



## Bio 101: GENERAL BIOLOGY LECTURE

### Fall 2017 Course Calendar for CRN 10980, 10982, 14408

Jo Wen Wu, Ph.D. Fullerton College

This General Biology (Bio 101) includes a 4 hour lecture and 3 hour lab each week for one course grade (5 semester units). The **LECTURE** class meets on **Mondays 5:30 – 9:40 pm in Room 420** with Jo Wu (jwu@fullcoll.edu).

The three associated **LAB** sections are:

- CRN has **Tuesday Lab 6:20–9:30 pm in Room 429** with d
- CRN has **Wednesday Lab 6:20 – 9:30 pm in Room 429** with Valerie Wong (vwong@fullcoll.edu).
- CRN has **Wednesday Lab 6:20 – 9:30 pm in Room 422** with Jo Wu

Week	Dates	Lecture Topic (Chapter)	Lab Exercises
1	Aug 28	Scientific Study of Life (1) Chemistry of Life (2)	Lab Safety, Graphing (Labs A & B)
2	Sep 4	<b>Sep 4: No School</b> <b>Sep 10: Deadline to Drop w/o "W"</b>	DNA Extraction and Pigment Chromatography (Handout)
3	Sep 11	Cells (3) and Transport (4)	Microscope (Lab E)
4	Sep 18	Energy of Life (4) Photosynthesis (5)	Cell Processes (Lab F)
5	Sep 25	How Cells Release Energy (6)	Digestion (Lab D)
6	Oct 2	<b>Exam 1 (Ch 1, 2, 3, 4, 5, 6)</b> Mitosis & Cancer (8)	Mitosis (Lab H) and Karyotypes (Lab J)
7	Oct 9	Reproduction & Meiosis (9) Patterns of Inheritance (10) Bring Lab L to class	Meiosis (Lab I) and Create-a-Kid (Lab K)
8	Oct 16	DNA Structure and Gene Function (7)	<b>Lab Exam 1</b> Gene Expression (Handout or Lab G)
9	Oct 23	Jo Wu at conference Reproduction & Development (30)	Fullerton Arboretum Field Trip (Lab R)
10	Oct 30	DNA Technology (11)	Plant Reproduction (Lab M)
11	Nov 6	<b>Exam 2 (Ch 7, 8, 9, 10, 11, 30)</b>	DNA Electrophoresis (Handout)
12	Nov 13	Populations (18) Nov 19 = Deadline to Drop with "W"	Coastal Sage Scrub Field Trip (Lab S)
13	Nov 20	Communities & Ecosystems (19)	Natural Selection (Lab P)
14	Nov 27	Preserving Biodiversity (20) Forces of Evolutionary Change (12)	Predator-Prey (Lab N)
15	Dec 4	Evidence of Evolution (13) Speciation and Extinction (14)	<b>Lab Exam 2</b>
16	Dec 11	<b>Unit 3 Exam (Ch 12, 13, 18, 19, 20)</b>	<b>No Lab</b> Optional Cumulative Lecture Final Exam during Wed lab time

Sat Sep 16 Coastal Cleanup Day, Sat Oct 14: Newport Bay Friends Tour, Sat Nov 11: Newport Bay Friends Tour, Sat Dec 9: Newport Bay Friends Tour



**Bio 101: GENERAL BIOLOGY LECTURE**  
**Fall 2017 Course Syllabus for CRN 20381, 20392, 24483**

**Jo Wen Wu, Ph.D. Fullerton College**

**INSTRUCTOR CONTACT**

- **Jo Wen Wu, Ph.D.**, Division of Natural Sciences, Fullerton College, 321 East Chapman Ave, Fullerton, CA 92832-4055.
  - Email: [jwu@fullcoll.edu](mailto:jwu@fullcoll.edu). Email contact is preferred and answered each night.
  - Voice messages: 714-992-7459.
  - Office: 411-11 (first floor, southeast corner of Science building)
  - Group Study Sessions: Mondays 2:15– 5 pm in lab room 423
  - Private Appointments for Mentoring, Grades, Resume, Other: **Wed 2:15– 4 pm in 411-11**
    - Sign up at <http://www.signupgenius.com/go/5080e4eada82ea64-study> (or use this QR code)  
If no one signs up for appointment, you can come in for study session.



