McLennan COMMUNITY COLLEGE

WACO, TEXAS

# COURSE SYLLABUS

# AND

# INSTRUCTOR PLAN

## CONTEMPORARY MATH – QUANTITATIVE REASONING

## MATH 1332 Section 15

**Mark Crenwelge, M.A.**

**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.

## Course Description:

Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors.Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications.Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course.Additional topics may be covered.Graphing calculator required.

## Prerequisites and/or Corequisites:

Prerequisite: TSI math complete (non-algebraic) or MATH 0308 or consent of the division chair. Semester Hours 3 (3 lec).

## Instructor Information:

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| Instructor Name: | Mark Crenwelge |
| MCC E-mail: | mcrenwelge@mclennan.edu |
| Office Phone Number: | 254.299.8874 |
| Office Location: | MWF 221 |
| Office/Teacher Conference | Posted in Brightspace |

## Required Text & Materials:

TI-83, 83Plus, 84, or 84Plus Required

No hard copy text required (Inclusive Access Course)

Optional Text: Thinking Mathematically by Robert Blitzer, 8th ed. Pearson ISBN 13:978-0-13-755120-0

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

## Methods of Teaching and Learning:

MyMathLab is the online component that will house the course information. Homework will be done online in this environment. Lecture notes, reference materials and videos are available there as well.

## Course Objectives and/or Competencies:

Students successfully completing Liberal Arts Mathematics should be able to:

1. Apply the language and notation of sets.
2. Determine the validity of an argument or statement and provide mathematical evidence.
3. Solve problems in mathematics of finance.
4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
5. Interpret and analyze various representations of data.
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

***Critical Thinking:** Critical thinking is the essence of all mathematical studies. Through inductive and deductive reasoning, students explore problems using the logical process of inquiry, analysis, evaluation, and synthesis.

***Communications:** Students participate in assignments involving topics related to Precalculus or other mathematics. They then share their result with their instructor and/or colleagues in class via written, oral, and/or visual methods. Assessment will use at least one of the following: board work, class time explanation, case study presentation, poster board presentation, and small group presentation. Evaluation process will use departmental rubric for communication assessment. This will be provided in class.

***Empirical/Quantitative:** Students work on various mathematical problem solving skills throughout the course. The course focuses on the manipulation and analysis of numerical data or observable facts as presented in application problems and/or problem skill sets in which students demonstrate their ability to reach informed conclusions using mathematical process. Assessment will include discussion, independent practice, or collaborative experience, or instructional technology to include questions from a departmental test bank and the CAAP test.

## Course Outline or Schedule:

Schedule subject to change. Changes will be in email and posted in Brightspace.

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| **WEEK 1** | 1.1 Inductive and Deductive Reasoning<br>1.2 Estimation, Graphs, and Mathematical Models<br>1.3 Problem Solving |
| **WEEK 2** | 2.1 Basic Set Concepts<br>2.2 Subsets<br>2.3 Venn Diagrams and Set Operations<br>2.4 Set Operations and Venn Diagrams with Three Sets<br>2.5 Survey Problems |
| **WEEK 3** | 3.1 Statements, Negations and Quantified Statements<br>3.2 Compound Statements and Connectives |
| **WEEK 4** | 3.3 Truth Tables for Negation, Conjunction and Disjunction<br>3.4 Truth Tables for the Conditional and Biconditional<br>3.5 Equivalent Statements and Variations of Conditional Statements<br>3.6 Negations of Conditional Statements and DeMorgan's Laws |
| **WEEK 5** | **TEST 1 – Chapters 1,2,and 3** |
| **WEEK 6** | 7.1 Graphing and Functions<br>7.2 Linear Functions and Their Graphs<br>7.3 System of Linear Equations in Two Variables |
| **WEEK 7** | 7.3 System of Linear Equations in Two Variables<br>7.4 Linear Inequalities in Two Variables<br>9.1 Measuring Length; The Metric System<br>9.2 Measuring Area and Volume<br>9.3 Measuring Weight and Temperature |
| **WEEK 8** | **TEST 2 – Chapters 7 and 9** |
| **WEEK 9** | 8.1 Percent, Sales Tax, and Discounts<br>8.2 Income Tax<br>8.3 Simple Interest<br>8.4 Compound Interest |
| **WEEK 10** | 8.5 Annuities, Methods of Saving, and Investments<br>8.6 Cars<br>8.7 The Cost of Home Ownership<br>8.8 Credit Cards |
| **WEEK 11** | **TEST 3 – Chapter 8** |

