

# Syllabus for Spring 2021 MATH 1470 Section I2462

Cuyahoga Community College Business, Technology & Mathematics Eastern Campus

Course: MATH 1470 Modern Math for Bus/Sci I

Instructor: Mike McCraith

Lecture Hours: 04 hours    Laboratory Hours: 00 hours

Office: EMHC 210

Office Phone: 216-987-2320

Office Hours (using Zoom): MW 12:00 - 2:30 pm

TTH 4:00 - 6:30 pm

Email: mike.mccraith@tri-c.edu

Website: mathaccordingtomike.com

Text: Mathematics with Applications, 12th Ed, Lial, Hungerford, Holcomb, Mullins (only get the MyMathLab access to save money)  
Graphing calculator is required - TI-83/83+, TI-84/84+ is recommended

## Prerequisites

MATH-0965 Intermediate Algebra, or appropriate score on Math Placement Test, or departmental approval: equivalent coursework.

## Course Description

First of two-semester sequence. Topics include functions, mathematics of finance, linear systems, matrix algebra and linear programming with applications in business and social sciences.

## Course Schedule

To be successful in the class, you must be determined and able to stay on task. Read the section, watch the corresponding YouTube videos, skim the section, and then try the homework. Do one section at a time! If there's time between when you finish the homework, quizzes, and the test due date, print out the practice tests (see Tests) and compare your work to the answer key. Do not wait until the last minute to start the material. Info on which YouTube video to watch is posted in the Math 1470 Schedule at the end of the syllabus.

## Attendance

As if this were a traditional class, you need to have the self-discipline to work on math every day to increase your chance of success. Try to do some work for this class every day. Even if you only have 20 minutes, it is better than not spending any time at all.

Regular class attendance is expected. Tri-C is required by law to verify the enrollment of students who participate in federal Title IV student aid programs and/or who receive educational benefits through other funding sources. Eligibility for federal student financial aid is based in part on enrollment status.

Students who do not attend classes for the entire term are required to withdraw from the course(s). Additionally, students who withdraw from a course or stop attending class without officially withdrawing may be required to return all or a portion of their financial aid based on the date of last attendance. Students who do not attend the full session are responsible for withdrawing from the course(s).

Tri-C is responsible for identifying students who have not attended a course before financial aid funds can be applied to students' accounts. There are several tasks required to be marked attended for this course. See the Welcome email to learn more. Students who have not met all attendance requirements will be considered not attending and will be dropped for non-attendance. This may affect any aid you may be receiving, so it is imperative that directions are followed carefully.

At the conclusion of the first two weeks of a semester or equivalent, instructors report any registered students who have "Never Attended" a course. Those students will be administratively withdrawn from that course. However, after the time period in the previous paragraphs, if a student stops attending a class or wants or needs to withdraw, for any reason, it is the student's responsibility to take action to withdraw from the course. Students must complete and submit the appropriate Tri-C form by the established withdrawal deadline.

Tri-C is required to ensure that students receive financial aid only for courses that they attend and complete. Students reported for not attending at least one of their registered courses will have all financial aid funds held until confirmation of attendance in registered courses has been verified. Students who fail to complete at least one course may be required to repay all or a portion of their federal financial aid funds and may be ineligible to receive future federal financial aid awards. Students who withdraw from classes prior to completing more than 60 percent of their enrolled class time may be subject to the required federal refund policy.

If illness or emergency should necessitate a brief absence from class, students should confer with instructors upon their return. Students having problems with coursework due to a prolonged absence should confer with the instructor or a counselor.

## Learning Outcomes Assessment

Occasionally, in addition to submitting assignments to their instructors for evaluation and a grade, students will also be asked to submit completed assignments, called 'artifacts,' for assessment of course and program outcomes and the College's Essential Learning Outcomes (ELOs). The artifacts will be submitted in Blackboard or a similar technology. The level of mastery of the outcome demonstrated by the artifact DOES NOT affect the student's grade or academic record in any way. However, some instructors require that students submit their artifact before receiving their final grade. Some artifacts will be randomly selected for assessment, which will help determine improvements and support needed to further student success. If you have any questions, please feel free to speak with your instructor or contact the Learning Outcomes Assessment office.

