

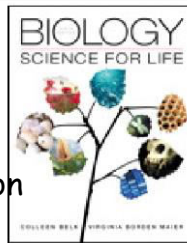
BIO 101: Introduction to Biology



This course serves as an introduction to the biological sciences: including cellular and molecular biology, the diversity of life, organismal biology, ecology, and evolution. More importantly, it will serve to enhance your broad-based education and help you become a more scientifically informed citizen regarding current biological issues. Modules will tie biological principles to real-world problems and allow you to critically assess scientific issues addressing our world today. Including the impact of society on biotechnology, the destruction of habitat, and the intersection of theory and practice.

Required Text:

- 1.) Colleen Belk and Virginia Bordon Maier. (6th Edition). Pearson Benjamin Cummings.



Biology, Science for Life.

ISBN-13: 978-0133892307

- 2.) SimUText: Online Package
Available at:
McKendree University Bookstore (voucher)
Or online at SimBio (see online instructions)

Learning Objectives:

A student successfully completing the Introduction to Biology course should have developed the ability to:

1. Distinguish science from other disciplines;
2. Apply the process of scientific inquiry;
3. Interpret the validity of science in the news;
4. Locate reliable scientific information/publications;
5. Interpret scientific information in a variety of sources;
6. Discriminate between scientific and societal controversy;
7. Understand the reasons for controversy involving science;
8. Communicate about science with accuracy and sensitivity.

Percentages for Final Grade Calculation:

A	94-100%	C+	77-79%
A-	90-93%	C	74-76%
B+	87-89%	C-	70-73%
B	84-86%	D	60-69%
B-	80-83%	F	59-0%

Grading Criteria

8 quizzes (10)	= 80
8 Discussion boards (10)	= 80
1 Current news blog	= 18
4 Funny Biology pins (21)	= 84
7 Labs	= 178
TOTAL	= 440

SELECTED MCKENDREE UNIVERSITY COURSE POLICIES

Academic Honesty:

Any student detected of cheating or engaging in plagiarism on any exam or paper, or participating in any other form of academic dishonesty, will receive the appropriate sanctions, which can include a failing grade ("F") for the course. Please visit with me regarding any questions. In cases of serious violations, additional sanctions (such as academic probation or suspension) are possible.

ADA Policy:

A student requiring assistance with the technical portions of the course should contact the Instructor or the Academic Support Center. Services for Students with disabilities are provided through the McKendree Academic Support Center (MASC) in order to help the student integrate into the entire university experience. MASC provides coordination and implementation of special accommodations for students with documented disabilities.

Challenges to Academic Decisions:

Students who think that their work has been improperly evaluated or who think that they have been unfairly treated in any academic decision may use the grievance procedures found in the catalog.

Course Deletions/Additions:

Students may drop or add courses according to the schedules posted by the Office of Academic Records for each semester. Drops and adds are not effective until recorded by the Registrar. A course may not be added after one week from the first class meeting.

Email:

Every student is issued a McKendree email account, which is one of the major means of communication from departments such as the Office of Academic Records, Student Affairs and the Business Office. All students are responsible for checking their McKendree email accounts regularly, and are accountable for information disseminated to their email accounts. Failure to read university communications sent to McKendree email accounts does not absolve students from knowing and complying with the content of these communications.

ASSIGNMENTS

NO late work will be accepted. It is SO important to stay on track in this course

1. Quizzes:



There are 8 quizzes, one for each module. These can be considered open book/ note, but please keep in mind that the quizzes are timed. Because you will only have 30 minutes to complete the quiz, it is imperative that you read the material and go through the power point before you begin the quiz. You are to close all other websites and pages before you begin. Each quiz must be completed in a single sitting and you will not be allowed to stop and begin later. Quizzes are due on Sundays by midnight. Grades will be posted after the due date.

2. Discussion Boards:

There are 8 discussion boards, one for each module. You are to post a response to the question (start your own thread) by Thursday at midnight. You should also then post two responses to other posts (not your own) by Sunday at midnight. Please use appropriate grammar and sensitivity in your posts. I am looking for you to incorporate not only your personal thoughts and experiences, but also content from the book or other sources to substantiate your opinions. It is imperative that you use outside information in your original post (and looked highly upon in your responses). You are to properly/formally cite all outside information, utilizing both in-text citations as well as providing a full citation of the source (not just a web-link). There may be times when I grade the original responses before the end of the week (progressive scoring). Therefore, disregard your score until the response posts have been graded.