**COURSE DESCRIPTION:**

*Four hours lecture and three hours lab per week.* This integrated lecture-lab course is an introductory non-majors course that will emphasize the fundamental understanding of basic biological principles, illustrate the structure and function of living organisms and their relationship to the physical world, and develop the student's ability to make effective decisions regarding contemporary issues in natural sciences. Lecture topics include the structure and function of life at the cellular and organismal level, metabolism, photosynthesis and energetics, cell division and animal development, classical and molecular genetics, developments and applications in biotechnology, evolution and adaptations of living organisms, and ecological relationships and environmental conservation. (CSU) (UC; no UC credit if after a 200 level Biology) (Degree Credit) AA GE, CSU GE, IGETC

**COURSE OBJECTIVES:**

Upon completion of this course, the student will be able to:

- Compare and contrast natural science and non-science.
- Construct a scientific explanation by describing relevant causes.
- Analyze experimental data and write a valid conclusion.
- Define the properties of living things and contrast them with non-life.
- Describe interactions of organelles in cell functions and processes.
- Predict responses of cells to specific changes in their environment.
- Relate gene function to the processes of cellular control and heredity.
- Compare and contrast genetic recombination in prokaryotes and eukaryotes.
- Demonstrate an understanding of the flow of energy and cycling of matter in ecosystems.
- Interpret graphical representations of interesting components of ecosystems.
- Demonstrate an understanding of evolutionary adaptations in terms of population genetics and the process of natural selection.
- Apply biological concepts to issues of current public concern.
- Define the terms and concepts covered in the course outline.
- Formulate an experiment. This includes design and techniques that identify variables and use controls.
- Collect and interpret data, compare experimental results with hypotheses, and analyze for consistencies or contradictions.
- Propose realistic hypotheses about the effect of temperature on physiological processes.
- Compare and contrast adaptations, niches, ecological relationships, food chains, limiting factors and selective agents in local ecosystems.
- Predict the outcome of experiments involving enzymes or cell processes such as osmosis, respiration or photosynthesis.
- Develop measuring skills using metric units.
- Use a microscope, binoculars, scales and other laboratory equipment.
- Prepare and carry out chemical, analytical and physiological tests.
- Identify, describe, and classify organisms representative of the five kingdoms of life.
- Identify and compare structures of representative organisms.
- Collect and analyze physiological and nutritional data pertaining to human subjects.
- Demonstrate collaborative skills through assignments requiring individual and group participation.

### STUDENT LEARNING OUTCOMES:

- Collect and analyze data using standard scientific techniques and methodology.
- Evaluate the relationships between various components of an ecosystem.
- Summarize the relationships between genetic variation, natural selection, and speciation in evolutionary terms.

### COURSE MATERIALS:

- Textbook: Biology: The Essentials (2nd edition) by Hoefnagles ISBN: 9781308972558
- Powerpoints will be available on MyGateway – print out if desired, or take notes electronically.
- Lab exercises will be available for download – students are responsible for printing BEFORE lab.
- Online quizzes may be given through Blackboard or Canvas or Connect (TBA).
- Scantron #882 for exams, scantron #815 and cell phone for quizzes
- Email, Internet Access, #2 Pencil, Paper, Good eraser, 3-ring binder, basic calculator



### CLASS POLICIES

**ATTENDANCE AND PARTICIPATION:** Attending the entire class period and being on time are required for both lecture and lab. Come to class prepared physically and mentally by reading the assigned chapters and bringing all materials needed to take notes and learn. If you miss a lecture, it is your responsibility to get notes and other information from someone in the class. The instructor will send out periodic announcements through the MyGateway class email list. It is your responsibility to withdraw officially via MyGateway before the drop deadline. The instructor will NOT drop students for non-participation or failing grade (if course needed for financial aid, insurance, visa, etc).

**COURSE GRADE.** Jo Wu will submit the Bio 101 official course grade. The Bio 101 course grade is based on the scale of: A > 90%, B > 80% , C > 65%, D > 55% , F < 55%.

