

General Biology I (BIO161)

John Ireland, Ph.D.

OFFICE:	136A McDivitt	CLASS:	T/R 1:00-2:30
EMAIL:	irelandjohn@jccmi.edu	LAB:	T 2:30-5:30
WEB:	http://docireland.org	OFFICE HOURS:	See Website

TEXT: *Biology*, Raven et. al (11th Edition, there are significant changes in this edition, but a 9th or 10th can be used.) Textbook Zero: This text is available in a digital format from several sources, including: amazon.com (Kindle) audible.com (Audiobook) barnesandnoble.com (NOOK Book). You can also check with the JC bookstore or your local library regarding possible digital formats. ISBN: 978-1259188138

LAB MANUAL: Lab Notebook available in Bookstore

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 which does include dissection of preserved specimens.

Prerequisite: ENG 090 or higher and MAT 031 or higher

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

General Education Outcomes (from JCC Catalog):

GEO 4: Demonstrate Scientific Reasoning

Grade Scale

4.0 = 100 – 90.0%
3.5 = 89.9 – 85.0%
3.0 = 84.9 – 80.0%
2.5 = 79.9 – 75.0%
2.0 = 74.9 – 70.0%
1.5 = 69.9 – 65.0%
1.0 = 64.9 – 60.0%
0.5 = 59.9 – 55.0%
0.0 = 54.9 – 0%

Grade Distribution

Lab Segment	~225 pts.
Lecture Overall	
Exams	400 pts.
Daily Quizzes	~200 pts.
<u>Final Exam</u>	<u>100 pts.</u>
TOTAL	~925 pts.

Percentage is calculated as a percentage of the total number of points

All grades are rounded to three significant digits.

Point totals may be adjusted during the term for schedule/material reasons.

Course Learning Objectives

1. The student will be able to explain the definition of scientific process and apply that definition to real world examples, with interest in differentiating scientific hypotheses, theories, laws, and experimental methodology.
2. The student will be able to demonstrate the ability to discern science from pseudoscience in real world examples.
3. The student will be able to explain how modern evolutionary theory developed and provide supporting evidence for the modern theory from the current knowledge base of science.
4. The student will be able to develop a complete cladogram for several given organisms, demonstrating a grasp of the fundamental tenants of cladistics as applied to biology.
5. The student will be able to differentiate the major groups in modern biological taxonomy to at least the Phylum level in all life, and the Class/Order level in specific subsets of life.
6. The student will be able to explain the role, biology, and place of viruses in biology.
7. The student will be able to construct a plausible timeline, based on the modern scientific body of knowledge, for the development of life on Earth, including the evolution of humans from earlier organisms.
8. The student will be able to apply basic wet and/or dry biology lab techniques to given experimental designs, generate data, and analyze the data with appropriate measures.
9. The student will be able to differentiate the basic visceral anatomy of several representative specimens during dissection.

Course Policies

Course Communication

I maintain server space to host materials for my courses. The website (<http://docireland.org>) is where I will publish all notices for the course, post materials needed, and link copies of the PowerPoint files. This is my personal space and the materials are produced with my personal equipment. The materials are intended for your personal use in the class only.

Course Accommodation

Course accommodations (extra testing time, quiet testing area, etc.) can only be made with a completed accommodation form from the Center for Student Success (CSS) in response to documented need. Accommodations will only be made after I have received the paperwork from CSS and no retroactive adjustments will be made. It is the responsibility of the student to seek accommodations that they are eligible to receive, and the accommodations must be reasonable within the context of the course.

Attendance and Participation

The school has a vested interest in making sure you are attending the classes in order to help you be successful. In light of this we, as instructors, must report your participation on a number of occasions throughout the semester. You will be reported as a V for *Verified* (meaning you are attending, participating and in addition passing), as an H for *Help* (meaning you are attending and participating, but not passing), or as Q for *Quit* (meaning you are no longer attending and/or participating in class). There are several reasons you may be listed as a Q, which I will address in a

moment, but it is important to note that *once you have been dropped from a class by an instructor you cannot be put back into the class without the instructor's signature.*

Reasons for Being Assigned a Q

- Failure to attend class within the first week without contacting the instructor.
- Failure to attend class for greater than three (3) sessions without contacting the instructor.
- Failure to take two (2) Unit Exams
- Failure to take five (5) Daily Quizzes
- Failure to complete three (3) Laboratory Exercises

These conditions will result in an automatic Q during the next HQV reporting period and your dismissal from the course. If you fail to participate after the final HQV reporting period (1 week after midterm) you will not be automatically dropped from the course but will receive a grade of 0.0 (E) for failing to participate in the course.

