

# BIOL 10 – INTRO TO LIFE SCIENCE

SPRING 2023

REEDLEY COLLEGE

**SECTION:** 51005

**INSTRUCTOR:** KAREN MARKS

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**OFFICE/PHONE:** TBA

**LECTURE:** 100% ONLINE, NO REQUIRED MEETINGS

**Course Description:** This 3-unit lecture course is recommended for the non-biological science and pre-education majors. This is an introductory course using biological concepts. The organismal structure, function, inheritance, evolution, and ecology are covered. Students needing a life science lab must enroll in Biology 10L in addition to Biology 10. Not open to students with credit in Biology 3.

## Course Objectives

1. Compare and contrast Eukaryote and Prokaryote cell structure.
2. Recognize chemical elements, bonds, and properties of water.
3. Compare anatomical and physiological features seen in the animal kingdom with emphasis on human body systems.
4. Calculate genetic probabilities based on the principles of Mendelian genetics.
  - a. identify human genetic mutations and explain probable causes for their occurrence.
5. Distinguish the processes of transcription and translation and identify their roles in protein synthesis.
6. Diagram plant life cycles and identify major plant adaptations.
7. Explain and compare the processes of photosynthesis and cellular respiration.
8. Demonstrate knowledge of evolutionary theory and identify the different mechanisms responsible for biological change.
9. Describe energy flow and nutrient cycling within an ecosystem.
  - a. Consider human impact on natural systems.
10. Relate principles of population ecology to the study of the global human population.
11. Read scientific literature and apply the steps of the scientific method to laboratory research.

### Course SLOs

1. Evaluate current scientific literature and examine how the scientific method is employed in biological research.
2. Identify levels of biological organization and apply these concepts to living systems.
  - a. By examining anatomical and physiological features.
  - b. By investigating chemical and energy relationships.
3. Assess human impacts on natural systems and critically evaluate solutions to environmental problems.
4. Explore the cellular basis of life.
5. Apply the principles of Mendelian genetics to evolutionary theory and human medicine.
6. Recognize the function of DNA and how its discovery has impacted modern science.
7. Classify the wide range of living organisms and identify the evolutionary mechanisms that have impacted this diversity.
8. Recognize the chemical basis of life.

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### COURSE MATERIALS

This course uses online materials. While you may choose to pay for a physical copy of the book, only an online access code version is required. The link to our course section can be accessed directly through Canvas, with the appropriate sections linked in their respective modules. You can also access the entire book online without Canvas.

**Textbook Title:** Mader, S. Essentials of Biology, custom, 6th edition McGraw Hill. With active LearnSmart access code.

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### ATTENDANCE-RELATED POLICIES

**Dropping the Class:** Attendance is especially important at the beginning of the semester. All students are expected to complete the first assignment to establish an intention to attend the class for the semester. Students who do not participate and fail to submit the first assignment during the first week may be dropped for non-attendance. Additionally, students who miss more than two assignments in the first three weeks may be dropped as well. After the first three weeks, students will be responsible for dropping the class if they choose to no longer attend.

**Adding the Class:** Students hoping to add the class should email me the first day of class. Previous systems required an “add code”. These are no longer used. Instead, if you wish to add the class, you must obtain permission from the instructor, who will add that permission to Self-Service. Then, you may log in to Self-Service and add the class. Students must add the class within 3 days of obtaining permission. Students who fail to add the class on Self-Service in a reasonable timeframe will have permission revoked.

### **Important Dates**

*Last Day to Add: 1/29/2023*

*Drop without a W: 1/29/2023*

*Last Day to Drop (W): 3/10/2023*

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### COMMUNICATION POLICIES

**Email/Canvas:** I generally respond to emails within 24 hours on weekdays, with potentially slower responses over weekends. Please allow that time for a response before sending a follow-up email. In emails (especially when not using the Canvas messaging system) please include the class/section you are in to add clarity to your message.

**In-Person/Office Hours:** TBA

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### LECTURE POLICIES

**General Lecture Statement:** This course is 3 units, meaning students will have approximately 3 hours of lecture per week. Lectures will be held in 45-50 minute live Zoom sessions and recorded for students who cannot attend at the scheduled time. Watching the lectures (either live or recorded) is key to success in the class, as lectures will help you decipher new material.