75% of the course grade will be derived from the lecture portion, and 25% of the course grade will be derived from the lab portion. The tentative lecture assignments are listed below, but I reserve the right to make assignment changes.

**Important policy: You MUST score at least 65% in the overall lab portion** in order to pass the entire course (with C or better). Grade updates are usually given after every exam. Report any grading errors within one week.

The Fall 2017 Bio 101 course grade is weighted with 3/4 Lecture and 1/4 lab scores.			
<b>Lecture Portion</b> (75% of course grade)	3 Unit exams	170 points each x 3	= 510 pt
	Optional Cumulative final exam	can replace one unit exam	
	3 Study Guides	20 pt each x 3	= 60 pt
	9 Best Quizzes	20 pt each x 9	= 180 pt
<b>Lab Portion</b> (25% of course grade)	2 Lab Exams	65 pt x 2	130 pt
	Lab Reports	10 pt x 12	120 pt

**LECTURE EXAMS.** 120-minute lecture exams will consist of multiple-choice and written questions. You will be allowed to bring in one 8x11 paper to the exam. Any electronic devices on your body are strictly prohibited during exams. If you are absent due to a serious excuse with documentation, then one makeup can be taken during the week of drop deadline or finals week. If you do not have an excused absence, then you can take the optional cumulative final exam (arranged with instructor).

**LECTURE QUIZZES.** Expect 1-2 quizzes each week. Quizzes are given at varying times during class period, with different partners. Usually class quizzes are taken on your phones/computers with WIFI or internet access. There are no make-ups for in-class quizzes.

**LABORATORY** portion is worth 25% of the Bio 101 course grade. If you miss a lab, try to make up the same lab later in the week with another Bio 101 teacher (get their signature).



## **Fullerton College: CAMPUS POLICIES**

### **STUDENT RIGHTS AND RESPONSIBILITIES:**

Students are expected to be knowledgeable of the guidelines, policies and procedures in the [2016-2017 Fullerton College Catalog \(PDF 4.84 MB\)](#), which can be downloaded at <http://www.fullcoll.edu/catalog>. Only a few policies are listed here. All pages refer to the 2016-2017 catalog.

### **ABSENCES:**

While an instructor may drop a student who has poor attendance, if a student wishes to drop a class, it is the student's responsibility to log onto MyGateway and drop. Failure to officially withdraw from a class may result in a grade of "F," or "NP" being assigned.

### **ACADEMIC HONESTY POLICY AND STANDARDS OF STUDENT CONDUCT AND DISCIPLINE POLICY:**

Fullerton College has specific policies regarding academic dishonesty (cheating, misconduct, plagiarism, and collusion). The policies may be found on page 26 of the [2016-2017 catalog](#) and **will be strictly enforced at all times**. In many cases, academic dishonesty will result in failing the course, a documented proof placed in your academic records, and your name and infraction reported to the appropriate administrators. Moreover, academic dishonesty may ultimately result in expulsion from the College.

All students are expected to adhere to the Standards of Student Conduct and Discipline Policy as described on page 30 of the [2016-2017 catalog](#) at all times. The Standards of Student Conduct and Discipline Policy **will be strictly enforced at all times**. In accordance with the requirements for due process of law, the College shall follow the established procedures as outlined, including but not limited to removal, suspension, or expulsion.

### **AMERICANS WITH DISABILITIES ACT (ADA) STATEMENT:**

Fullerton College is committed to providing educational accommodations for students with disabilities upon the timely request by the student to the instructor. Verification of the disability must be provided. The Disability Support Services office functions as a resource for students and faculty in the determination and provision of educational accommodations.

### **DISABILITY SUPPORT SERVICES (DSS):**

Any student who feels he or she may need an academic accommodation based on the impact of a disability should discuss this with the instructor and contact Disability Support Services at 714-992-7099 or visit DSS in Room 842 of Building 840. The services provided by DSS are described on page 40 of the [2016-2017 catalog](#). To ensure the health and safety of all students, those who feel they may need evacuation assistance in the event of an emergency should speak with the instructor as soon as possible.