Electronic Devices and Classroom Courtesy

All students have a right to the same classroom experience and opportunity to learn. Any disruptive behavior in my class will result in *your immediate removal and loss of all points possible on that day* (daily quiz, lab, unit exam, etc.). This includes the use of cell phones and other electronic devices. You are welcome to tape my classes for *your future personal use only* and use a laptop or tablet for scholarly pursuits but any use of devices that I deem distracting (yes, I am the one who decides) will be dealt with immediately.

Academic Integrity and Honesty

The following is the text from the JCC Catalog and Policy Statements about Academic Honesty.

Any students found cheating and/or plagiarizing will receive a grade of 0.0 for the assessment. A second offense will result in a grade of 0.0 for the course. ALL INCIDENTS WILL BE REPORTED TO THE ACADEMIC DEAN

Faculty members who suspect a student of academic dishonesty may penalize the student by taking appropriate action up to and including assigning a failing grade for the paper, project, report, exam, or the course itself. Instructors must document all instances of academic dishonesty beyond those of a very minor nature, in writing to the Office of the Academic Deans using the attached form.

Students, who are suspected of cheating during a course exam or course placement in the testing lab, will be questioned and reported to the appropriate faculty member or Executive Dean of Students. The proctors are not to stop the exam but report the questionable behavior. As in other instances, the faculty will determine the penalty and appropriate action. If the student is suspected of cheating on course placement, the Executive Dean of Students is to be contacted and will determine the next steps.

The Office of the Academic Deans will record and track students who have been reported as having cheated. If the same student has a second incident, the dean will enact sanctions appropriate to level of infraction. The sanction will be selected in consultation with the involved faculty. The Dean can administer consequences up to and including suspension.

Definitions:

Academic Honesty: Is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism: Is defined as the failure to give credit for the use of material from outside sources. Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, quotations, or paraphrases from other sources without adequate documentation
- Self-plagiarism – is the reuse of significant, identical or nearly identical portions of one's own work without acknowledging that one is doing so or without citing this original work

Cheating: Is defined as obtaining answers/material from an outside source without authorization. Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical

(<http://www.jccmi.edu/policies>)

Incomplete Policy

The following is the text from the JCC Catalog and Policy Statements about an Incomplete.

Students may receive an "I" if, at least 90 percent (or as otherwise designated within the course syllabus) of the coursework is completed with an average grade of 2.0 to meet the objectives as specified in the course syllabus. The student shall complete appropriate documentation and follow defined procedures to request an incomplete grade considered. The course objectives are to be satisfactorily completed during the next semester or within a shorter period of time as determined by the instructor. The instructor and student shall work together to determine when the work is to be completed taking into consideration any extenuating circumstances which may cause the one semester to be extended; however, a due date is required. If the student does not complete the course within the designated period, the Registrar will replace the "I" grade with the earned grade as originally assigned by the instructor.

The grade of "I" is not awarded to students who did not attend, seldom attended, or to those who simply are not pleased with their final grades. Students receiving an "I" submit only the remaining work that had not been completed at the end of the semester. Students do not redo work that had already been graded. (<http://www.jccmi.edu/policies>)

Extra Credit and Missed Work

There is no extra credit available, per department policy, and no make-up/late work. Any deviation from this is solely at my discretion. If I do make an exception to any policies in the course they will be communicated in written (email) form for future reference.

Course Assessments

Unit Exams

There are five (5) Unit Exams, covering between one (1) and three (3) chapters in the text. These exams are comprehensive for the material in the unit and may also require skills, information or techniques learned in previous units (to a lesser extent). The exams are a mixture of various testing styles but will always include a set of problems to test your ability to work with the information in the chapters. Each Unit Exam is worth one hundred (100) points and I count the highest four (4) towards your final grade.

Daily Quizzes

There are approximately twenty-three (23) Daily Quizzes, each covering a mixture of material covered in the last class and/or the reading assigned for class that day. You may use any handwritten notes for the Daily Quizzes (*not copies of the PowerPoint files*) but be warned, they are only ten (10) minutes and failure to prepare will result in a low score. The Daily Quizzes occur in the first ten minutes of class. Each Daily Quiz is worth ten (10) points and I drop your lowest three (3) scores for the final grade.

Lab Assessment

Lab assessment will be covered in a separate syllabus provided during the laboratory.

Final Exam

There is a cumulative final for the course. The final is composed of Scantron type questions culled from previous exams (though they may be modified from their original form) and a cumulative cladogram assessment (you'll get to love those). Every student in the course will be judged by the same rubric for the course. The Final Exam is worth one hundred (100) points and counts towards your final grade.

