

**McLennan**  
C O M M U N I T Y  
**C O L L E G E**

WACO, TEXAS

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**COURSE SYLLABUS**  
**AND**  
**INSTRUCTOR PLAN**

**GENERAL BIOLOGY II - FOR SCIENCE MAJORS**

**BIOLOGY 1407.02; 1407.04**

**STEPHANIE RANDELL**

**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 on any changes to these guidelines.

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**Course Description:**

The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. **Semester Hours: 4** (3 lecture/3lab per week).

**Prerequisites and/or Corequisites:**

Successful completion of **Biology 1406 with a “C”** or better is required.

**Course Notes and Instructor Recommendations:**

1. To succeed in this course, the student should have available in their personal schedule, and adhere to, a minimum of **12-16 study hours/week** to study for this course.
2. Syllabus/Policy Modification: The instructor may modify the syllabus to meet individual class needs. Modifications will be announced at the beginning of class. It is the student's responsibility to keep up with these modifications. It is the student's responsibility to keep informed of class scheduling and policy changes.
3. The online portions of the class demand daily attending. Make sure you do the daily assignments and keep track of due dates.
4. **This course has mandatory out-of-class study sessions - one-hour/per week. Attendance and participation are included in your grade average.**

**Instructor Information:**

**Instructor Name:** Stephanie Randell

MCC E-mail: [srandell@mclennan.edu](mailto:srandell@mclennan.edu)

Office Phone Number: 254-299-8183

Office Location: S209

Office/Teacher Conference Hours: Monday 10:30-11:00am; Tues 11:10-11:40; **Meetings by appointment; or immediately after each class**

**\*Other Instruction Information:** **Professor will check and** generally respond to your **emails** within 24 hours, except for Friday afternoon, Saturday and Sunday. As I am physically in class most of the day, these are the best times to contact me: **Monday/Wednesday:** I will check emails the first thing in the morning. Then I will start checking regularly after 2:00pm when I get out of class; **Tuesday** is checked regularly 1:00 - 4:00pm. I have research on Thursday and dedicate that day to coral reef research only.

**\*On Fridays:** I will stop checking emails at 2:00pm. Therefore, if you need to reach me before Monday, have your emails in my box before that time. If my response does not come within this

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stated timeline, please resend your email, as it may not have reached me. **I will not check emails on Saturday and Sunday.**

**Required Text & Materials:**

**Title:** BIOLOGY  
**Author:** Raven, Johnson, Mason, Losos, Duncan  
**Edition:** 13<sup>th</sup>  
**ISBN:** 9781265547998  
**Publisher:** MCGRAW HILL CREATE (CUSTOM PUBLISHING)  
**Formats:** Loose-Leaf

**Title:** Lecture Notes (BIOL 1407)  
**Author:** Randell  
**Publisher:** MCC SHOP  
**Formats:** Loose-Leaf

**Title:** BIOLOGY  
**Connect for Biology w/Proctorio 1406 (0482)**  
**Author:** Raven, Johnson, Mason, Losos, Duncan  
**Edition:** 13<sup>th</sup>  
**ISBN:** 9781265253998  
**Publisher:** MCGRAW HILL CREATE (CUSTOM PUBLISHING)  
**Formats:** Adobe Digital Editions

**Title:** **Photo Atlas for General Biology**  
**Author:** Dennis Strete  
**Edition:** 4<sup>th</sup>  
**Publisher:** McGraw-Hill  
**ISBN:** 9781266006517

**Other Required Materials:**

Digital camera or Phone with camera

**Three,** 1-inch three-ring notebooks with pockets; one each for (1) loose leaf text, (2) lecture notes; (3) lab notebook

Paper for lecture and lab notebooks

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Pencils and pens

Dissecting kit (reserved at bookstore)

Safety glasses (reserved at bookstore)

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

**Required technology:**

Students must use a device with consistent, strong internet and a fully functioning webcam for exams and be able to download Respondus/Respondus Monitor for use during exams.