### **EMERGENCY RESPONSE:**

If required to evacuate a classroom/building, the instructor will lead you to a clear and safe area away from the building. Take all personal belongings with you. During some emergencies, it may be necessary to stay inside the classroom. If this is required, please remain seated and listen to the instructor. Please maintain order during any emergency, and always look out for your own safety and the safety of your classmates.

### **STUDENT WAIT TIME FOR INSTRUCTOR**

If the instructor, due to unforeseen emergencies, does not arrive at the scheduled start time for class, students are to remain in class for fifteen minutes, unless otherwise notified by the Division. If you do not receive notification to wait for your instructor to arrive, you may leave after fifteen minutes with no penalty for absence or assigned work due for that class.



## **Fullerton College: CAMPUS SUPPORT SERVICES**

### **ACADEMIC SUPPORT CENTER:**

The Academic Support Center at Fullerton College offers various forms of services to students including free tutoring, workshops, group tutoring, writing consultation, and computer access to assist students in their academic development and success. The Academic Support Center includes three centers located in the LLRC, each designed to address specific student needs. The Math Lab is also available in the LLRC and provides similar services for students directed at Math.

Math Lab	Room 807	(714) 992-7140	<a href="http://math.fullcoll.edu/mathlab.html">http://math.fullcoll.edu/mathlab.html</a>
Skills Center	Room 801	(714) 992-7144	<a href="http://skills.fullcoll.edu/">http://skills.fullcoll.edu/</a>
Tutoring Center	Room 806	(714) 992-7151	<b><a href="http://tutoringcenter.fullcoll.edu/">http://tutoringcenter.fullcoll.edu/</a></b>
Writing Center	Room 801	(714) 992-7153	<a href="http://writingcenter.fullcoll.edu/">http://writingcenter.fullcoll.edu/</a>

### **CAMPUS SAFETY PHONE NUMBER:**

Call 714-992-7080 to contact Campus Safety. **During an emergency dial 714-992-7777.** There are many Emergency Phones throughout the campus that will immediately connect with a Campus Safety Officer. Feel free to ask for escort to the parking lots during evening hours.

### **COMPUTER LABS:** <http://fcnet.fullcoll.edu/complabs.htm>

Use your FCnet account information to log in. You will need to purchase Printing Credit at the FC Bookstore and show your receipt, so that you can print in the computer labs.

### **EXTENDED OPPORTUNITY PROGRAM AND SERVICES (EOPS):** <http://eops.fullcoll.edu/>

The Extended Opportunity Program & Services (EOPS) is dedicated to recruit and successfully retain college students of educationally and socioeconomically disadvantaged backgrounds.

### **FC FOUNDATION:** <http://www.fullertoncollegescholarships.com/>

Apply for scholarships and grants for continuing and transfer students from November to February. Please note that there are general scholarships awarded by the Foundation Office and others awarded by FC Divisions (to their majors).

### **LIBRARY:** 714-992-7039 <http://library.fullcoll.edu/>

You will need a current campus ID to check out library books.

### **TRANSFER CENTER** (<http://transfer.fullcoll.edu/>) **and** **CADENA CULTURAL CENTER:** <http://cadena.fullcoll.edu/>

These two centers provide services that enhance awareness of campus diversity, facilitate transfer to colleges and universities, and promote student development and lifelong learning. Check the calendar often for special events, application deadlines, workshops, and visits with university representatives.

### **TUTORING AND SUPPLEMENTAL INSTRUCTION.**

- FC Tutoring Center in room 806 (walk-in and by appointment) <http://tutoringcenter.fullcoll.edu/>
- Science PAL for Biology, Chemistry, Physics in room 415-P (schedule posted at <http://http://goo.gl/8R4nHw>)
- Online 24/7 tutoring (5 hours per term) <http://tutoringcenter.fullcoll.edu/>
- Supplemental Instruction may be provided for certain courses by student facilitator or faculty.
- Veterans tutoring veterans at Veterans Resource Center.

### **VETERANS RESOURCE CENTER, Room 518:** <http://veterans.fullcoll.edu/>

Provides in-house and community services, tutoring, and other support for veterans.