course (previous grade of "F" or "W"), you are eligible to participate in the Math Advancement Program (MAP) which provides weekly one-on-one tutoring with an experienced tutor. The deadline to sign up for the MAP program is Thursday, January 31, 2013. Please see Ms. Michele Doney in room 01.94 NB by 5:00 PM on January 31, 2013 for details.

Contact Information for the MSRC, room 01.94 NB:

Phone: (646) 557-4635

Email: msrc@jjay.cuny.edu

MSRC Website: <http://www.jjay.cuny.edu/academics/592.php>

TutorTrac (for scheduling appointments): <https://jjctutortrac.jjay.cuny.edu>

LECTURE SCHEDULE

Week	Date	Day	Lecture	Pages
1	Jan 29	Tues	Chapter 22: Descent with Modification	452-467
	Jan 31	Thurs	Chapter 23: Evolution of Populations	468-486
2	Feb 05	Tues	Chapter 24: The Origin of Species	487-506
	Feb 07	Thurs	Chapter 53/54: Ecology	1174-1221
3	Feb 12	Tues	Lincoln's Birthday; No Classes!	
	Feb 14	Thurs	Chapter 25: History of Life on Earth	507-533
4	Feb 19	Tues	Chapter 26: Phylogeny and the Tree of Life	536-555
	Feb 21	Thurs	EXAM 1: Chapters 22-26, 53-54	
5	Feb 26	Tues	Chapters 27 & 28: Intro to Microbiology	556-564, 571-581
	Feb 28	Thurs	Biotechnology	
6	Mar 05	Tues	Chapter 31.1-3, 5: Introduction to Fungi	636-641, 648-653
	Mar 07	Thurs	Chapter 30: Introduction to Plants	600-636
7	Mar 12	Tues	Chapter 35: Plant Form and Function	738-763
	Mar 14	Thurs	Chapter 38: Angiosperm Reproduction	801-820
8	Mar 19	Tues	EXAM 2: Chapters 27-31, 35, 38	
	Mar 21	Thurs	Chapter 32.3: The Animal Body Plan	654-665
			Chapter 33: A Brief Survey of Invertebrates	666-697
9			Spring Break 3/25-4/2 NO CLASSES	
10	Apr 4	Thurs	Chapter 40: Animal Form and Function	852-874
11	Apr 9	Tues	Chapter 41: Animal Nutrition and Digestion	875-897
	Apr 11	Thurs	Chapter 42: Circulation and Gas Exchange	898-929
<u>** Friday, April 12 – Last day to resign without academic penalty**</u>				
12	Apr 16	Tues	Chapter 42: Continued	
	Apr 18	Thurs	Chapter 43: The Immune System	930-953
13	Apr 23	Tues	EXAM 3 Chapter 32-33, 40-43	
	Apr 25	Thurs	Chapter 44: Osmoregulation and Excretion	954-975
14	Apr 30	Tues	Chapter 45: Hormones and the Endocrine System	976-997
	May 02	Thurs	Chapter 46: Animal Reproduction	998-1020
13	May 07	Tues	Chapter 47: Intro. To Animal Development	1021-1046
14	May 09	Thurs	Chapter 48: The Nervous System	1047-1063
	May 14	Tues	Chapter 49.1-3: Nervous Systems (Chapter 50: Sensory and Motor Mechanisms)*	1064-1078 1087-1119

*Time dependent

Final Exam Schedule will be provided later in the semester

RECITATION SCHEDULE

Date	Topic Covered	Text book Pages
<u>Sec02/04/06</u>	<u>Sec01/03/05</u>	
Jan 29	Jan31 Course Description, policies, grading, and... Introduction to evolution by Natural Selection	ch22
Feb 05	Feb 07 Hardy-Weinberg equilibrium and allele frequencies	ch23
Feb. 12 LINCOLN'S BIRTHDAY - NO CLASSES		
Feb 14	--- Ecology, (PAPER)	ch53-54
Feb 19	Feb 21 (PAPER)	
Feb 26	Feb 28 Microbiology and Biotechnology	ch 27/28
Mar 05	Mar 07 Introduction to Plants and Plant Anatomy	ch30/35
Mar 12	Mar 14 Angiosperm Reproduction	ch38
Mar 19	Mar 21 (PAPER)	ch40
Spring Break: 3/25 - 4/2 - NO CLASSES		
---	Apr 04 Tissues and Organs	ch40
Apr 09	Apr 11 Nutrition and Digestion	ch41
Apr 16	Apr 18 Circulation and Immune System	ch42/43
Apr 23	Apr 25 (PAPER)/Osmoregulation	ch44
Apr 30	May 02 Hormones and Endocrine System	ch45
May 07	May 09 Reproduction and Development	ch46/47
May 14	--- The Nervous System	ch48

Recitation Attendance and Participation is mandatory. Following one "freebie," for every missed recitation class, a deduction of five (5) percentage points will be taken off of the final recitation grade. Absences may be excused only with valid written documentation. Because class will **NEVER** let out early, students are expected to come to recitation sections with questions about the selected topic or lecture material. Following one warning, any student that does not actively participate in the in-class activities will be charged an absence.