Grade Normalizations

All Unit Exams and the Final Exam will be subject to a grade normalization (what many of you call a curve). The extent of the normalization will be the lowest positive value of the following two (2) conditions.

- The points needed to bring the class median to 74%
- The points needed to bring the highest score to 100%

No normalization will be applied to Daily Quizzes or Lab Reports, I reserve the right whether to normalize the lab quiz scores.

Use of Notes and Study Guides

I have gone back and forth on these topics throughout my teaching career and have decided on the following policy. No study guides will be provided. I know this sounds harsh, but the policy is from my years of experience and my expectations for work you will be required to do in the future. I find that the use of study guides consistently lead to students expecting the test to be specifically off the study guide which is not what the exams are about.

Students can use any handwritten notes (not PowerPoint slides copied with notes on them) for the Daily Quizzes.

Course Schedule (subject to change with notification)

Class Date	Lesson	Chapter(s)
1/17	Syllabus/Nature of Science	1
1/19	Evolutionary Theory	21
1/24	Evidence for Evolution	21
1/26	Speciation/Systematics	22/23
1/31	Systematics/Tree of Life	23/26
2/2	EXAM 1	
2/7	Viruses	27
2/9	Prokaryotes	28
2/14	Prokaryotes	28
2/16	Protista	29
2/21	Protista	29
2/23	EXAM 2	
2/28	SPRING BREAK	
3/2	SPRING BREAK	
3/7	Unseeded Plants	30
3/9	Seed Plants	31
3/14	Fungi	32
3/16	Fungi	32
3/21	Fill-In Day	30-32
3/23	EXAM 3	
3/28	Animal Diversity	33
3/30	Radials/Acoelomates	33
4/4	Protostomes	34
4/6	Protostomes	34
4/11	Protostomes	34
4/13	EXAM 4	
4/18	Deuterostomes	35
4/20	Deuterostomes	35
4/25	Deuterostomes	35
4/27	Deuterostomes	35
5/2	EXAM 5	
5/4	FINAL EXAM (CUMULATIVE)	

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Learning Contract

I, _____ (print your name), have been given a copy of the syllabus/policies for General Biology I (BIO161) taught by Professor John Ireland, during the Winter 2017 term at Jackson College. The following conditions for the class were explained to me during class.

- This class has daily, open, hand-written notes quizzes over the assigned reading and previous class's materials. The quizzes occur during the first ten (10) minutes of class and missing a quiz results in a grade of zero (0). Quiz times may be shortened if the class has finished the quiz, this does not mean additional time will be given to students who arrive late.
- Copies of the PowerPoints are provided in an electronic archive for the course, but hardcopies of these slides are not allowed to be used for the quizzes.
- There are no make-up labs, daily quizzes, lab quizzes, or exams in the class. Periodic absences are accounted for in the dropped grade policy for the course.
- While the occasional absence or tardiness in this class can be absorbed by dropped grades, the student is still responsible for the missed information and any schedule changes that occur during your absence.
- Lab attendance is required for the course. Failure to attend three (3) labs will result in the automatic failure (with a grade of 0) of the course.
- The lab for this class contains dissections of preserved animals.
- Only reasonable accommodations properly registered and reported by the Center for Student Success (CSS) will be honored in the class, no other changes to class protocol are to be assumed.
- A preliminary schedule for the class was given to the class in the syllabus, but it is possible that dates may change. Any major assessment (exams, lab quizzes, or formal lab) day changes will be done with at least seven (7) days notice to the class. This does not pertain to daily quizzes.
- Absences are not judged as excused or unexcused. The student is assumed to be an adult and capable of prioritizing their lives and class, so no consideration will be given for early/late testing due to absences for personal reasons (i.e. vacations during term). The performance of governmental service (military, jury duty, etc.) is the exception to this rule and will require documentation.
- Medical leave is subject to the dropped scores policy, and occasional absences for such will be handled through that policy. If extensive medical concerns occur, it is the responsibility of the student to seek a withdrawal for medical reasons, or an incomplete (if appropriate).
- The audio recording of the lectures is permitted for personal use, as are still images of materials or specimens. However, no video recording or public sharing of class materials is allowed.

These conditions and all assessment criteria/policies of the class were explained during the first meeting of the class. I have been given a minimum of thirty-six (36) hours to review the materials outside class and email any questions to the professor. I agree to abide by the requirements of the course as outlined in the syllabus and other materials provided.

Signature: _____ Date: _____