Original Post (6 points):

2 points = Presentation of a clear and concise opinion directly related to & thoroughly addressing the board topic

2 points = Use of references to substantiate opinion that are coherently integrated

2 points = Proper in-text and full citation

Response posts (4 points):

2 points = Two responses to other students on the board

2 points = Strong, in-depth responses that clearly display engagement

3. Current News Blog:

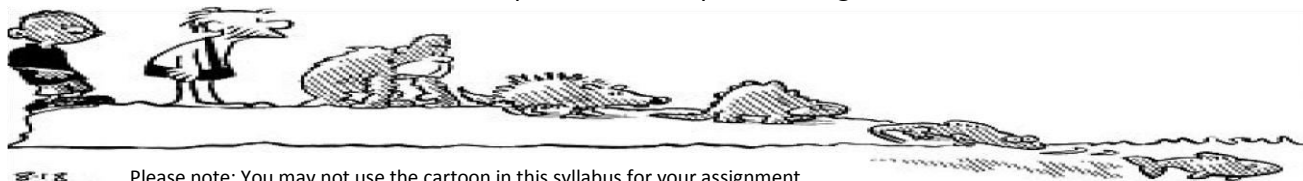
You are to locate one current news article highlighting a current event and post a summary and reflection. The article should be published AFTER the start of the course as well as come from a credible source, and current event/news of the articles should reflect the week to which you are assigned (see blackboard for assignments). For example, if you are assigned to the 6th module, which covers the topic of pollution, you can use an article on pollution for your assignment. Do not utilize summaries of primary literature articles/research studies; find articles discussing something that happened recently. No two students can report on the same news piece or event. Utilize some of the links provided in blackboard to locate articles if you need guidance in finding appropriate articles. Blog assignments are due on Thursdays at midnight.

ASSIGNMENTS

3. Current News Blog (continued): You will be assessed on the following items (3pts each).

Your post should include

- 1) A picture that best illustrates the current event, and formal citation for the article (this will contain a link),
- 2) A brief summary of the current event as reported in the article (in your own words),
- 3) A reflection on how the science in the course helps you understand the science in the news article you are presenting. This helps us understand how the general public will interact with science in their daily lives.
- 4) A personal reflection/reaction to the news piece, including comments on what you found interesting about it and why you liked the article, &
- 5) Two credible links (formally cited) to articles that provide additional information related to the topic that would be helpful to readers that want to further explore the topic.
- 6) Be sure that your event is *unique* to the blog, current (after start of the course), and focused on an event (not research). The assignment should not be an attachment.



Please note: You may not use the cartoon in this syllabus for your assignment.

4. Funny Biology Pin:

You are to locate a cartoon that makes a statement about the topic currently being studied, so select your cartoon carefully so that you are able to complete this assignment. You are to create an **original pin** with an appropriate cartoon on our class Pinterest account (further instructions and an example are on blackboard), with a brief title and your first name, initial of your last name. You are to post your pin by Sunday at midnight. **A comic may not be used more than once on the board, so please review other pins before posting your own.** You will then create a word document for the pin containing a description of the

pin that is organized with answers/responses to the following items, taking care to be detailed and specific in your responses. This document will be uploaded to blackboard as an assignment. You will be graded on the following items. (3pts each).

- 1) Pin a unique cartoon and create a one-line byline with your name as instructed.

In the description, including the following items:

- 2) Provide a complete & proper citation for the pin (see document on BB for formatting)
- 3) Description: **Thoroughly** describe what you see (can you picture it after reading your description?). Look for details, but make no judgments or analysis.
- 4) Biology: Tell me how the comic relates to our course content by broadly highlighting the biological information/topic it is addressing. Be sure to **explain** how your cartoon fits with the information we are currently studying and be **explicit** in your explanation.
- 5) Analysis: Analyze whether the cartoon's depiction of the biological information you explained above is accurate based on what you have learned in the course. If it is an exaggeration, explain.
- 6) Purpose: What is the purpose of the cartoon? Some possible functions follow, but you may think of a different purpose. Is this cartoon mostly trying to make you laugh, view the content in a new/different way, help you remember the content, or affect how you think/what you believe about the topic? Explain.
- 7) Choice: Why did you choose this cartoon over the others that were available? (What made it "better" or how did it "speak to" you?) What have you learned anything about how the general public interacts with/interprets this particular biological topic?

