



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

BIOLOGY FOR NON-MAJORS I

BIOL 1408_08

MARY SIDES

NOTE: This is a 16-week course.

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at <https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html> on any changes to these guidelines.

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This Instructor Plan is tentative, and changes may be made at the instructor's discretion.

Course Description:

Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Semester Hours 4 (3 lec, 3 lab)

Prerequisites and/or Corequisites:

None.

Course Notes and Instructor Recommendations:

A few hints for doing well in this class:

1. Read the textbook before the lecture and spend some time studying the material every day.
2. Attend class regularly.
3. Pay attention in class and supplement the notes with material heard in lecture.
4. Utilize the review materials at the end of each chapter.
5. In a face-to-face class, you will spend about six (6) hours per week in class and lab. In order to be successful, you also need to plan on spending *at least* another six to eight hours per week outside of class reading and studying the material. This means a total of 12 to 14 hours per week.
6. Prepare for exams by utilizing the review materials (reading questions, potential short answer topics, completed lab assignments) provided by the instructor. Review the reading questions and try answering them without looking at the answers. Use the list of potential short answer topics to compose a review sheet with the information on each topic. Start with the information in the lectures and then fill in additional information using the textbook. You can use this as a study guide and reference for the exam. Once you have studied, make up your own questions and try to answer them without using the notes.
7. Remember that college is much, much different than high school. There are no exam re-takes or extensive extra credit, and late submission of multiple assignments at the end of the semester is not allowed. Those of you who have been in college more than one semester already know this fact very well. Southern Methodist University (SMU) has a website that provides a nice summary of the differences between the two educational levels. Here is the web address:

<http://www.smu.edu/Provost/ALEC/NeatStuffforNewStudents/HowIsCollegeDifferentfromHighSchool>

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I strongly encourage all of you, especially those of you who are new to college, to look at this website. It will give you an idea of what is expected of you as a college student and will (hopefully) help decrease the culture shock.

When all is said and done, I **do not GIVE** you a grade for this course, you **EARN** the grade you receive. Earning the grade involves not only working hard and completing assignments by their due dates; it involves understanding and mastering the material. Learning is an ACTIVE process that is more than simple memorization; learning requires gaining an understanding of the information and concepts involved. Learning the material takes more time and effort than just coming to class and passively listening to the lecture and passively looking up answers to lab assessments. Like most of life's endeavors, you will get out of this class what you put into it. I have provided some strategies to help you learn the material, but if you have questions about other study methods, please do not hesitate to ask.

Instructor Information:

Instructor Name: Ms. Mary Sides

MCC E-mail: msides@mclennan.edu

Office Phone Number: 254-299-8164

Office Location: Science Building – Room 208A. Room 124 - Highlander Ranch.

Office/Teacher Conference Hours: 2:15 pm – 3:00 pm on Tuesdays and Thursdays (Science Building). Other times by Zoom videoconference by appointment.

Other Instruction Information: The best way to reach me is through the e-mail address listed above. I may not be able to respond immediately, but I will try to respond within 24 hours.

Please include the following information in your message:

- **Your name and the course name and number in the subject line.** For this class, the course name and number is BIOL 1408_08.
- **Your purpose for writing.** Please state the purpose of the message in the subject line.
- **Please utilize correct spelling and grammar.** Proper spelling and grammar are vital to clear communication.

You need to use your MCC e-mail account when contacting me. Please do not attach files or e-mail assignments without prior authorization. Also, please do not put me on your e-mail lists for inspirational, funny, or chain e-mails. E-mails should be confined to class-related issues.

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I only reply to telephone messages when I am on campus. I live over 1.50 hours from campus, and I am only on campus for a few hours on Tuesdays and Thursdays. If you do need to call me, please leave me your e-mail address in addition to your phone number.

Required Text & Materials:

For our textbook for this course, we will be using selections from three open educational resources (OERs) as well as other provided readings. I will be providing the relevant chapters and readings to you through Brightspace. Therefore, you will not need to purchase a textbook. I am providing the information on the OERs below.

Title: Biology, 2nd edition.

Author: Mary Ann Clark, Jung Choi, and Matthew Douglas

Edition: 2nd

Publisher: OpenStax

ISBN: 978-1-947172-52-4

Title: Concepts of Biology

Author: Samantha Fowler, Rebecca Roush, and James Wise

Edition: 1st

Publisher: OpenStax

ISBN: 978-1-947172-03-6

Title: Principles of Biology

Editors: Robert Bear, David Rintoul, Bruce Snyder, Martha Smith-Caldas, Christopher Herren, and Eva Horne.

Publisher: OpenStax

Other readings as assigned.

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Methods of Teaching and Learning:

This section is in the traditional, face-to-face format. Learning will be achieved through lectures, lab exercises, reading quizzes, and lecture exams. Material is presented in classroom lectures, labs, and via Brightspace.