Exams will be taken on campus, so students must have a portable testing device that will work with Respondus. \*Chromebooks and computers with Screencastify may need adjustments to engage Respondus. **It is the student's responsibility to ensure they have necessary testing device and can access MCC internet on exam days.**

**Methods of Teaching and Learning:**

Recorded Zoom lectures and notetaking, Socratic method, critical thinking reviews and exercises, Zoom and in-class reviews, assigned readings, videos, animations, online labs, labs, WebQuests, quizzes, lab exams, discussions boards, scientific notebooks, **mandatory out-of-class study sessions**, and lecture exams.

***\*Class participation is required; therefore, it is essential to class performance and success that students be optimally prepared for each class by mastering the foundational material before each class!***

**Course Objectives and/or Competencies:**

**FOR LECTURE:**

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.

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6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

**FOR LAB:**

Laboratory activities will reinforce study of the diversity and classification of life, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
5. Distinguish between phylogenetic relationships and classification schemes.
6. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
7. Describe basic animal physiology and homeostasis as maintained by organ systems.
8. Compare different sexual and asexual life cycles noting their adaptive advantages.
9. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

**Course Objectives and/or Competencies:**

1. Interpret phylogenetic trees and explain the criteria/evidence upon which those trees are based.
2. Distinguish between viral structure, replication, and lineages.
3. Explain three criteria used for categorizing species and discuss the strengths and limitations associated with each.

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4. Recognize and discuss the human impact and ecological significance of viruses, bacteria, protists, plants, fungi, and animals.
5. Explain the morphological, physiological, and metabolic diversity among taxonomic groups of bacteria, protists, plants, fungi, and animals.
6. Explain gram stain procedure and its association with bacterial cell wall characteristics and antibiotic treatment.
7. Recognize and explain principle elements and cycles in ecology and address ecological concerns and causes of/for sustainability, global warming, and dead zone formation.
8. Describe the chronology and structures of animal embryology, as well as germ layer formation and tissue development.
9. Discuss the major adaptations of plants and animals to life on land.
10. Use taxonomy to classify, compare, and contrast major groups of living organisms.
11. Discuss changes and trends in biological classification and correctly write scientific names.
12. Participate in the scientific community and exhibit scientific collaboration.
13. Make and record scientific observations; maintain a scientific notebook.
14. Develop scientific professionalism: adapts to scientific procedure, writing, and editing.
15. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
16. Illustrate the relationship between major geologic change, extinctions, and evolutionary Trends.

**Course Outline or Schedule:**

\*Tentative schedule - modifications will be given at the beginning of in-person classes or as an announcement on Brightspace.

<b>Week</b>	<b>Lectures</b>	<b>Chapter</b>
<b>Before Class start</b>	Brightspace	Start Here
<b>1</b>	Intro and Taxonomy	22; 23
<b>2</b>	1. <b>MLK Day Holiday</b> 2. Taxonomy and Viruses	26
<b>3</b>	1. Viruses 2. Bacteria	27

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4	1. Bacteria 2. <b>Review</b>	
5	1. <b>Exam 1</b> 2. Fungi Self-study/Protists	31;28
6	1. Protists 2. <b>Wild Protist Lab – Entire Class - <u>Lab Notebook Grade</u></b>	28
7	1. Review for Lab Practical 2. <b>LAB PRACTICAL/</b> Review for Exam	
8	1. <b>Exam 2</b> 2. Plants Intro	29
9	Plants Intro and Early Plants	29
10	Seed Plants	30
11	1. <b>Flower Dissections - Entire class - <u>Lab Notebook Grade</u></b> 2. Animals Intro	32
12	1. <b>Exam 3</b> 2. Animals - 2 Porifera, Cnidaria	32
13	Animals - Protostomes: <b>Lophotrochozoans:</b> Platyhelminthes Mollusca, Annelida	33
14	Animals – Protostomes: <b>Ecdysozoans:</b> Nematoda, Arthropoda  Animals - Deuterostomes: Echinodermata	33  34
15	Animals – Deuterostomes: Chordata Ecology	34
	<b>Final Lab Notebook Checks</b>	
16	<b><u>Final exams:</u></b>  1407.02 (M/W) Monday, May 1: 8-10:00 am  1407.04 (T/R) Tuesday, May 2: 9:35-11:35 am	