## Homework and Quizzes

There will be online homework assigned for every section that we cover in class. Homework can be accessed on MyMathLab <http://portal.mypearson.com>. The Course ID is **mcraith24989**. You will have ample time to complete the homework. You should consider printing out the homework to do the problems on paper, log back in, and the submit answers. Each section is worth 3 points. Homework is only available for one week.

Quizzes are also posted on the MyMathLab website listed above. Quizzes cover the entire chapter and are worth 10 points. You have only two hours to complete the quiz. You will have two attempts at the quiz and I will take the better grade. Make sure you stay organized as you do your

homework and quizzes to ensure full credit is received. The quiz will be available during the same week that the last section of homework for that quiz is available. See the last page of the syllabus for a detailed schedule.

Homework and quizzes will have due dates where a student can receive full credit. Any homework turned in after that due date will receive a penalty of 30% (only the parts answered after the due date.) Quizzes completed after the due date lose 30% on the entire assignment. It's advisable to turn in everything by the due date to maximize your points as points in this course are very hard to come by. The late date to turn in all homework and quizzes is Wednesday, May 5, 2021 at 11:59 pm.

## Tests

This course will have only a midterm and a Final. The midterm will be worth 150 points and the comprehensive Final will be worth 200 points. These tests will be paper/pencil. The day for the midterm will be Tuesday, March 2, 2021 and the day for the Final will be Tuesday, May 4, 2021. Both days, you will have two options: the test at either 10:00 am or 6:00 pm. **You will need to make an appointment to register for the exam and you'll report the time during the Syllabus Quiz.** Failure to complete the Syllabus Quiz will result in being dropped for non-attendance.

While taking the tests, no other materials, besides blank paper, calculator and formula sheet, may be used.

### BEFORE TAKING THE TEST:

- 1) **Make a Zoom account by going to <https://zoom.us/>.** You will need to download Zoom for your computer or for your phone to use during the exams. Be sure to try it out by making a visit during office hours (see first page) or making an appointment before the day of the test.
- 2) **If you do not have a scanner, download a scanning app for your smartphone such as Microsoft Office Lens or Evernote/Evernote Scannable.** One of your first assignments (Weekly Planner) is also going to be a test to make sure you can download and submit through Blackboard. **If you have an issue, please let me know ASAP!**
- 3) **Practice creating a multiple-page PDF file using the software mentioned or the website <http://combinepdf.com>.**

Tests will appear on Blackboard at your preselected time. You are to perform the following steps:

- 1) Log into the Zoom meeting <https://us02web.zoom.us/j/5387886450> **10 minutes before the exam** with your webcam on. If you do not have a webcam, you'll need to download the Zoom app for your smartphone. Make sure your phone is charged throughout the exam. If there is a disruption during the exam, **email me immediately.** I will be proctoring and recording the test as you take it.
- 2) During the 10 minutes prior to the exam, I will be checking IDs. Make sure you have a photo ID ready.
- 3) Log into Blackboard and click on Tests in the menu on the left. Print out the test and do the work on the paper (preferred). If you cannot print, work on separate sheets of paper, write the problem number and show the work. You do not have to rewrite the actual problem. If you choose the latter, make sure that you do not skip around and the problems are done sequentially. Do not put more than one problem on a line. In other words, make sure the work is very easy to follow. If I cannot find a problem, I will not grade it and you'll receive a zero. **If you print the test or use separate sheets, PRINT AND SIGN your name at the top of every page.** You can leave this website tab open during the test as you'll also use it to submit your completed test.
- 4) Once the test is complete, scan it and save the document as a PDF. If you do not have access to a scanner, then use a scanning app for your smartphone. If you use your smartphone, you might have to send the file to yourself to get it to your computer in order to submit the test. Failure to create one PDF document will result in a 10% grade reduction.
- 5) Go back to Blackboard and submit your test using the same page where you downloaded the test.
- 6) Tests are timed, so be sure to submit it within the window. It is advisable to document that the test was sent by taking a photo/screenshot showing the upload was successful. **If a test is submitted outside of the allotted time, the grade will automatically be a zero.**

### Important Notes:

- Students must ALWAYS be facing their webcam/phone and be the only person in the room!
- A student will receive a zero if:
  - The student does not provide a photo ID.
  - The student leaves their computer for ANY reason other than to print/scan the exam.
  - Turns their back to their webcam for any reason.
  - Uses a cell phone for any reason besides using Zoom if a webcam isn't available.
  - There is another person in the room while taking your assessment or you are heard talking to a person in the room that is not in view of the camera.
  - Turns their webcam and/or audio off during the test.
  - The student takes a test without using Zoom via a webcam or cellphone app and microphone.

