

Updated 07/18/2023



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

Majors Biology I

BIOL 1406.005 and 1406.007

Elizabeth Mitchell

NOTE: This is a 16-week course.

NOTE: This is a Face-to-Face course.

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Course Description:

Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification.

Concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Prerequisites and/or Corequisites:

Must have passed the reading and writing portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 4 (3 lec/3 lab)

Course Notes and Instructor Recommendations:

This course is for students interested in majoring in biology and/or students who are interested in pursuing a degree in a health profession (pre-med, pre-dental, pre-PA, pre-pharmacy, etc.).

As such, the purpose of this course is to lay foundational groundwork upon which many principles of biology will be built. Therefore, this is a content heavy course. Please make sure you have the time commitment necessary to be successful.

This is also a reading intense course. Students will be expected to read the material outside of class.

Instructor Information:

Instructor Name: Liz Mitchell

MCC Email: emitchell@mcclennan.edu

Office Phone Number: 254.299.8187 (If I am not in my office, please leave a message. I will be able to listen to the message on my cell phone).

Office Location: Science 220

Office/Teacher Conference Hours:

In person or on Zoom: Mondays 11:30 – 1:30, Thursdays 2:30 – 3:30

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Other Instruction Information: I will be using Remind to send out important messages. Please sign up here. <https://www.remind.com/join/bybio>

Required Text & Materials:

Title: *Biology*

Author: Peter Raven, George Johnson, et al.

Edition: 13th

Publisher: McGraw-Hill

ISBN 13: 978-1260565959

ISBN 10: 1260565955

Title: *Custom Lab Manual Biology 1406/07*

Author: McLennan Community College/Liz Mitchell

Edition: 1st

Publisher: McGraw-Hill

ISBN 13: 978-1-307-77395-8

ISBN 10: 1-307-77395-9

*Note: This book is ONLY available at the MCC bookstore. You will be required to bring this book to each class. Failure to do so will result in you not being able to complete the labs. You will be unable to make-up missed labs.

Students will need access to a computer or tablet with internet (smart phones will not work). All Reading Assignments are accessed through the Connect software platform. Students who do not have a computer at home can use the MCC library computers.

Your class is enrolled in Inclusive Access. This means your textbook was paid in your tuition fees. **Unless you specifically opted out of this option, your textbook and lab manual have already been paid for.**

Please go to the bookstore to pick up your lab manual. It will be required to have your lab manual during lab.

Please go to the bookstore to pick up your hardcopy, loose-leaf textbook. You will need a large 3-ring binder to keep your book and your graded labs.

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

Methods of Teaching and Learning:

Lectures are dynamic and require student participation. Please come talk to me if you are unable to participate in lecture activities. PowerPoint will be used sparingly in class. Lectures will be conducted using class white boards and online resources (YouTube, KEGG, OMIM, etc.).

Weekly homework will be assigned to help students learn lecture material. Students will be given tests to assess their mastery of lecture material.

Weekly reading assignments will also be assigned to help students connect the material of the textbook to the material we are learning in class. These assignments are also created to help students understand the material more deeply and broadly.

Labs will help lead to deeper learning of lecture concepts. Labs will also facilitate an understanding of how scientific knowledge is created, scrutinized, and disseminated. Not all labs follow the lecture material.

Students will also be required to attend outside Supplemental Instruction (SI) activities. Students will be required to attend 7 SI sessions during 7 different weeks. Mandatory SI has been scientifically shown to help students achieve higher success in courses.

Course Objectives and/or Competencies:

Upon successful completion of this course, students will:

- Describe the characteristics of life.
- Explain the methods of inquiry used by scientists.
- Identify the basic requirements of life and the properties of the major molecules needed for life.
- Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.

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- Describe the structure of cell membranes and the movement of molecules across a membrane.
- Identify the substrates, products, and important chemical pathways in metabolism.
- Identify the principles of inheritance and solve classical genetic problems.
- Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
- Describe the unity and diversity of life and the evidence for evolution through natural selection.

Course Attendance/Participation Guidelines:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

Before the 60% point of the semester, a student who is absent for 25% or more of a face-to-face or blended course or who misses 25% or more of assigned work for an online course will be withdrawn from the course with a grade of W. A student may also request to be withdrawn with a grade of W before the 60% point of the semester. After the 60% point of the semester, the student may request to be withdrawn if the student is passing, or be assigned the final grade earned at the end of the semester after grades have been updated to reflect missing work.