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| **WEEK 12** | 11.1 The Fundamental Counting Principle<br>11.2 Permutations<br>11.3 Combinations<br>11.4 Fundamentals of Probability<br>11.5 Probability w/ Fundamental Counting Principle, Permutations, & Combinations<br>11.6 Events Involving Not and Or; Odds |
| **WEEK 13** | 12.1 Sampling, Frequency Distributions, and Graphs<br>12.2 Measures of Central Tendency<br>12.3 Measures of Dispersion<br>12.4 Normal Distribution<br>12.5 Problem Solving with the Normal Distribution<br>12.6 Scatter Plots, Correlation, and Regression Lines |
| **WEEK 14** | Review |
| **WEEK 15** | **TEST 4 – Chapters 11 and 12**<br>Final Review |
| **WEEK 16** | **FINAL Exam** |

## Course Grading Information:

Your course grade will be based on assignments, chapter tests, and a cumulative final exam.

The relative weights of each of these factors is as follows:

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| Assignments | 4**0%** |
| Tests | **40%** |
| Final Exam | **20%** |

Assignments will include Online Homework problems on MyMathLab and any Projects or Group assignments that are given. These will count for 40% of the final grade. Success in this class depends on keeping up with the assignments. Learning is directly correlated to the amount of practice completed on the topics we cover. Homework problems will be assigned and worked online using MyMathLab. The deadline for each set of homework will be the scheduled time of the test over the sections covered by the homework. After the due date the problems can still be completed but there will be a 10% penalty for late work**.**

If you have a conflict with one test for one of the reasons given in MCC's General Catalog, and you have provided a documented excuse for doing so, the Final exam will also count as your make-up test for that chapter. If it is necessary for you to miss more than one test, you should discuss the situation with me. Unexcused absences from tests will not be made up. I reserve the right to make changes in extreme circumstances. The Test average will count as 40% of the final grade.

The Final will be cumulative. It is scheduled on **December 7, 2022 at 1:00 pm.** Please plan accordingly. Your grade on the final may also count in place of the lowest test grade, if that is to your advantage. The Final exam will count as 20% of the final grade.

The letter grade received will be based on the customary 90-80-70-60 scale.

This course will use a variety of internal and external assessments. A faculty developed comprehensive final exam may assess the core objectives of critical thinking and empirical/quantitative analysis. These core objectives may also be assessed using parts of a standardized test (CAAP). A faculty designed rubric will be used to assess communication skills as well. Review of such items such as GPA, retention levels, and success in following course may be used to evaluate the effectiveness of student learning.

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

Due dates for assignments will be clearly communicated and extensions not given (with the exception of the 10% penalty on Homework assignments). It is my policy to replace a student's lowest test grade with their final exam grade, if it is higher, at the end of the semester. For this reason, **I do not give makeup tests**. A missed test will be recorded as a 0 and then replaced with the final exam at the end of the semester. If a student is aware of a conflict on a test date, they may ask to arrange to take the test early. I reserve the right to make changes in extreme circumstances.

**If you are absent from 25% of the scheduled class meetings by the deadline for student initiated drops, you will be dropped from the class.** I will take attendance weekly by looking for activity in MyMathLab. If there is no activity you will be counted absent for the week. Two absences would equal the 25% amount. If this limit is reached after that date, you will be kept on the roll, and the grade that you earn for the semester is the grade you will receive.

Make attendance a priority. If absence is unavoidable, **YOU** are still responsible for completing assignments. Attendance (participation) is very important in this class and many students find that missing puts them at a distinct disadvantage. If you miss a week and get behind, it is easy to get discouraged and give up. When you are actively participating and completing assignments, you have the opportunity to ask questions and get help immediately.

**Student Behavioral Expectations or Conduct Policy:**

Students are expected to maintain online 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.
In this online class it is expected that students will participate in ZOOM conferences as needed and follow rules of online etiquette, keep up with assignments and deadlines, and be respectful of others in the class.

**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.

McLennan COMMUNITY COLLEGE

# 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)
- 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)

**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.