

**McLennan**  
C O M M U N I T Y  
**COLLEGE**

WACO, TEXAS

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**COURSE SYLLABUS**

**AND**

**INSTRUCTOR PLAN**

**CLINICAL PATHOLOGY I**

**VTHT 2223.75**

**(INCLUDES VTHTL 2223.76)**

**LAUREL SHRAWDER, LVT**

**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.

## CLINICAL PATHOLOGY I

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### **Course Description:**

In-depth study of hematology and blood chemistries with emphasis on lab procedures.

### **Prerequisites and/or Corequisites:**

Prerequisites: Successful completion of first semester VTHT courses with a grade of C or better.

### **Course Notes and Instructor Recommendations:**

This class requires intensive studying of veterinary laboratory procedures, techniques, principles, and results. Students should come to the instructor early if they are having issues performing procedures or understanding the material. This class will move at a very fast pace covering a vast amount of material.

### **Instructor Information:**

Instructor Name: Laurel Shrawder

MCC E-mail: lshrawder@mclennan.edu

Office Phone Number: 254-299-8735

Cell Phone Number: 512-461-2600

Office Location: 126 Veterinary Technology Building

Office/Teacher Conference Hours: By Appointment; Friday 8:00 to 5:00PM by appointment

Other Instruction Information: Email is the best way to contact me. It is essential that you have a fully functioning MCC email account and that you check it often. This is the primary way that I communicate. You need to use your student email address as this is where emails will be sent. My cell phone number is provided and should only be used in important or emergent matters.

### **\*\*\*INSTRUCTOR NOTE:\*\*\***

I read my e-mail at least twice a day during the week; however, if you send me an e-mail at 11 PM with a question you need answered before the class tomorrow, I likely will not read it before class. I do not always read e-mails on the weekends. Do not expect instantaneous responses from me via e-mail. Instructors are not 24/7 call centers. Please plan ahead. Remember, poor planning on your part does not constitute an emergency for anyone else.

**DO NOT email, text, or leave class to contact another instructor. Any issues should be managed before or after scheduled class times.**

When you send an e-mail, ALWAYS begin the subject line with VTHT and your course number. If you respond to my e-mail, hit reply, and make sure VTHT (1234.56) is present in the subject line. **Please use complete text in your emails. I do not want to see: u, ur, b4 etc.** Be professional in your communications to your instructors.

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### **Required Text & Materials:**

Title: Laboratory Procedures for Veterinary Technicians, 7<sup>th</sup> Edition

Author: Margi Sirois

Edition: Seventh Edition

Publisher: Elsevier

ISBN: 978-0-323-59538-4

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

### **Methods of Teaching and Learning:**

This course will consist of Lecture and hands-on Laboratory time.

Completion of ALL the Essential Skills associated with this course is required by the AVMA/CVTEA for all program veterinary technician students, and as part of eligibility to graduate.

### **Course Objectives and/or Competencies:**

1. Describe the role of the veterinary technician in the clinical laboratory.
2. Identify the use and care for common laboratory equipment.
3. Describe the hematology evaluations that are commonly performed in veterinary practice.
4. Describe the appearance of normal blood cells and platelets.
5. Describe the process and pathways that lead to the clotting of blood.
6. Understand the common parasites internal/external of domestic animals

### **Course Outline or Schedule:**

| Course Lecture Outline |             |  | Lab Outline                                      |
|------------------------|-------------|--|--|
| Week                   | Reading     | Chapter  | Lab Tasks  |
|                        |             | <b>Unit 1: The Veterinary Practice Laboratory</b>  |  |
| 1                      | Pg. 2 - 9   | <b>Syllabus Introduction</b><br><b>Chapter 1:</b> Safety Concerns and OSHA Standards                             | Clean Lab & Introduction to Laboratory Equipment |
| 2                      | Pg. 10 - 22 | <b>Chapter 2:</b> General Laboratory Equipment<br><b>Chapter 3:</b> The Microscope                               | Laboratory Equipment                             |
| 3                      | Pg. 23 - 30 | <b>Chapter 4:</b> The Metric System and Lab Calculations<br><b>Chapter 5:</b> Quality Control and Record Keeping | Laboratory Equipment Quality Control             |
|                        |             | <b>Exam 1: Unit 1</b>  |  |

