

COURSE SYLLABUS – WINTER 2014
BIOLOGY 161 - GENERAL BIOLOGY I – SURVEY OF LIFE

LECTURE: JM 218; TUESDAY AND THURSDAY 1:00 PM – 2:30 AM

LAB: JM 133; T 2:30 – 5:30 PM

Course Description:

Biology 161 is the first semester of a one year general biology experience intended for science major or pre-professional students. This course covers nature of science, a survey of the major groups of living organisms (bacteria, fungi, plants, & animals), the process and evidence for evolution, and the fundamentals of ecology. It provides the foundation for upper level biology courses. The course includes a laboratory component.

Prerequisite: ENG 090 or higher and MAT 031 or higher

*Note: CEM 131 or higher is required for Bio 162

Required Text: - **Biology, 10th Edition**, Raven, Johnson, Losos, Mason, & Singer
ISBN: 9780073383071

- **Student Lab Notebook**: Hayden McNeil
ISBN 1930882351

*These two text will be required in BIO 161 and BIO 162, if you take BIO 162 you will not need to buy additional books

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Office Hours: **Monday** **1:30 – 3:00** **Thursday** **10:30 – 2:30**
 Wednesday **1:30 - 3:30** **or by appointment**

Introduction:

As a college student you are responsible for your own learning. This course is intended to prepare you for higher level biology courses and we will be covering a large amount of material in a relatively short amount of time. To be successful you will need to allocate sufficient time and discipline to your studies. There are no quick and easy ways to be successful.

Course Requirements:

Final grades will be comprised of 75% from lecture and 25% from lab.

Lecture:

Each day a portion of the book will be assigned. A ten point quiz over the assigned material will be given at the beginning of the next class period. To aid in your success on the quiz, you will be able to use any handwritten notes you have taken. The first ten minutes of class will be provided for the quiz. If you arrive late, additional time will not be given. The two lowest daily quizzes will be dropped for the semester

- Exam formats may include, multiple choice, matching, fill-in, short answer, essay, application, and problem solving. Questions on the exam will be Up to 15% of the exam may include material from previous chapters. Dates for the exams will be discussed in class. Exams will be 100 points each. A final cumulative exam will be given on the last day of class. Your lowest exam score will be dropped (the final exam

cannot be dropped). Electronic devices may not be used during exams and will result in a zero for the assessment. Low scores due to academic dishonesty cannot be dropped.

If you miss an exam (for any reason) you will receive a zero (0%) for the exam. Make-up exams will not be given. The intention of the policy to drop your lowest exam of the semester is to account for missed exams or poor performances due to circumstances that are beyond your control. However, some students start to count on the dropped test policy to cover for a poor exam. Do not fall into this because you may experience an absence later in the semester.

Tentative Lecture Schedule

<u>Class</u>	<u>Topic</u>	<u>Chapter</u>
9-2	Intro	
9-5	Biology	
9-9	Nature of Science	1
9-11	Scientific Inquiry	1
9-16	Natural Selection	20
9-18	Evidence for Evolution	20/21
9-23	Evidence for Evolution	21
9-25	Origin of Species	22
9-30	Exam 1	
10-2	Introduction to Systematics	23
10-7	Origin of Life	26
10-9	Prokaryotic Cells	28
10-14	Prokaryotic Cells	28
10-16	Exam 2	
10-21	Protists	29
10-23	Protists	29
10-28	Seedless Plants	30
10-30	Seed Plants	31
11-4	Fungi	32
11-6	Exam 3	
11-11	Animal Overview	33
11-13	Flatworms & Mollusks	34
11-18	Annelids & Arthropods	34
11-20	Fish & Amphibians	35
11-25	Reptiles and Birds	35
11-27	No Classes	
12-2	Mammals and Primates	35
12-4	Exam 4	
12-9	Population Biology	55
12-11	Population Ecology	55-56
12-16	Ecosystems	57
12-18	Final Exam	

Lab

- Points will be awarded for each lab whether they are collected for grading or not. The instructor will inform you if the lab is to be collected prior to the end of lab. Labs not collected for grading will be submitted to the instructor prior to the end of lab and will

receive up to 5 points. Labs that are collected will be graded out of 10 points and scored on content.

