

# Introductory Biology

BIO 110.I5

Winter 2021



**Number of Credits:** 4 credits

**Days Class Meets:** Mondays & Wednesdays

**Meeting Times:** 6-8pm

**Online Office Hours:** 9-11:30am Fridays

**Instructor:** Dr. Curt Blankespoor

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**Contact Phone:** 616.401.1848

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## Course Description

Students will investigate the nature of science and critically analyze scientific data and current biological issues. Basic biological concepts including cell structure and function, context of current issues. This course is designed for non-science majors. This course includes a laboratory component.

## Prerequisite(s)

ENG 085 or 090, and MAT 031

## Course Focus

The main focus of this course is to improve scientific literacy. Many students fail to see the relevance of science in their lives. To address this, this course will approach science from current topics that you should be able to relate to in your life. We will then need to learn some biology to understand these topics.

## Course Objectives

Students successfully completing this course should be able to:

1. Describe the nature of science and how it is a self-correcting process
2. Understand the factors affecting global warming and other human impacts on the environment
3. Identify cell structures and describe their functions
4. Explain the origin of cancer cells and factors affecting their growth
5. Understand the basic structure and function of DNA
6. Understand the mechanisms of evolutionary change and how evolution differs from non-scientific explanations

## General Education Outcomes

The course goals and objectives incorporate specific General Education Outcomes (GEOs) established by the JC Board of Trustees, administration, and faculty. These goals are in concert with four-year colleges and universities and reflect input from the professional communities we serve. GEOs guarantee students achieve goals necessary for graduation credit, transferability, and professional skills needed in many certification programs. The GEOs and course objectives addressed in this class include the following:

**GEO 4—Demonstrate Scientific Reasoning** (addressed through course objectives 1-6)

## Textbook

**Biology: The Core.** 3<sup>rd</sup> Ed. Eric J. Simon (ISBN: 978-013-4189151-4)

**Text Book Zero!** This text is available in a digital format. Please see the links posted on our class Jet Net site. This text is available to rent or purchase in digital format through the JC Bookstore.

**Follett Access! Please review the cost of your required materials at the following link to determine the best option for you to purchase your materials:** <https://www.bkstr.com/jacksonstore>

For more information on the Follett ACCESS Program, you can view the frequently asked questions here: <https://www.jccmi.edu/bookstore/student-services-follett-access/>.

If after reviewing the costs, you choose to opt out, you may do so here: [www.jccmi.edu/optout](http://www.jccmi.edu/optout). Please note your opt out selection is for your entire semester schedule. You cannot opt out and opt in to individual courses. And you must opt out by the due date for your first class.

If you have questions about materials, please contact the Jackson College Follett bookstore at [jackson@bkstr.com](mailto:jackson@bkstr.com). For account billing questions, please contact the Jackson College Cashier at [jccashier@jccmi.edu](mailto:jccashier@jccmi.edu).

## Grading Procedure

Your course grade will be based on your performance in the assessment categories found in the table below. The course will comprise both lecture (75%) and lab (25%) components.

Assessment Category	Points	Details
Learning Celebrations	400	4, each worth 100 points
Position Papers	50	5, each worth 10 points
Lab Reports/Summary Write-Ups	100	12, each worth 10 points, drop lowest 2
Lab Quizzes	50	2, each worth 25 points

Learning Celebration "Surrogate" Category	Points	Details
LC Portfolios (includes Fact-Finding Missions, Briefing Worksheets, Group Assignments, and Debriefing Notes)	(144)	3, each worth 48 LC "replacement" points

"Grade Enhancer" Category (up to 5%)	Points	Details
Full participation in synchronous meetings	30	30, each worth 1 point

**Attendance:** Attendance is critical to your success in this course. The doors on classrooms are now required to be locked at all times for security purposes. If you arrive late, please knock and wait patiently until you are allowed in the class.

**Learning Celebrations:** Learning Celebration formats may include, multiple choice, matching, fill-in, short answer, essay, application, and problem solving; they will be 100 points each. A Final Cumulative Learning Celebrations will be given on the last day of class. During Learning Celebrations, electronic devices must be turned off and may not be within reach unless otherwise specified by the instructor. Violation of this will result in a zero and implementation of the academic dishonesty policy. A low score due to academic dishonesty cannot be dropped.