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| <b>Unit 2: Hematology</b> |               |   |  |
|---------------------------|---------------|---|--|
| 4                         | Pg. 32 - 40   | <b>Chapter 6:</b> Hematopoiesis<br><b>Chapter 7:</b> Sample Collection and Handling   | Venipuncture Labs<br>(Sample Collection, Evaluation, Refractometer)                  |
| 5                         | Pg. 41 - 52   | <b>Chapter 8:</b> Automated Analyzers<br><b>Chapter 9:</b> Hemoglobin, PCV, and Erythrocyte Indices   | Venipuncture Labs<br>IDEXX Introduction (LaserCyte)<br>Hematocrit/PCV/ Refractometer |
| 6                         | Pg. 53 - 73   | <b>Chapter 10:</b> Evaluating a Blood Smear<br><b>Chapter 11:</b> Morphologic Abnormalities of Blood Cells  | Venipuncture Labs<br>(Blood Smears, Differentials)                                   |
| 7                         | Pg. 74 - 84   | <b>Chapter 12:</b> Additional Hematologic Tests<br><b>Chapter 13:</b> Hematopoietic Disorders and Classification of Anemia                        | Venipuncture Labs<br>(Blood Smears, Differentials, Reticulocyte Counts)              |
| <b>Exam 2: Unit 2</b>     |               |   |  |
| <b>Unit 3: Hemostasis</b> |               |   |  |
| 8                         | Pg. 86 - 91   | <b>Chapter 14:</b> Principles of Blood Coagulation<br><b>Chapter 15:</b> Sample Collection and Handling<br><b>Spring Break - March 6th - 10th</b> | Venipuncture Labs<br>(Coagulation)   |
| 9                         | Pg. 92 - 98   | <b>Chapter 16:</b> Platelet Evaluation<br><b>Chapter 17:</b> Coagulation Testing  | Venipuncture Labs<br>(Blood Smears/ Platelet Counts)                                 |
| 10                        | Pg. 99 - 104  | <b>Chapter 18:</b> Disorders of Hemostasis  | Venipuncture Labs<br>Coagulation Testing   |
| <b>Exam 3: Unit 3</b>     |               |   |  |
| <b>Unit 4: Immunology</b> |               |   |  |
| 11                        | Pg. 106 - 116 | <b>Chapter 19:</b> Basic Principles of Immunity<br><b>Chapter 20:</b> Common Immunologic Laboratory Tests   | Venipuncture Labs<br>(Blood Smears and diagnostic practices)                         |
| 12                        | Pg. 117 - 124 | <b>Chapter 21:</b> Blood Groups and Immunity<br><b>Chapter 22:</b> Intradermal Testing  | Venipuncture Labs<br>(Blood Typing, Crossmatching)<br>Mandatory Lab Skill            |

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|    |               |   |                                  |
|----|---------------|---|----------------------------------|
| 13 | Pg. 125 - 132 | <b>Chapter 23:</b> Reference Laboratory Immunoassays<br><b>Chapter 24:</b> Disorders of the Immune System | Venipuncture Labs<br>ELISA Tests |
| 14 |               | Case Study  |                                  |
|    |               | <b>Exam 4: Unit 9</b>   |                                  |
| 15 | Review        | <b>Review Week</b>  |                                  |
| 16 |               | <b>Comprehensive Lecture/Lab Final</b>  |                                  |

\*\*\* The schedule is subject to change. All notifications of change will be announced in lecture, lab, and by McLennan Student email/Brightspace. If you are absent from class, it is your responsibility to notify the Instructor and obtain information, handouts, and material missed. \*\*\*

**Course Grading Information: Grades will be on a point grading scale.**

| Grading  |             |
|--|-------------|
| Items  | Points      |
| Kennel Duty  | 200         |
| Exams: (4) 100 points each   | 400         |
| Laboratory Attendance/Participation  | 100         |
| Comprehensive Lecture Final  | 200         |
| Laboratory Final Exam  | 100         |
| <b>TOTAL</b>   | <b>1000</b> |
| Grading Breakdown  |             |
| 1000 - 900   | A           |
| 899 - 800  | B           |
| 799 - 700  | C           |
| 699 - 600  | D           |
| 599 - Below  | F           |
| NOTE: As per MCC Veterinary Technology policy, second year veterinary technology students must pass this course with a minimum of 750 points or higher to pass this course. (A grade equivalent of a "C" or 75% as indicated in the Student Handbook for 2nd year Vet Tech students) |             |