- Dissections will be a part of lab and will be conducted as part of a group.
- A formal lab report will be written based on the results of a lab exercise. The format of the report will be provided. The lab report will be worth 25 points.
- Three lab quizzes will be assigned over the semester. The lab quizzes will cover the material related to the lab activities and concepts. The first two will be worth 25 points and the final will be worth 50 points. Missed lab quizzes cannot be made up, but your lowest lab quiz will be dropped.
- If you are going to miss your lab section you may attend another lab section with the instructor's permission. If you cannot make up the lab, one lab may be made up by writing a review (2 pages, double spaced, 1 inch margins, 12 point font) of a biology related article from Scientific American magazine (article must be 3 pgs or more). In the review you should provide a reflective statement of your perspective on the article.

Tentative Lab Schedule

<u>Week of:</u>	<u>Lab Topic</u>
Sept. 8	Basic Techniques
Sept. 15	Field Trip
Sept. 22	Evolution
Sept. 29	Systematics
Oct. 6	Prokaryotes
Oct. 13	Protists
Oct. 20	Plant Lab
Oct. 27	Protostome Lab 1
Nov. 3	Protostome Lab 2
Nov. 10	Protostome Lab 2
Nov. 17	Coelomate invertebrates
Nov. 24	No Lab
Dec. 1	Vertebrates Lab 1
Dec. 8	Vertebrates Lab 2
Dec. 15	Lab Practical

Lab Notebook Guidelines:

A lab notebook is used to document your observations and work in science. It is important to keep the lab notebook as it can be considered a legal document.

1. Write in only black or blue ink. Write your name and contact information on the inside of your notebook in case it is lost. Pages need to be used in numerical order and not removed from your lab book. This can raise concerns of removal of data.
2. Include the date at the start of each journal entry. At the bottom of each page include your initials or signature.

3. Document what you did in lab. If you followed certain procedures, you may cite them rather than rewriting. However, if you deviate from the procedure, you need to specify what changes were made.
4. Neatness counts. Entries must be legible. You may wish to show this to a prospective employer to show your work.
5. Do not erase. If you make a mistake, indicate with a single line through the ~~mistake~~ mistake. Initialize that you crossed out the information.
6. Record all calculation and measurements. This includes those used to prepare solutions. This can be helpful if you have to troubleshoot your experiment to find out where what might have gone wrong.
7. Record all data collected and any related observations.
8. Include a summary statement (conclusions) about the lab or experiment.

Extra credit will NOT be given under any circumstance. Instead, take the time that you would have spent on doing the extra credit to learn assigned material.

Grading:

The grading scale will be as followed pending further. Grades may be curved at the instructor's discretion.

<u>Percent</u>	<u>Grade</u>	<u>Percent</u>	<u>Grade</u>	<u>Percent</u>	<u>Grade</u>
90 - 100%	4.0	75 – 79 %	2.5	60 – 64 %	1.0
85 – 89 %	3.5	70 – 74 %	2.0	55 – 59 %	0.0
80 – 84 %	3.0	65 – 69 %	1.5		

Assistance:

If you are in need of assistance in this course I encourage schedule a time to meet with me during office hours to discuss your study strategies. You may also benefit from discussion strategies with your classmates or setting up group study sessions. If you feel that you would benefit from a tutor, be aware that tutors are available free of charge. Additional information on special services may be found by contacting the front office or through the JCC's Center for Student Success (796-8415).

If you have special needs or accommodations, it is your responsibility to make me aware of those needs as soon as possible so suitable arrangements may be made. In order to receive special accommodations I will also need the necessary paperwork from Student Services.