Course Objectives and/or Competencies:

Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

- **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
 - Assessed through the use of laboratory exercises, case studies, writing assignments, and/or lecture examinations.
- **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication.
 - Assessed through the use of written assignments, laboratory exercises, case studies, class discussions, and/or poster or PowerPoint presentations. Lab results or student projects by individuals or small groups will be presented with oral, written, and visual elements.
- **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
 - Assessed through the use of lecture examinations, laboratory exercises, and/or case studies.
- **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
 - Assessed through the use of group laboratory exercises, group assessment of case studies, class discussions, and/or poster or PowerPoint presentations. Small groups of students will work together to complete lab experiments, case study assessments, or group projects and present their results using oral, written, and visual elements.

Course Objectives and/or Competencies:

Upon successful completion of lecture and lab portions of this course, students will:

1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
5. Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each.

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6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
 7. Analyze evidence for evolution and natural selection.
 8. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
 9. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
 10. Communicate effectively the results of scientific investigations.

Course Outline or Schedule:

Week 1 (08/22/2022 – 08/28/2022): Introduction to the course. Introduction to Science.

Week 2 (08/29/2022 – 09/04/2022): Math in Science. Begin Chemistry.

Week 3 (09/05/2022 – 09/11/2022): Conclude Chemistry. Begin Cell Structure and Function.

Week 4 (09/12/2022 – 09/18/2022): Conclude Cell Structure and Function. Energy and Metabolism. **Major Exam 1 (Introduction to Science, Math in Science, and Chemistry) – 09/15/2022 in SB 131.**

Week 5 (09/19/2022 – 09/25/2022): Cellular Respiration. Photosynthesis.

Week 6 (09/26/2022 – 10/02/2022): Molecular Biology. Mitosis. **Major Exam 2 (Cell Structure and Function, Energy and Metabolism, Cellular Respiration, and Photosynthesis) – 09/29/2022 in SB 131.**

Week 7 (10/03/2022 – 10/09/2022): Meiosis. Begin Mendelian Genetics

Week 8 (10/10/2022 – 10/16/2022): Conclude Mendelian Genetics. Modern Understanding of Inheritance. **Major Exam 3 (Molecular Biology, Mitosis, and Meiosis) – 10/13/2022 in MAC 302.**

Week 9 (10/17/2022 – 10/23/2022): Biotechnology.

Week 10 (10/24/2022 – 10/30/2022): Natural Selection. **Monday, 10/24/2022. Last day for student-initiated withdrawals with an automatic grade of ‘W.’**

Week 11 (10/31/2022 – 11/06/2022): Begin Microbes. Analysis Paper Intro. **Major Exam 4 (Mendelian Genetics, Modern Understanding of Inheritance, and Biotechnology) – 11/03/2022 in MAC 302.**

Week 12 (11/07/2022 – 11/13/2022): Conclude Microbes. Analysis Paper and associated assessments.

Week 13 (11/14/2022 – 11/20/2022): Introduction to Ecology. Conservation Biology.

Week 14 (11/21/2022 – 11/27/2022): Biodiversity. **Thanksgiving Holiday (11/23/2022 – 11/27/2022).**

Week 15 (11/28/2022 – 12/04/2022): **Major Exam 5 (Microbes, Intro to Ecology, Conservation Biology, and Biodiversity) – 11/29/2022 in SB 131.** Review for Final Exam.

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Week 16 (12/05/2022 – 12/08/2022): **Final Exam (Thursday, December 8, 11:10 am in SB 131).**

This schedule is tentative and may be changed at the instructor's discretion. Students will be informed of changes in class and announcements in Brightspace.

Course Grading Information:

Orientation Activities	50 points
Major Exam 1	75 points
Major Exam 2	75 points
Major Exam 3	75 points
Major Exam 4	75 points
Major Exam 5	75 points
Analysis Paper Project	125 points
Lab Assessments	200 points
Reading Questions	25 points
Unit Reflect and Review Quizzes	125 points
Comprehensive Final exam	<u>100 points</u>
Total	1000 points

The points needed for each letter grade are as follows:

90% of 1000 points = 900 to 1000 points =	A
80% of 1000 points = 800 to 899 points =	B
70% of 1000 points = 700 to 799 points =	C
60% of 1000 points = 600 to 699 points =	D
Fewer than 600 points =	F

There will be five (5) major (lecture) exams worth 75 points each. There will also be a final exam worth 100 points.

The major exams will be based on material from the textbook readings, the lectures, and any additional assigned readings and videos. These exams will have two sections. The first section will be a random selection from all the reading questions for the unit. The second section will be mostly written response questions, but there may occasionally also be matching, ordering, and/or multi-select questions. A portion of these questions will be direct knowledge questions, but many

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will require you to use your critical thinking and analytical skills. The major exams in the course will be unproctored, timed, open book exams.

The exams will be taken online through Brightspace during the lab section of the Thursday class time the week following the conclusion of the unit. Please see the schedule above. If you have testing accommodations and will be taking your exams at the Testing Center, you will need to schedule them on the same day that the rest of the class is taking them.

Now, before you get too excited about the prospect of open-book exams, there are some conditions that will be in place to maintain academic integrity. The first condition is that these exams will have a very strict time limit. You will not be allowed to enter additional answers once the time limit is reached. So, you will still need to study and prepare for the exams. There will not be enough time for you to look up every single answer on the test, so you will still need to learn the material.