ASSIGNMENTS

5. LAB:

There are a total of 7 lab modules across the 8 week semester for this course. All of the 7 modules are virtual experiences that require the use of SimBio software. All labs are due Sundays by midnight.

SimBio

You will need to purchase the SimBio labs, which are developed for BIO 101 at McKendree. You will be submitting answers to questions that will be uploaded to the SimU Text system that your instructor will use to assess both your effort and understanding. The modules come in three varieties: Tutorials, Chapters, and Labs. For each module, you are to work through the sections indicated on the schedule, answering all questions as you proceed through those corresponding sections. Be sure to take your time and make the most of these online experiments.



Tutorials & Chapters: All virtual experiences.

Labs: The labs are virtual, but there are pdf workbooks that are to be printed and completed as you proceed through the lab. You are to complete the workbooks in their entirety. Your responses to workbook questions will be submitted as an assignment on

blackboard. This applies to module 6 only.

Assessment of Lab Experiences

You will be assessed on both effort & understanding.

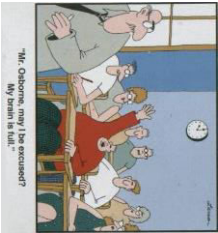
Effort:

- Within the SimBio labs, you will be assessed for effort through the (non-graded) embedded questions, which are submitted to the SimU Text system. Even though these questions are "not graded" through the system, the proportion of correct responses will be used to assess your effort.

Understanding:

- Within the SimBio labs, you will be assessed for understanding based off of the graded SimBio questions (embedded within the software and submitted online).



Module	Topics	Chapter	DB	Quiz	Assignment	Blog	LAB	Effort
	 "Mr. Ockrop, may I have recommend? My brain is blank."		All DB Post by Thursday and 2 Re- sponses by Sunday	All Quizzes due by Sunday	One Funny Biology Pin (due ~every 2 weeks by Sunday)	One Current News Blog due by Thursday see BB for as signed week)	Activity Both effort & understanding items due by Sunday	
	1 Introduction to the Scientific Method	CH 1 2-29	Introduction DB 1	Q1	The process of science; Scientists	-	SimBio: Understanding Experimental Design	All virtual ?s 10 pts
	2 DNA, Mitosis and Meiosis	CH 6 106-131	DB 2	Q2			SimBio: Mitosis	All virtual ?s 10 pts
	3 Mendelian and Quantitative Genetics	CH 7 132-157	DB 3	Q3			SimBio: Meiosis	All virtual ?s 10 pts
	4 Inheritance, DNA Profiling, Gene Expression, Mutation and Cloning	CH 8 158-175 CH 9 176-199	DB 4	Q4	DNA Applications		Rework Mitosis or Meiosis Tutorials (if needed)	
	5 Evolution and Natural Selection	CH 10 200-231 CH11 232-255	DB 5	Q5			SimBio: Exercises Darwinian Snails Experimenting	Darwinian: All virtual ?s 10pts Experimenting: All virtual 10pts
	6 Biodiversity and The Human Impact	CH 15 334-365 CH 16 386-395	DB 6	Q6	Threats to Diversity		SimBio: Nutrient Pollution Print workbook	Workbook re-sponses submitted in BB: 10 pts
	7 Photosynthesis and Climate Change	CH 5 86-105	DB 7	Q7			SimBio: Climate Change 2	All virtual ?s 10 pts
	8 Population Ecology	CH 14 316-333	DB 8	Q8	Human Population & Consequences		SimBio: Exercises Population Growth Isle Royale	Population: all virtual 10pts Isle: all virtual 10

Understanding
Graded Questions (10 pts)
Section 6: 10 pts
Section 6: 10 pts
Darwinian: Section 6: 10 pts
Graded Questions: 10 pts
All Graded Questions: 18 pts
Population: Section 3: 10pts Isle: Section 6: 10pts