**Lecture Exams:** There are five module exams in this course. These exams are online and do NOT require any special software, however, students will be required to stay ONLY on the exam page during the exam. Students suspected of academic dishonesty may also require a meeting with the instructor. ***Make-up exams will NOT be readily offered without the instructor's permission.*** You MUST take them during the scheduled exam window unless other arrangements (such as DSP&S proctoring) have been made. If you have a known conflict from a college-sponsored event (such as a sporting match), you MUST contact the instructor in writing at least 1 week in advance to make arrangements. Emergency situations will be handled on a case-by-case basis, at the instructor's discretion.

**Writing Assignment:** The writing assignment is a 1000-word essay on citizen science. More instructions on this assignment will be given later in the class.

**LearnSmart:** LearnSmart homework assignments are meant to provide you with practice questions based on the book and can connect you to the right reading sections for questions you find difficult. LearnSmart assignments require an access code so it is important to register for Connect very quickly. Most LearnSmart assignments take about 40-50 minutes to complete but this time can vary, as the program will give you new questions if you miss them. This also means that it is completely possible to get 100% of the points on every LearnSmart assignment so it's worth it.

**Quizzes:** Quizzes are there to help you practice for the exams. There are two quizzes for each module. These are also run through the textbook access code so make sure you acquire that quickly.

**Extra Credit:** Extra credit is generally not offered in this class. Students will have other opportunities to improve their grade by demonstrating the knowledge they have missed previously. Requests for personal extra credit are not ethical, as it robs other students of the same opportunity, and so requests for extra credit will be ignored.

**Late Work:** Students are generally expected to turn in their work on time. However, it is understandable that occasionally students need a little extra time to complete things in cases of life-happenings such as illness. Every student is allowed five 1-week extension passes for the class. Extension passes can be used on any regular assignment, paper, discussion, or quiz but CANNOT be used on exams of any type. I don't need to know the reason, but the student should let me know if they plan on submitting it late. Students can stack these, meaning a student can use multiple passes on the same assignment. (Example: you use two 1-week passes on one quiz, giving you a 2-week extension.)

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## ACADEMIC INTEGRITY

**Academic Integrity Policy:** You're expected to demonstrate your best work in the course. That means maintaining academic integrity. What is academic integrity? It's when you are accurately and honestly demonstrating your knowledge of the course material. Violations of this are called academic dishonesty AKA cheating. Cheating can be obvious, such as looking at your book or asking someone for test answers. But it can also be more insidious, such as copying answers from Google or Chegg. Students suspected on cheating on an exam may need to have a meeting with the instructor. Students caught cheating will receive a "0" on the assignment and may be referred to the Dean.

"Cheating" can include but is not limited to:

- Copying someone else's work (plagiarism)
- Possessing/using test banks
- Lying to get extensions/exemptions
- Copying from sources without providing a citation (like Google or Chegg)
- Copying from sources AT ALL during online exams
- Paying for/getting paid to complete someone else's work

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## GENERAL COLLEGE POLICIES

**Accommodations for Students with Disabilities:** If you have a verified need for an academic accommodation or materials in alternate media (e.g., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact your instructor as soon as possible and provide a copy of the specific accommodations.

**SCCCD Nondiscrimination Statement:** SCCCDC complies with all federal and state rules and regulations and does not discriminate on the basis of national origin, religion, age, sex (gender), race, color, medical condition, ancestry, sexual orientation, marital status, physical or mental disability, or because he or she is perceived to have one or more of the foregoing characteristics.

This holds true for all students who are interested in participating in educational programs and/or extracurricular school activities. Harassment of any employee/student with regard to national origin, religion, age, sex (gender), race, color, medical condition, ancestry, sexual orientation, marital status, physical or mental disability, or because he or she is perceived to have one or more of the foregoing characteristics is strictly prohibited.

Inquiries regarding compliance and/or grievance procedures may be directed to the college's Title IX Officer and Section 504/ADA Coordinator.

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## GRADING

**General Grading Statement:** Students will be graded based on their demonstration of knowledge in class. Grades are entirely based on performance in graded assignments, such as LearnSmart assignments and exams. Attendance, participation, or other non-academic activities will not count for points toward final grades. Grades are not rounded and are non-negotiable and may only be adjusted in the rare case of an error.