The second condition is that each test will be a random draw of questions. This means is that each student's exam will be slightly different.

The third condition is that you will be asked to provide the course materials reference (chapter name and page number or lecture name and slide number) where the information is located that will help you answer the written response questions on the exam. All the answers for the assessments in the course can be found in the course materials, and looking for answers in a Google search is not permitted. Information found on Google is likely to be incorrect, incomplete, or inconsistent with the course materials and can result in the loss of points.

There will be an analysis paper based on assessment of Internet sources of scientific information. Students will be assigned to teams. Each member of a team will be assigned a different search engine to be used to research the given topic. In addition to each student submitting a paper detailing the results of his or her research, there will also be a team discussion to analyze the reliability of each of the assigned search engines to provide reliable scientific content. The paper and associated assignments will be worth a total of 125 points. The paper itself will be worth 100 points, and students will have the opportunity to earn the remaining 25 points based on their participation in the team discussion and completion of preparatory quizzes and follow-up questions. Additional information regarding this assignment will be provided later in the semester.

There will be reading questions based on the material in the textbook and other assigned readings. There will be a set of questions associated with each lecture. These are designed to help the student prepare for class. Answers to the reading questions will be submitted through quiz links in Brightspace.

There will be lab assessments designed to help you start interacting with the course materials. These assessments will consist of a combination of multiple choice, matching, ordering, and choose all that apply questions. You will have a printed copy of the lab assessment to use to get your answers, and you will then submit your answers using a quiz link in Brightspace.

There will be five reflect and review quizzes worth 25 points each. These will be due at the end of each learning unit (materials for each major exam). The reflect and review quizzes will help you think about what you have learned in each unit and start preparing for the major exams.

Due to the rules of the Family Educational Rights and Privacy Act (FERPA), I cannot discuss your grades with your parents, spouse, children, significant other, employer, family pet, etc. without your written permission. This permission has to be in writing; consent furnished by e-mail is not acceptable. In addition, I cannot discuss your grades with you via e-mail since it is not considered a secure form of communication.

Late Work, Attendance, and Make Up Work Policies:

Regular class attendance is expected. Seven (7) or more absences (25 percent of class meeting days) will be taken as evidence that a student does not intend to complete the course. In this case and in accordance with MCC's attendance policy, the student will be withdrawn from the course with a grade of W. The instructor may reinstate the student if satisfied that the student will resume regular attendance and will complete the course. If the student's 25 percent absences are reached after the official drop date, the instructor may assign a W, if the student is passing and requests to be withdrawn. However, if a student who is not passing reaches the 25 percent point after the official drop date, the student will receive an F. In extenuating circumstances, the instructor may assign a W to a student who is not passing.

Each class meeting will consist of a lecture and lab portion. Students must be present for the **ENTIRE CLASS** to be counted present. This means that you must be in class for the entire class period (both lecture and lab). Attendance will be taken at the beginning of the lecture and the end of lab.

Each absence will count toward attendance requirements in each course.

Late work is generally not accepted; however, it will sometimes be accepted in extenuating circumstances. If you are not going to be able to submit an assignment before the due date,

please let me know as soon as possible. If an extension is granted, you will need to submit the late work within 24 hours of due date.

Make-up exams will generally not be given. If a student misses one of the regularly scheduled major exams, the grades for the other four major exams will be averaged, and the average will be substituted for the missing grade.

Student Behavioral Expectations or Conduct Policy:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity.

Professionalism. A casual and friendly atmosphere is encouraged. However, respect and civility towards the instructor and fellow classmates is required. This includes not talking while the instructor is talking. Talking while the instructor is talking is extremely discourteous and very distracting to the instructor and to other students who are trying to listen. A seating chart will be used, and I reserve the right to move students to other seats if needed. **Students who repeatedly disrupt class may be asked to leave and not be permitted to return until after meeting with the Student Conduct Coordinator and the Science Division Chair regarding the disruptive behavior.** All written and verbal communications (whether between students or between student and instructor) need to be clean, free of profanity, polite, and civil.

Cell phones and other electronic devices. Cell phones and other disruptive devices (pagers, MP3 players, etc.) will be turned off and stored in your purse/backpack during class and lab. Cell phone access during class time/lab time is permitted in certain cases (work requirement, family illness, etc.). If there is some reason why you would need to have access to your phone during class and lab time, please let me know.

Safety. For reasons of safety, no food or drink is allowed inside the lab; this includes gum. In addition, the application of make-up or insertion/removal of contact lenses is not allowed in the lab. Running, shoving, or any type of horseplay is not allowed in the classroom/lab, again for reasons of safety. While we do not perform traditional lab experiments in this course, we may be sharing a lab with other sections that might. If you have known allergies to chemicals that may be used in this lab, iodine and latex in particular, please let me know as soon as possible.

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

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Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu

254-299-8122

Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/student-email.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us>)
- [Email Setup for Androids](https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us>)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.