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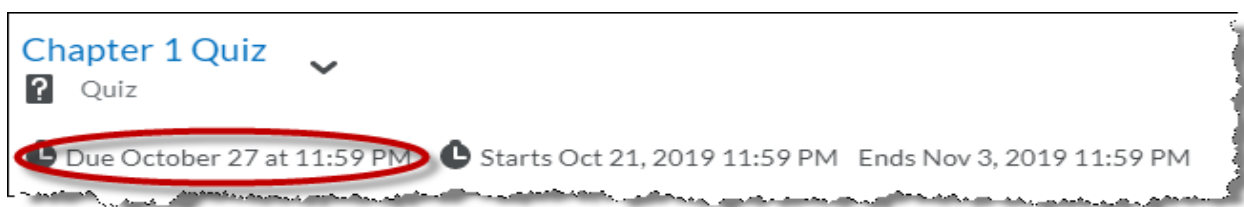
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### **Kennel Duty:**

Each student will be assigned kennel duty throughout the semester, and/or duration the student is in the program. Each day, Monday-Thursday includes three shifts: morning, noon, & p.m. Each student must arrangements to attend each day he or she is assigned to kennel duty. If for some reason the student cannot attend their scheduled kennel duty, he or she is responsible to find another class mate to switch days with. **YOU MUST INFORM YOUR SECOND YEAR SUPERVISOR AND YOUR INSTRUCTORS OF THE SWITCH.** Kennel duty is NOT an excuse to be tardy to class. Arrive on time and complete your duties on time. **All changes in the schedule must be cleared with Sue Allen, LVT, Program Director and Kennel Supervisor, in advance.**

**MISSED EXAM:** As stated in the Student attendance policy: Students will be permitted to make up class work and assignments missed due to absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family or (4) the observance of a religious holy day. Also, the instructor has the prerogative of determining whether a student may make up work missed due to absences for other reasons. It is the student's responsibility to inform the instructor of the reason for an absence and to do so in a timely fashion. If the student misses an exam he/she will be allowed to make up the missed exam **ONLY IF** the absence is caused by one of the 4 causes listed above. Personal illnesses will require a doctor's note before you can make up any missed exams or work.

Pay attention to important dates on Brightspace! Example: Circled is the Due date for a Quiz. You can also see when the Quiz starts/becomes available and Ends/closes in Brightspace.



### **\*\*\*INSTRUCTOR NOTE:\*\*\***

Do not submit \*.pages, \*.numbers, or \*.key files. These are Apple iWork's files and cannot be opened. If you submit Apple iWork's files and your work cannot be opened by the instructor, you will receive a zero for the assignment.

Do not submit \*.odp, \*.odt, or \*.ods files. These are OpenOffice files and, when opened in Microsoft Office, will lose formatting and document properties. If you submit OpenOffice files and your document loses formatting when opened, you will lose any points associated with the formatting of the document for the assignment.

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If you submit \*.pdf files, your professor will be limited to how they can markup the document or assist with modifications to the document. PDF files are an acceptable submission format, but may limit the assistance that you can receive if corrections or revisions must be made.

Do not submit assignments in Google Docs, your instructors can always open these submissions and will cause a delay in grading. You will be asked to resubmit the assignment as a Word document.

### **Technology in the Classroom:**

Students can utilize laptops in class if they are used for the class the student is attending. Please do not work on other classes or anything that may distract you from valuable information.

### **Cellphones in the Classroom:**

Students will not be on their phone during class time hours. If you need to have your phone out, please discuss this with your instructor prior to class. Students will be asked in class to put their phone away.

**ATTENDANCE:** Attendance at all class lectures and labs is **required and is essential** to your success in this course. Attendance may be taken by, but not limited to, any of the following measures: roll call, quiz, vocabulary word, and/or survey. You must wear closed-toe, non-slip shoes in lab. Scrubs and lab coat are required during lab. **THERE IS A NO FOOD OR DRINK POLICY AT ALL TIMES IN THE LAB.**

### **NEW TARDY POLICY EFFECTIVE SP 2020**

To ensure students, arrive on time for class, please note that effective for Spring 2020, the classroom instructor will be locking the classroom door 10 minutes after class begins. If a student arrives late and the door is locked, please know that the student will NOT be allowed in the classroom and will be counted absent for that class period. If a student leaves the classroom during the class (for anything other than an emergency)-such as becoming ill, or specific phone calls-for example a sick child, doctor's office, etc.-they will NOT be allowed to return to the classroom. Personal needs need to be taken care of between classes.