Absences & Arriving to Class Late:

Although you will not be directly graded on attendance, it is an important factor to your learning and success in this course. In the case of an absence it is the student's responsibility to contact the instructor about missed materials or assignments. You are strongly encouraged to get the notes from a classmate. Missed in-class assignments may not be made up and assignments will not be accepted after the scheduled due date.

If you do not attend class regularly you may be dropped from the course. However, if you wish to drop the course, it is your responsibility to complete the required paperwork.

Incompletes:

Incompletes will only be issued if the student and is unable to complete the course due to extenuating circumstances. In order to receive an incomplete the student must have completed a vast majority (over 90%) of the course and have been earning a minimum of a 2.0 at the time of

the request. If a grade of incomplete is issued all grades/scores earned to that date will be used in calculating the course grade.

Academic Dishonesty:

Consistent with JCC policy, cheating and plagiarism (copying another's work and presenting it as your own) will not be tolerated. A first offense of cheating, plagiarism, and unethical behavior will result in a zero for the assignment and a deduction of the points value of the assignment from points earned. This score may not be dropped. A second offense will result in a zero for the course. All cases of academic dishonesty will be documented and forwarded to the Academic Dean.

Grievances:

If you have a concern about any aspect of the course it is your responsibility to bring it to the instructor's attention. This is the first step of handling any academic concern. Academic complaints need to be handled by having a scheduled meeting with the instructor.

Disruptive Behavior:

Disruptive behaviors will not be tolerated in this class. Disruptive behaviors include (but are not limited to) having side discussions, being distracting to class when arriving late, cell phone constantly ringing, and being disrespectful of others. These behaviors will result in point deductions of up to 15 points and being asked to leave the class. If there are situations that I may not be aware of, please let me know so the situation may be addressed.

I am not opposed to the use of computers in the classroom if they are being used for classroom purposes. However, the use of computers for non-class activities (facebook, YouTube, etc...) has been distracting to others learning. If you use the computer for non-class activities you will not be allowed to use a computer during class.

Important Dates:

Sept. 2	First day of classes
Nov. 26-30	No classes
Dec. 10	Last day to drop
Dec. 21	Last day of classes

Associate Degree Outcomes:

Associate Degree Outcomes. The Board of Trustees has determined that all JCC graduates should develop or enhance certain essential skills while enrolled in the college. Several of these Associate Degree Outcomes are addressed in this class, including critical thinking, scientific reasoning, and a knowledge of science.

ADO 4: Scientific Reasoning

Students will be able to design and carry out valid experiments to assess a given hypothesis, and draw appropriate conclusions based on the results.

ADO 7: Critical Thinking

Students will learn to critically analyze and interpret scientific data from scientific experiments as in the analysis carried out in numerous labs that involve interpreting and graphing data.

Note: The policies included in this document are subject to change at the instructor's discretion.

Biology 161 Learning Contract:

As a student taking Biology 161, I understand my responsibilities as follows:

- I understand and accept the policies outlined in this syllabus
- I understand that this is a transferable college level course that transfers easily to most colleges and universities
- I understand that this is General Biology and not Introductory Biology and am aware of the differences between these courses
- I understand that this is not an “easy” or “blow-off” course.
- I understand that I am responsible for my success in this course
- I understand that if I do not come to class prepared, having studied previous material, completed homework, and read from the book that I will not be successful in this course
- I understand that this course builds upon previous information and falling behind will make the course more challenging.
- I understand that attendance and being to class on-time are critical to my success.
- I will ask questions that I have about the course material.
- I understand that if I cheat in this course, it may affect my ability to obtain certain jobs in health care or with the government for the rest of my life.
- If I need help or have special problems, I will see the instructor, or request a tutor before I fall too far behind.
- If I have a complaint about the course, I will first discuss it with the instructor by scheduling an office appointment as per JCC policy.