**Laboratory:** As a part of lab, you will be working in a group of up to four people. It is expected that you will work together to complete the exercise. As such, you may not leave lab until all individuals in your group have completed the lab exercise. The reason for this is that lab is a group activity and cooperation is required. Due to the fact that the laboratory rooms and equipment are not readily available, make-up laboratories will not be possible. However, the lowest 2 laboratory exercise grades will be dropped. In order to fulfill the General Education Outcomes for a laboratory science course, students must complete 10 out of the 12 laboratory exercises. Failure to do so will result in a course grade of 0.0 regardless of the grades in the rest of the course.

**Late work:** Unless special arrangements are made in advance, no credit will be given for late work. In fairness to students who complete their work on time, this policy will be strictly enforced.

**Extra Credit:** No extra credit be given/accepted under any circumstance. Rather time should be taken to learn the assigned material.

## Grading Scale

Final grades will be assigned based on the percentage of possible points earned as shown in the table below. The grading scale will be as followed pending further notice and grades will be rounded to the nearest percent. Grades will be curved at the instructor's discretion and will only be applied if it will improve grades.

Grade	4.0	3.5	3.0	2.5	2.0	1.5	1.0	0.5
Minimum %	90.0	85.0	80.0	75.0	70.0	65.0	60.0	50.0
Points Range	> 540	510-539	480-509	450-479	420-449	390-419	360-389	330-359

## Course Management

**Incompletes:** In accordance with JC's Incomplete Grade policy, a student may request the grade of Incomplete if they are unable to complete the course work for some documentable unforeseen circumstance. The Incomplete will be granted if at least 50% of the assigned work in the course (including both assignments and exams) has been performed with sufficient quality (with an average grade of 2.0) and the student provides documentation of the circumstance. The student will be required to provide a detailed written schedule with due dates for making up the missing work during the following semester.

## Academic Honesty Policy

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, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

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

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

## Help

If you have special needs that I should be aware of in order to help you to best learn course material, please let me know as soon as possible. Accommodations cannot be applied retroactively. Students requiring special

assistance (including those affected by the Americans With Disabilities Act) should contact the Center for Student Success in Bert Walker Hall Room 138 (517-796-8414) or visit the following website:

<https://www.jccmi.edu/center-for-student-success/accommodations-for-students-with-disabilities/>

**Tutoring services:** Tutoring services are free at JC if at any point in the course you feel that you would benefit from a tutor, contact the Center.

**Accommodations:** If you need any specific 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.

## **Attendance Policy**

Just as in a traditional classroom course, regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams BEFORE the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate **within the first couple of days of the term** to validate your enrollment in the course. After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you.

## **Failure**

The college is required to drop students from classes if they are not participating. Examples of non-participation include:

- Failure to attend the first or second day of class without contacting the instructor
- Failure to attend more than three (3) synchronous meetings
- Failure to complete three (2) Position Papers or three (2) Laboratory Reports
- Failure to take two (2) Learning Celebrations

Any of these examples of non-participation may result in your immediate dismissal from the course. If you fail to participate after the final reporting period (1 week after mid-term) you will not be automatically dropped from the course, but will receive a grade of 0.0 for failing to participate in the course.

Students own the responsibility of the effect of being dropped. Being dropped from the class may affect financial aid or housing status. If you are dropped, the drop status will NOT be changed due to the impact on financial aid, housing status, etc.

## **Caveat**

The policies included in this document are subject to change at the instructor's discretion. Some minor revisions may be necessary during the semester due to unforeseen circumstances (e.g., weather-related school closings, instructor illness, etc.).

## Expectations & Guidelines for Success

- Attend all classes and arrive on time
- When you have an unavoidable absence, contact the instructor for missed assignments
- Read the assigned chapters, either before or after lecture. This will help reinforce the topics covered.
- Study class materials for at least 2 hours outside of class for each hour in class.
- Participate in class discussions.
- Participate in group study sessions, this can be the most effective form of learning for many students
- Do not hesitate to contact the instructor about concerns you may have with the class.
- Make use of the instructor's office hours.
- Review study practices at <https://www.jccmi.edu/science/how-to-study-science/>

## Other Course Policies

**Assistance:** If you need 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 JC's Center for Student Success (796-8415).

**JetNet Resources:** Many course materials can be accessed through the JetNet course management system. This is the way you will be able to view your grades, announcements, screencasts, animations, etc. You are expected to use JetNet to help you track assignments and due dates.