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**Exam Schedule:**

**Exam 1:**      **1407.02 (M/W):      Feb. 6 (Mon.)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**1407.04: (T/R):      Feb. 7 (Tues.)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**Exam 2:**      **1407.02: (M/W):      Feb 27 (Mon)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**1407.04 (T/R):      Feb. 28 (Tues.)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**Exam 3:**      **1407.02 (M/W):      April 3 (Mon)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**1407.04 (T/R):      April 4 (Tues)**  
                    Taken in class, S138 - bring laptop, iPad for testing

**Final exams:**    **1407.02 (M/W): Monday, May 1: 8-10:00 am**  
                            Taken in class, S138 - bring laptop, iPad for testing

**1407.04 (T/R): Tuesday, May 2: 9:35-11:35 am**  
                            Taken in class, S138 - bring laptop, iPad for testing

**Course Grading Information:**

<b>Evaluation and grading:</b>	<b>Grade:</b>	90-100	A
		80-89	B
<b><u>Lecture Exams</u> (60% of final grade)</b>		70-79	C
		60-69	D
3 Lecture exams - 100 points each		<60	F
1 Comprehensive Final - 100 points			

**Lab: (35% of final grade)**

Online labs (100 point each)  
Lab practical or exams (1-2) - 100 points each  
Lab Notebook Grades (1-5) – 100 points each



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**Mastery Quizzes - (2% of final grade)**

100 points each

**Weekly Study Session Attendance/Participation – (3% of final grade)**

*\*\* Grades will not be finalized until all reports from proctoring agencies have been received and reviewed. This means your grade could change up to a week after an exam! Until that time, posted exam and final grades are tentative.*

**Class participation** is required and is included in the student's average.

The **Class Participation Grade** is subjective and can help a student in borderline cases. Class participation grade comes from the student's class and online discussions, participation during reviews and study sessions, attendance, promptness, class preparedness, ability to perform independent and original work, adaptability to laboratory and scientific protocol, and attitude.

**Exam security:** no students will have access to physical copies of exams other than for actual testing purposes. In addition, students should be prepared for exam security on exam day, some things that may be employed (but not limited to): removal of all biology-related materials from testing region, requirement to keep your face in the center of the screen throughout the duration of the exam, restriction of departure from the classroom or computer after the start of an exam, removal of cell phones, tablets, ear buds, and watches with shaded faces, use of only simple pencils for written exams. This includes all exam and Respondus rules and guidelines. These methods are entirely at the discretion of your professor and may change during the semester.

**Late Work, Attendance, and Make Up Work Policies:**

**The student is responsible for all material assigned and their due dates for this class whether they are present or absent from class.**

Any student missing class due to **any one COVID symptom** MUST self-report on the MCC homepage. Students may only return after receiving an MCC email telling them they may return to class. Your professor is copied on these emails and will know if you can attend class and if you have any special masking requirements.

**If we are strictly online:** Attendance will be taken by roll-check at required Zoom meetings or as completion of weekly assignments in the event of professor illness. If assignments are not submitted by the due dates, an absence will be recorded.

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**When we are meeting in-person:** Absence from class is counted as an absence, unless prior arrangements are made due to COVID isolation, etc.

**Tardy policy:** Every two class, Zoom, and lab tardies (after the initial two allowed) are counted as an absence. Roll is taken at the start of class or Zoom meeting. Attendance within the first 10 minutes of class/Zoom meeting is a tardy. Anything after 10 minutes is recorded as an absence.

**Late Work and Missed Exams:**

**Assignments, Discussions, Projects, or Labs** may not be completed after the due date. Those not completed by the due date will become a “0”.

\*No Labs, Assignments, Discussion Boards, or Exams will be reopened, so students must start the assignment or exam before due date to ensure completion.

\*Exceptions may be made to due to **documented** COVID-19 disease or hospitalization. Uncompleted work will be recorded as “0”.

**In-person assignments** due are “late” after the roll check. Anything after that point is (-20 points). This especially affects required lab materials.