For classes (either lecture or labs), that last more than the approximate 50-minute period, a tardy student may be allowed into that class when the class takes a scheduled break or at the instructor's discretion if scheduled breaks are not practical.

This policy is to help diminish disruption of the class, and to help ensure student safety while in the classroom.

**Student Behavioral Expectations or Conduct Policy:**

**STUDENT UNIFORMS/DRESS CODE:**

The type of scrubs and lab coats worn by veterinary technicians in veterinary clinics is required in laboratory classes starting with the first semester in the first year of training. Student's dress and appearance will be expected to reflect the dress worn when the student becomes employed as a veterinary technician. Scrub tops and jeans are acceptable in some courses. If jeans are worn, they must NOT have any holes/tears/rips in them, and be clean.

You are required to have at least one set of MCC Veterinary Technology scrubs to wear as directed by your instructors for labs, field trips and special occasions. These are available at the MCC Bookstore. Otherwise, scrubs of various prints and colors may be worn to lecture and laboratory sessions if the scrubs are in good condition, fit well, and are clean not wrinkled, and in good taste. Full scrubs, close toed shoes, and full surgical attire must be worn during all surgery laboratories.

Coveralls may be worn when working around large animals or appropriate clothing as determined by instructor's class syllabi. Lab coats are required in labs that involved handling blood, fecal material, or urine. Lab coats that have the MCC Vet Tech logo are available in the MCC Bookstore. Coveralls are available at most retail clothing stores and are similar to the Dickies brand coveralls. Closed-toe, non-slip shoes, such as boots or tennis shoes, must be worn during all labs and field trips. It is strongly advisable to wear boots when handling large animals to minimize foot injuries.

1. Visible tattoos and body jewelry (other than earrings confined to the ear lobes-1 per year) may required to be covered up or removed, respectively, when in lecture or laboratory sessions while at the veterinary technology facility, and AT ALL TIMES during your practicum. Gauged ears require a plug in each while in any/all program classes, field trips or public events.
2. No loose jewelry or loose-fitting clothing (such as bracelets, scarves) are typically allowed in any lab due to safety concerns.
3. Disruptive hair styles are discouraged. Acceptable hair colors fall under the normal range of natural color.

Instructors may have specific requirements, as outlined in the syllabus for the course.

**Personal Grooming Guidelines:**

1. Professional appearance when in clinical settings.
2. Good personal hygiene is required.



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3. All clothing should be clean and free from wrinkles, stains, ragged hems. Hems and pants should be at least ½" from the floor.
  4. Hair should be well groomed and pulled out of face and off shoulders in the laboratory courses.
  5. Male students should be freshly shaven or have well-groomed beards, mustaches, and sideburns.
  6. Fingernails are to be kept at a length and shape consistent with patient and personal safety. NO artificial nails are allowed.
  7. The use of safety goggles or other eye protection may be required in the laboratory classes, and the wearing of exam gloves when handling laboratory specimens, including anatomical specimens, blood, urine, and feces, is required.
- You must always wear closed-toe non-slip shoes for lecture and lab. No sandals, flip-flops, Crocs, etc.

**Students may wear the following to class:** Jeans (clean with no holes, no rips, and no tears), Scrub pants, Dress slacks, Scrub top, MCC Vet Tech Polo shirt or polo shirt, or other shirts deemed appropriate.

**Preferred dress for all vet tech classes:** Scrub top, Scrub pants or jeans

**The following is prohibited and will result in being dismissed from class for the day, being marked as absence, and a grade of 0 (F) for the day:** Open toed shoes, Shorts, Capri Pants, Leggings, Short skirt or kilt, T- Shirt (MCC shirts may be considered), Spaghetti strap/Cami-style/Tank tops (Allowed under Scrub top), Sleeveless shirt (such as shirt/t-shirt with the arms cut off), Facial Piercings (one 1 earring allowed in each ear-no lip/nose/tongue or other piercings with jewelry), and Any distractive/suggestive clothing, piercing, or body art.

### **The Veterinary Technician's Oath**

"I solemnly dedicate myself to aiding animals and society by providing excellent care and services for animals, by alleviating animal suffering, and promoting public health.  
I accept my obligations to practice my profession conscientiously and with sensitivity, adhering to the profession's Code of Ethics, and furthering my knowledge and competence through a commitment to lifelong learning."

**[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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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.