Attendance will be taken at the start of each class. Students who are more than 30 minutes late will be marked absent for that day (unless a note for an MCC-excused absence is provided). Students who leave 30 minutes early will be marked absent. If coming late/leaving early equals 30 minutes or more, the student will be marked absent.

Students will also be marked absent if they are not participating (for example, paying attention to their phone, etc.).

Course Outline or Schedule:

The following schedule is tentative. If schedule changes occur, I will communicate the changes through Bright Space and through class announcements.

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	Day	Date	Class Material	Reading Assignmnts	Homework Assigned	Pre-Lab To Complete	Lab
Week 1	Tuesday	2-Aug	Introduction/Cells				What is Science, Lab Safety
	Thursday	24-Aug	Cells	Week 1 Reading Assignments	Week 1 Homework	Measurements in Biology	Potato Cell Lab
Week 2	Tuesday	29-Aug	Tissues				Measurements in Biology
	Thursday	31-Aug	Tissues	Week 2 Reading Assignments	Week 2 Homework	Microscope Pre-Lab	Measurements in Biology
Week 3	Tuesday	5-Sep	Cells and Tissues				
	Thursday	7-Sep	Intro to Bio Molecules and Lipids, and the Plasma Membrane	Week 3 Reading Assignments	Week 3 Homework	The Scientific Method Pre-Lab	Microscope Lab
Week 4	Tuesday	12-Sep	Proteins	Week 4 Reading Assignments			Microscope Lab
	Thursday	14-Sep	Enzymes		Week 4 Homework		
Week 5	Tuesday	19-Sep	Intro to Cell Communication	Week 5 Reading Assignments		No Pre-Lab to Complete This Week	The Scientific Method Lab
	Thursday	21-Sep	Test 1 (2 hours)		Week 5 Homework: Practice Test		Test 1 (2 hours)
Week 6	Tuesday	26-Sep	Cell Signaling	Week 6 Reading Assignments		Biologically Important Molecules Pre-Lab	The Scientific Method Lab
	Thursday	28-Sep	Cell Signaling		Week 6 Homework		KEGG and OMIM Activity

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Week 7	Tuesday	3-Oct	Transcription and Translation	Week 7 Reading Assignments	Solutions, Acids, and Bases Pre-Lab	Biologically Important Molecules Lab
	Thursday	5-Oct	Transcription and Translation	Week 7 Homework		Biologically Important Molecules Lab
Week 8	Tuesday	10-Oct	Mutations	Week 8 Reading Assignments	Genetics Pre-Lab	Solutions, Acids, and Bases
	Thursday	12-Oct	Regulation of Gene Expression	Week 8 Homework		Solutions, Acids, and Bases
Week 9	Tuesday	17-Oct	Genetics (Test 3)	Week 9 Reading Assignments	No Pre-Lab to Complete This Week	Genetics Lab
	Thursday	19-Oct	Test 2 (2 hours)	Week 9 Homework: Practice Test		Test 2 (2 hours)
Week 10	Tuesday	24-Oct	Genetics	Week 10 Reading Assignments	No Pre-Lab to Complete This Week	Genetics Problems (Provided by Mitchell)
	Thursday	26-Oct	DNA Replication	Week 10 Homework		ELISA
Week 11	Tuesday	31-Oct	Cellular Respiration	Week 11 Reading Assignments	Evolution Pre-Lab	Cellular Respiration Lab (Provided by Mitchell)
	Thursday	2-Nov	Cellular Respiration	Week 11 Homework		Cellular Respiration Lab (Provided by Mitchell)
Week 12	Tuesday	7-Nov	A Darwinian View of Life	Week 12 Reading Assignments	Diffusion and Osmosis Pre-Lab	Evolution Lab
	Thursday	9-Nov	Natural Selection	Week 12 Homework		Evolution Lab

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Week 13	Tuesday	14-Nov	Genomes and Their Evolution	Week 13 Reading Assignments	Mitosis Pre-Lab	Diffusion and Osmosis Lab
	Thursday	16-Nov	Stem Cells and Mitosis		Week 13 Homework: Practice Test	Diffusion and Osmosis Lab
Week 14	Tuesday	21-Nov	Test 3 (2 hours)	Week 14 Reading Assignments		Test 3: No lab
	Thursday	23-Nov	Thanksgiving		No Homework	
Week 15	Tuesday	28-Nov	Meiosis	Week 15 Reading Assignments	Meiosis Pre-Lab	Mitosis Lab
	Thursday	30-Nov	Photosynthesis		Week 14 Homework	Meiosis Lab

Final Exam Time and Location:

1406.005: December 5th 9:35 – 11:35 am Room 234 (normal class room)

1406.007: December 5th 12:40 – 2:40 pm Room 234 (normal class room)

Course Grading Information:

Student grades will be measured based on performance on Connect Reading Assignments and Homework. Grades are marked based on correct answers.