Recitation Grades: The recitation section comprises 10% of the Bio104 course grade and is based on homework, in-class assignments, attendance and participation, and possibly quizzes. Every week, students will be assigned homework through the internet portal *Mastering Biology*. Access codes are provided with the custom textbook, if bought in the John Jay Bookstore. Students that have purchased the text separately must purchase an access code through the Mastering Biology website. The homework assignments are required and will be graded. Although the instructor reserves the right to substitute in-class quizzes for homework assignments at any time, the homework grade will form the grade for recitation, but will be affected by attendance as described above.

Biology 104 Lab Policies

Attendance and Lateness

You are required to attend the laboratory – it is considered a necessary hands-on learning experience. More than three (3) unexcused absences are considered excessive and you **will receive a zero** for the lab part of the course. Lateness (missing first roll call or a class quiz administered at the start of a lab) is considered one-half (1/2) an absence. Missing second roll call is considered a full absence. Any quiz missed due to unexcused absence or lateness cannot be made up and will count as a zero. You are responsible for providing acceptable written documentation for each excused absence or lateness or it will not be excused.

Lab quizzes

A quiz will be administered at the start of most labs. You are responsible for being prepared by doing the assigned pre-lab reading. Quizzes will be based on lab questions (homework) assigned in the previous lab and the assigned reading for the day's lab.

Lab homework

A few homework problems will be assigned at the end of most labs. You are responsible for preparing the answers to these questions, which will help you prepare for both next week's lab quiz and the midterm and final exams. These will be checked and graded for completion when you turn in your lab notebook at the midterm and final exams. However, the instructor also reserves the right to collect and grade these homework assignments if s/he so chooses.

Lab notebook

A notebook is required for all labs. It will be checked weekly for progress and must be handed in for a grade on the day of the midterm and final exams. In this notebook, there should be found answers to all assigned lab questions, homework, detailed description of all lab procedures, your lab results (as well as expected or "correct" results), data interpretation, conclusions, notes, etc. Your instructor will give the details of his/her preferred format, which must be followed to receive credit. One absolute requirement is that **all** the material for a given lab must be kept together. Everyone must use a three-ring binder with dividers for every week. No exceptions. For the dissection labs, students should include all detailed notes regarding the dissections and the physiology that is associated with dissections, as given by the lab instructor.

Participation

Many lab activities are hands-on and you are expected to actively participate even when part of a group – otherwise, you will not get full credit for attendance.

Other

Bring the proper lab book material to each lab. **You must bring protective eyewear to each lab.** You should wear a lab coat and sensible clothing relevant for lab work. No food, drinks, etc. Cell phones, iPods, mp3 players, etc. may not be used at any time.

Laboratory Schedule

<u>Date</u>	<u>Lab#:</u>	<u>Topic Covered</u>
Sec01/03/06	Sec02/04/05	
Jan 29	Jan 31	Lab#1: Course Description, policies, grading, and... Introduction to Cladistics
Feb 05	Feb 07	Lab#2: Field Trip to the American Museum of Natural History
Feb 14	Feb 21	Lab#3: Molecular Phylogenetics
Feb 19	Feb 28	Lab#4: Introduction to the microscope and... Microbiology: Eubacteria and Protista
Feb 26	Mar 07	Lab#5: Algae, Volvocine Series, Fungi
Mar 05	Mar 14	Lab#6: Plant evolution
Mar 12	Mar 21	LAB MIDTERM EXAM (Labs #1-6)
Mar 19	Apr 04	Lab#7: Animal Diversity 1
Apr 09	Apr 11	Lab#8: Animal Diversity 2
Apr 16	Apr 18	Lab#9: Animal Diversity 3
Apr 23	Apr 25	Lab#10: Dissection (Fetal Pig/Sheep Organ)
May 30	May 02	Lab#11: Dissection (Fetal Pig/Sheep Organ)
May 07	May 09	Lab#12: Dissection (Fetal Pig/Sheep Organ)
May 14	May 16	LAB FINAL EXAM (Labs #7-12)

Laboratory Grades: The laboratory section will comprise 30% of the course grade for Bio104. In-class quizzes will cover material from the assigned reading. Thus, the assigned reading **MUST** be done before the laboratory. Lab Grades will be based on the following required components:

25%	In-class quizzes
15%	Lab Notebook **
30%	Midterm lab exam
30%	Final lab exam

** (Notebook for Lab#1-6 due at the midterm exam, Lab#7-12 and dissection notes due at final exam) **