**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.

**Phones in the Classroom:** Research has clearly shown that having a cell phone out in class has a negative effect on learning and success. One study reported that students accessing their phones even once in class have an average earned grade 0.5 points less than those that do not have a phone out. Students with grades less than a 3.0 have even greater negative effect on their grade. JC has made a point of emphasizing student success. As such, **phones are not permitted to be out in class (this includes texting)**. If you have a phone with you, leave it in your backpack or pocket. If you have matters that require such vital importance that it requires you to focus on text messages or calls, you probably should not be in class. If you access your phone in class, you will be asked to leave for 10 minutes while you take care of the matter. A refusal to leave or the third time you access your phone over the semester will result in application of the disruptive behavior policy.

**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.

## Calendar (subject to revision if necessary)

WEEK	DATES	TEXTBOOK Chapter (section)	JETNET HOMEWORK (due Sunday 9:00pm)	MONDAY-THURSDAY
1	Jan 11 – Jan 15			Course Introduction
2	Jan 18 – Jan 22	1(4-10)	FFM 1a	Nature of Science
3	Jan 25 – Jan 29	7(1-7), 8(8), 10(11)	FFM 1b	Evolution, Natural Selection
4	Feb 1 – Feb 5	3(1), 7(12), skim 8-10	Position Paper 1, FFM 1c	Diversity of Life
February 7 at 1:30pm		<b>Learning Celebration 1</b>		
5	Feb 8 – Feb 12	12(4-6)	FFM 2a	Population Growth
6	Feb 15 – Feb 19	Core Issue 10	Position Paper 2a, FFM 2b	Climate Change
7	Feb 22 – Feb 26	12(10-11)	FFM 2c	Carbon and Ecological Footprints
8	Mar 1 – Mar 5	12(17-19)	Position Paper 2b, FFM 2d	Planetary Boundaries
March 4 at TBD		<b>Learning Celebration 2</b>		
	Mar 8 – Mar 12	HAPPY MID-SEMESTER BREAK!!		
9	Mar 15 – Mar 19	Core Issue 1, 2(7-12), 11(4-7)	FFM 3a	Nutrition, Activity, Wellness
10	Mar 22 – Mar 26	Core Issue 2, 5(1-10), 6(12)	FFM 3b	Cell Division, Cancer
11	Mar 29 – Apr 2	5(11-18)	FFM 3c	Genetics
12	Apr 5 – Apr 9	3(5), 6(1-7, 10, 17)	Position Paper 3, FFM 3d	DNA, Genetic Engineering
April 11 at 1:30pm		<b>Learning Celebration 3</b>		
13	Apr 12 – Apr 16			Reproduction I
14	Apr 19 – Apr 23	11(16-18)	Position Paper 4	Reproduction II
15	Apr 26 – Apr 30	<b>Learning Celebration 4</b>		

## Important Dates: Winter 2021

DATE	EVENT
Jan 11 – May 1, 2021	Semester Dates
Jan 18, 2021	Martin Luther King Jr. Day
Mar 8 – Mar 14, 2021	Mid-Semester Break

"No one cares how much you know...once they know how much you care."

## BIO 110 Laboratory Schedule Winter 2021

WEEK	DATES	LAB	LECTURE
1	Jan 11 – Jan 15	Habitat Exploration 1	Course Introduction
2	Jan 18 – Jan 22	Habitat Exploration 2	The Nature of Science
3	Jan 25 – Jan 29	EvoDots Simulation	Evolution/Natural Selection
4	Feb 1 – Feb 5	Habitat Exploration 3	Diversity of Life
			<b>Learning Celebration 1 (Feb 7)</b>
5	Feb 8 – Feb 12	Habitat Exploration 4	Population Growth
6	Feb 15 – Feb 19	Before the Flood Video	Climate Change
7	Feb 19 – Feb 26	What's your Carbon Footprint?	Sustainability/Global Health
8	Mar 1 – Mar 5	<b>Lab Quiz 1</b>	<b>Learning Celebration 2 (Mar 4)</b>
9	Mar 15 – Mar 19	Nutrition	Nutrition, Activity, and Wellness
10	Mar 22 – Mar 26	Cell Division	Cell Division/Cancer
11	Mar 29 – Apr 2	Genetics	Genetics
12	Apr 5 – Apr 9	DNA Structure and Extraction	DNA/Genetic Engineering
			<b>Learning Celebration 3 (Apr 11)</b>
13	Apr 12 – Apr 16	Graphing Data Sets	Reproduction
14	Apr 19 – Apr 23	Modeling Scientific Investigation	Pregnancy & Childbirth
15	Apr 26 – Apr 30	<b>Lab Quiz 2</b>	<b>Learning Celebration 4</b>