Tests are multiple choice, T/F, mark-all-that-apply, fill-in-the-blank, and short answer. Answers are marked based on correct answers. Tests will also have an essay question. Essay questions will be graded blindly and are also marked based on correct response.

Labs and pre-labs are graded based on effort, completion, and correct responses.

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Pop quizzes will be assigned throughout the course. Students who are not present at the beginning of the pop quiz will not be allowed to take the quiz. Students will be issued a 0 for that assignment.

Students who fail to complete the pre-lab or fail to bring their lab notebooks for one lab can only receive a 50% on the lab. Students who fail to complete the pre-lab one day and fail to bring their lab notebooks the next day will receive a 0% on their labs.

SI grades are calculated based off participation. Students will receive full credit for participating. Students who do not participate or who are more than 10 minutes late will not receive credit for that SI.

This course is a percentage course. Grades are calculated based off the following percentages:

The final exam is cumulative; it will include all information from Tests 1, 2, and 3, as well as the new information learned in the course.

A student's final exam will replace their lowest test grade.

Bonus:

1. For tests:
 - a. Turn in one practice test early (3 points), complete both practice tests (3 points).
 - b. If you complete both practice tests early, you can have a total of 6 bonus points on the test.
2. For the final (labeled as Test 4):
 - a. Practice tests as described above
 - b. After your 7 required SI sessions, attending up to 5 further SI sessions spread out over 5 weeks can result in 5 additional bonus points on the final exam.

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SI	5%
Reading Assignments, Homework, In-Class Assignments, Quizzes	10%
Lab Grades	20%
Tests	65%

Test 1	100 points
Test 2	100 points
Test 3	100 points
Final	100 points

Labs	
Pre-Lab	10%
Lab	90%

SI Attendance Requirements:

1. Students must attend SI sessions outside of class. Students will have several times to choose from throughout the week.
2. Students must attend 7 SI sessions throughout the semester. These 7 sessions must be attended on 7 different weeks.
3. Students will get an initialed card as attendance of SI. Students will give this card to the instructor the next class period.
4. Cards will not be accepted after December 1st.
5. Not having a card will mean students will not be counted present.
6. Students who arrive 5 minutes late or leave 5 minutes early will not be counted present.
7. Students who do not participate, are disruptive, are disrespectful, or cause problems will not be allowed to attend SI. These students will receive 0s for the remaining SI grades and will be ineligible to make these grades up.

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Students are expected to complete all course work themselves. Students who violate academic integrity will face penalties. Students who violate academic integrity for Reading Assignments, Homework, In-Class Assignments, Quizzes, Pre-Labs, and Labs will be issued a 0 for that assignment. A second offense will result in an F for the course. Students who violate academic integrity on tests will face an F on the course. Cheating/plagiarism include: copying another student's work, copying answers from the internet, having an AI system, such as ChatGPT generate answers and/or work for the student, having another student complete work, using outside sources to answer questions on a test, etc. It is up to the student to know if their actions violate the academic integrity of the course. If a student is concerned about an action, they may ask me before hand for no penalty. Students who provide answers to other students will face the same consequences as the students seeking answers.

Late Work, Attendance, and Make Up Work Policies:

Students get the following dropped grades:

Drops	
	1 lab grades
4 homework, reading, and quiz category	

Labs

All labs must be completed within the time frame given. If students do not finish the labs during the scheduled class time, those lab questions will not be completed and will be counted as incorrect.

You will have two class periods to complete the lab work. Any additional questions that need to be answered will be answered outside of class.

In order to make sure you have enough time to complete the labs, it is important for you to have read over the entire lab, to know what the expectations are.

Students must have all pre-lab questions answered before coming to class. Not having the pre-lab questions answered will mean students will not be able to complete that lab. This lab will not be eligible to be made up.