**Points Breakdown:** Here is the breakdown of assignments that have a point value. →

Graded Item	Points
Module Exams (5 x 100 pts)	500
Quizzes ( 10 x 5 pts)	50
LearnSmart (21 x 10 pts)	210
Discussions (10 x 10 pts)	100
Writing Assignment	140
<i>Total:</i>	1000

**Grading Scale:** Here is the grading scale used to calculate final grades. Final grades will not be rounded and requests to round or deviate from this grading scale will be ignored.

**Grades and Starfish:** Please check your grades regularly throughout the semester to ensure your grade appears accurate. Students may receive messages via Starfish from their instructor in a variety of circumstances including “kudos”, poor attendance, missing assignments, danger of failing, and more.

Letter Grade	Percentage
A	90%+
B	80-89.9%
C	70-79.9%
D	60-69.9%
F	<60%

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TENTATIVE SCHEDULE

Weekly Schedule

WEEKLY SCHEDULE	Lecture Chapters Covered	Assignments	Quizzes and Exams
Week 1 1/9 - 1/13	Intro to Class  Chapter 1	"Create a Study Plan" Due 1/11	
Week 2 1/16 - 1/20	Chapters 2-3	Module 1 Discussion 1 Due 1/18	Module 1 Quiz 1 Due 1/20
Week 3 1/23 - 1/27	Chapters 3-4		
Week 4 1/30 - 2/3	Chapters 4-5	Module 1 Discussion 2 Due 2/1	Module 1 Quiz 2 Due 2/3
Week 5 2/6 - 2/10	Chapter 6	Module 1 HW Due: 2/8	<b>Module 1 Exam Open: 2/9-2/10</b>
Week 6 2/13 - 2/17	Chapters 7-8	Module 2 Discussion 1 Due 2/15	Module 2 Quiz 1 Due 2/17
Week 7 2/20 - 2/24	Chapters 8, 11	Module 2 Discussion 2 Due 2/22	Module 2 Quiz 2 Due 2/24
Week 8 2/27 - 3/3	Chapter 9	Module 2 HW Due 3/1	<b>Module 2 Exam Open: 3/2-3/3</b>
Week 9 3/6 - 3/10	Chapters 10, 13	Module 3 Discussion 1 Due 3/8  <b>Topic Submission Due 3/10</b>	Module 3 Quiz 1 Due 3/10
Week 10 3/13 - 3/17	Chapters 13-14	Module 3 Discussion 2 Due 3/15	Module 3 Quiz 2 Due 3/17
Week 11 3/20 - 3/24	Chapter 15	Module 3 HW Due 3/22	<b>Module 3 Exam Open: 3/23-3/24</b>

<b>Week 12</b> <b>3/27 - 3/31</b>	Chapter 16	<b><i>Rough Draft Due 3/31</i></b>	
<b>4/3 - 4/7</b>	<b><i>SPRING BREAK</i></b>	<b><i>NO CLASSES</i></b>	<b><i>SPRING BREAK</i></b>
<b>Week 13</b> <b>4/10 - 4/14</b>	Chapter 17	Module 4 Discussion 1 Due 4/12	Module 4 Quiz 1 Due 4/14
<b>Week 14</b> <b>4/17 - 4/21</b>	Chapter 18	Module 4 Discussion 2 Due 4/19	Module 4 Quiz 2 Due 4/21
<b>Week 15</b> <b>4/24 - 4/28</b>	Chapter 19	Module 4 HW Due 4/26	<b><i>Module 4 Exam Open: 4/27-4/28</i></b>
<b>Week 16</b> <b>5/1 - 5/5</b>	Chapter 30-31	Module 5 Discussion 1 Due 5/3 <b><i>Final Draft Due 5/5</i></b>	Module 5 Quiz 1 Due 5/5
<b>Week 17</b> <b>5/8 - 5/12</b>	Chapter 31-32	Module 5 Discussion 2 Due 5/10	Module 5 Quiz 2 Due 5/12
<b>Week 18</b> <b>5/15 - 5/19</b>		Module 5 HW Due 5/17	<b><i>Module 5 Exam Open: 5/18-5/19</i></b>