**Lecture:** If students miss a lecture exam, their comprehensive final exam score will take the place of **one missed exam**. Any other missed exams will become a “0” unless there are documented extenuating circumstances, such as hospitalization. Exams may not be taken after the due date unless there is documentation for extenuating circumstances, such as hospitalization.

**It is the students’ responsibility to make testing arrangements with their Professor (if needed) one week before each exam.**

There are **no make-ups for lab exams** unless the student has documented COVID disease, quarantine, or essential hospitalization.

**Drops:** Students will not be dropped after the drop date unless they are passing or can document extenuating circumstances, such as long hospitalization, etc.

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**Student Behavioral Expectations or Conduct Policy:**

All correspondence and submissions must reflect boundaries and guidelines of science; be professionally and scientifically written and edited; and must be governed by rules of civility – follow etiquette accepted by polite society. If we go online and have Zoom meetings, students should join with video on, be early, and be fully clothed!

Any student engaging in any activity which interferes with the learning environment or professional decorum of the classroom or professional setting may be asked to leave the classroom, lab, office, Zoom meeting, or professor's presence. If a student is asked to leave, they must schedule an appointment with the instructor before returning to class or further Zoom meetings. If necessary, the student will be referred to the Student Discipline Department. If a student is asked to leave a second time they may be dropped from the course.

All cheating, plagiarism, and other forms of academic dishonesty will result in a grade of "0" and a report of the incident filed with appropriate campus authorities for record keeping and tracking.

**Some examples of cheating:** Plagiarism of research or scientific work, not citing work, using prohibited material for assignments (internet, etc.), copying or recording of exam questions, sharing exam questions with anyone, having unapproved biology book, papers, or notes present while taking exam, your computer goes offline during an exam, your webcam goes off during exam, your face is not in the center of the monitor throughout the exam, you have something at your desk or on your person which is not acceptable for use during the exam – notes, textbook, cell phone, earbuds, papers, etc., you do not complete a slow, 360° webcam scan of exam room, etc.

**\* [Click Here for the MCC Academic Integrity Statement](#)**

([www.mclennan.edu/academic-integrity](http://www.mclennan.edu/academic-integrity))

The link above will provide you with information about academic integrity, dishonesty, and cheating.

**\* [Click Here for the MCC Attendance/Absences Policy](#)**

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

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

***\* You will need to access each link separately through your Web browser (for example: Mozilla Firefox, Chrome, Microsoft Edge or Safari) to print each link's information.***

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Updated 11/04/2022

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## **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](http://www.mclennan.edu/disability).

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

[disabilities@mclennan.edu](mailto: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 acting Title IX Coordinator at [titleix@mclennan.edu](mailto:titleix@mclennan.edu) or by calling, Dr. Claudette Jackson, (Diversity, Equity & Inclusion/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center 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/](http://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/>

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom from 7:30 am - 6:00 pm Monday through Thursday and 7:30 am - 5:00 pm on Friday. You can contact the Academic Support and Tutoring team via Zoom (<https://mclennan.zoom.us/j/2542998500>) or email ([ast@mclennan.edu](mailto:ast@mclennan.edu)) during the above mentioned times.

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 either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing [crew@mclennan.edu](mailto:crew@mclennan.edu) or a Success Coach by calling (254) 299-8226 or emailing [SuccessCoach@mclennan.edu](mailto:SuccessCoach@mclennan.edu). Both are located in the Completion Center located on the second floor of the Student Services Center (SSC) which is open Monday-Friday from 8 a.m.-5 p.m.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to [https://mclennan.co1.qualtrics.com/jfe/form/SV\\_07byXd7eB8iTqJg](https://mclennan.co1.qualtrics.com/jfe/form/SV_07byXd7eB8iTqJg). Both the Completion Center and Paulanne's 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](https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf).

**MCC Academic Integrity Statement:**

Go to [www.mclennan.edu/academic-integrity](http://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-andStaffCommons/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/studentemail](http://www.mclennan.edu/studentemail).

**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](mailto: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](#)
- [Email Setup for Androids](#)

**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](mailto: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.