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Students who do not bring their lab manuals to class will not be allowed to complete that lab. Those labs will not be made up.

If students do not bring their lab manuals on the day a lab is due, students will not be allowed to turn that lab in later.

All students get 1 dropped lab. If a student misses more than 1 lab (all for approved MCC-excused absences), the student and I will have a conversation to determine a course of action.

A 50% grade penalty will be issued for lab stations and/or lab rooms that are left without being cleaned. These grade penalties can be issued for entire classes. If a student is worried their station is not clean enough, ask me, and we can make sure everything is ok before you leave.

Because some lab reagents are only available on the days assigned, students who miss a lab due to an MCC excused absence will be assigned an alternative assignment. Students will have 1 week to turn the assignment in.

Homework and Reading Assignments

All homework and reading assignments are assigned at the beginning of the week. Students have the option to turn all homework in using a Bright Space function. It is up to the student to complete these assignments by the due date.

All Reading Assignments and Homework are due the Sunday before the next week starts at 11:59 PM. For example, Week 2 Reading Assignments will be due the Sunday that Week 3 starts.

A student must have an MCC-excused absence covering the entire week to make up homework and reading assignments. Students will have 1 week to complete any missed work. Any work not completed in that time frame will be a 0.

No late homework or reading assignments will be accepted. Students have 4 dropped grades.

Quizzes

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Some pop quizzes will be given during class or lab time. Students who are not present when the quiz is given out will not be allowed to take the quiz (for example, if a student comes in late after the quiz has started, that student will not be allowed to take the quiz).

Students get 4 drops in the homework, reading assignment, and quiz category. A missed quiz will be counted as the drop.

Tests

Students have a 2 hour time frame to take the test (unless the student has ADA accommodations, in which case I will work with those accommodations).

Students who come late to the test will not be given additional time to complete the test.

If a student misses a test for any reason, that student can take that test on Friday, December 1st in the 8:30 – 12:30 time frame with me OR on Friday, December 1st during Testing Center hours. Students will need to tell me by Friday, November 17th, if they plan to take the test with me or with the Testing Center.

If a student does not show up to the make-up test day, that test will remain a 0 and the test will be replaced by the final exam.

If a student misses 2 tests, the first test will be made-up on make-up test day. The second test will be replaced by the final exam.

If a student misses 3 tests, the student must have an MCC-excused absence for the third test in order to coordinate with me to take that test.

If a student misses the final exam and does not have an MCC-excused absence, the final exam will be a 0. If a student has an MCC-excused absence, the student can coordinate with me to take the final exam by the end of the semester, Thursday December 7th..

Supplemental Instruction

Because students only need to attend 7 SI sessions in a 15 week course, no make-up SI sessions will be offered.

Covid Issues

If you have tested positive for Covid, please self-report on the MCC website.

https://mclennan.co1.qualtrics.com/jfe/form/SV_9FiKfG5D85livQN

Because the COVID guidelines have been quickly changing, please check Bright Space to know what the most up-to-date MCC requirements are.

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.

Students who continue to be disruptive in class, either to me or other students, will be asked to leave. Students will be required to meet with me and a third party (who may include the Division Director) before being allowed to return to class.

Please note: due to the threats faced in 2023, students who make remarks regarding committing violent acts, wishing to commit violent acts, or statements that can be interpreted as such, will be taken at face value. These remarks will be reported to the MCC police. Subsequent MCC police action will be taken.

Students who do not participate in class will be issued an absence for that day. Continued non-participation will result in being required to meet with me and potentially the Division Director.

Students who are disruptive, disrespectful, or cause problems during SI will be issued one warning. At the second disruption/problem, students will not be allowed to attend SI. Students will receive a 0 for the remaining SI sessions. Other disciplinary actions may also take place.

Students are expected to attend SI for the duration of SI. Students who come late/leave early will not get credit for that SI session.

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

(<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.

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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.

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

disabilities@mclennan.edu 2542998122 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 or by calling, Dr. Claudette Jackson, (Accommodations/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/. 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. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (<https://www.mclennan.edu/academic-support-and-tutoring/>).

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 or a Success Coach by calling (254) 299-8226 or emailing 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. 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.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

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

Go to <https://www.mclennan.edu/center-for-teachingandlearning/FacultyandStaffCommons/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.

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](#)
- [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.

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.