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- If I have a complaint about the course, I will first discuss it with the instructor by scheduling an office appointment as per JCC policy.

By signing this, I affirm that I have read and understand the policies of this course as identified in the course syllabus.

Print Name: _____ Signature: _____ Date: _____

On a scale of 1 to 5 (1= not very, 5 = very), how concerned are you about being able to be successful in this class: _____

After having learned more about the course, would you like to meet with the instructor to discuss the course? Yes / No

I recognize that this course will require 3-6 hours a week outside of class work. Yes / No

I understand that Bio 162 – Cellular and Molecular Biology has a prerequisite of 1 semester of college chemistry (Cem 131 or higher) Yes / No

Which of these courses have you completed? _____ High School Biology
_____ High School Chemistry
_____ High School AP Biology
_____ High School AP Chemistry

Why are you taking this course?

- I need a general science laboratory course
- It is a requirement for a specific program or transfer institution

Please list program or institution: _____

What is your career objective: _____

SAFETY IN THE LAB
JACKSON COMMUNITY COLLEGE
BIO 161/162: GENERAL BIOLOGY

Student Name: _____

Instructor: _____

1. Food, drinks, gum, cosmetics and candy may not be out or consumed in the laboratories at any time.
2. Read the label on any chemical you use! MSDS sheets that describe the hazards associated with any chemical are housed in the biology prep area (JM 134)
3. Always wash your hands before beginning a lab, before you leave the room and when you return from a break (e.g. restroom).
4. Open-toed shoes are prohibited in the lab. Hair that is shoulder-length or longer must be pulled back and secured with a band or barrette. Avoid clothing with long sleeves or decorations that could become a fire hazard.
5. Keep your lab space clean and organized. Place books, backpacks & jackets in the space provided at your lab table.
6. Dispose of biohazardous waste materials in the approved biohazard container. Notify your instructor of any broken glass so that it can be disposed of safely.
8. Notify your instructor immediately of any injury, spill or damage to equipment.
9. Know the location of emergency equipment and how to use it. This includes the eye wash station, emergency shower, fire extinguisher and fire blanket.
10. Come to lab prepared. Be sure to review the written procedures in advance.
11. Horseplay, practical jokes, etc. are dangerous and strictly forbidden in the lab.
12. If your immune system is compromised (i.e. illness, pregnancy, etc.) please notify your instructor so that appropriate measures can be taken to protect your health.

I the undersigned, acknowledge, appreciate and agree that:

1. There are inherent risks involved with participation in laboratory activities, and I choose to voluntarily participate with full knowledge that said may potentially be hazardous to me. I agree to follow the safety procedures outlined above and all instructions of my instructors. I understand that I may be forbidden from participating in the laboratory session and future laboratory courses if I violate any safety rule or procedure.
2. I voluntarily assume full responsibility for any risk of personal injury, including death, which may be sustained by me as a result of my participation. There may also be other risks which are not fully known or readily apparent.
3. I hereby release, waive, and discharge College and its Board of Trustees, its officers, agents, employees and representatives from all claims, demands, liabilities, rights and causes of action of whatever kind or nature, that may result from or occur during my participation, whether caused by negligence of the College, its Board of Trustees, officers, agents, employees or representatives or otherwise. I also agree to indemnify and hold harmless the College for any loss, liability, damage or costs, including court costs and attorney's fees that may occur as a result of my negligent or intentional act or omission while participating in this course.

I HAVE CAREFULLY READ THIS RELEASE OF LIABILITY AND ASSUMPTION OF RISK AND HAVE HAD SUFFICIENT TIME TO SEEK EXPLANATION OF THE PROVISIONS CONTAINED ABOVE. AFTER CAREFUL CONSIDERATION, I SIGN THIS DOCUMENT VOLUNTARILY AND WITHOUT ANY INDUCEMENT.

Student's signature: _____

Printed name: _____

Date: _____