Once you begin the test, you must finish it. Do not answer the phone if it rings or you receive a text, use the internet for other pages besides the Blackboard Test page, and definitely do not give me the impression you are cheating. If you have a question during the test, use the hand raise option inside Zoom and I will privately message you back. It's recommended that you keep your phone on do not disturb/airplane mode during the test.

All steps must be shown, including setups for formulas, on the test or full credit will not be given (in Math, how you get the answer is sometimes more important than the actual answer.) I do not need to see screenshots from calculators. You will have 170 minutes for the Midterm and 170 minutes for the Final. This time includes 20 minutes for printing, scanning, and submitting. The remaining time is for taking the exam. It is your responsibility to manage your time accordingly. Set an alarm to make sure you stay on task.

It's recommended that you view the previous tests on my website. On the website, click on "Classes" and then on "Math 1470". Take those tests and use the answer keys to check your work. **The midterm will cover Chapters 3, 4, and 5. The Final is accumulative.**

## Partial Credit Policy

While grading the midterm and Final, partial credit will be given based on the amount of work shown and how correct the work is. For example, a student who gets their answer straight from the calculator without showing any work will receive very few points, if any—even if the answer is correct. Whereas a student who does the correct work but somehow arrives at an incorrect answer will receive the majority of the credit. Arithmetic mistakes warrant only a few points lost; however, conceptual errors will not earn many points of partial credit. I understand that there are times where you don't need to use the calculator to get the answer, and thus in those cases, the policy does not apply. **If at any time, you need to reach for your calculator to get the answer, then you will need to write down the setup on the test paper and the corresponding answer.**

## Make-ups/Late Material

There will be no make-up tests (midterm and Final) offered. Be sure to have all materials on the day and by the time that they are required. Homework and quizzes turned in after the due date will be docked 30%. **Extra time will NOT be given for any reason.**

## Cheating Policy

Cheating will not be tolerated by the instructor. It includes having any extra materials not approved by the instructor. Cheating also includes having these materials in your possession. For instance, if you borrow a calculator, you are obligated to make sure there are no formulas in the calculator.

Misuse of external resources (including, but not limited to, other texts, other student's work, the internet, and the student solution manual) by submitting work that is not their own also constitutes cheating. For example, if a student copies from the student solution manual and turns that in as their homework, it is considered cheating. If you do not understand how to get the answer, do not simply copy down the work from an external source. Instead, ask me to help you with the problem. Copying down from an external source does not demonstrate mastery of the material and will not help you on the exam and on the final. Never give me the impression that you are cheating. Never look over at other student's work and never talk during the test for any reason. Throughout the course, your handwriting samples will be used for the purpose of comparison. If there is any suspicion that cheating has occurred, such as someone else did the work, then the Cheating Policy will be enacted.

On the first instance of cheating, the student will be reported to the Dean of Student Affairs, the grade received for that entire assignment/exam will be a zero, the student's lowest test score will not be replaced by the Final, if higher, and the final grade will be lowered by one letter. For the second instance of cheating, automatic failure in the course will result and a Student Conduct Hearing will take place. See the Student Handbook for more information.

## Instructor's Expectations

Math is a difficult subject for most people, so I strongly encourage you to ask any questions you may have (without having to worry.) Follow the guidelines (see below) to start every week prepared. Be sure homework is done in a timely manner and that you adequately schedule your time to include homework and studying. Studying only a "couple hours" for a test is never enough. Be sure to start to study for a test at least 2 days before the test. That way, you leave enough time for the material to be understood and to ask any questions. Do not wait until the last minute to get the help you might need! If you do not ask questions when you have them, then you are shorting yourself of an opportunity to learn the material. I will answer all questions in a respectful, patient, and timely manner. **Please allow one week for the midterm to be returned.** The Final will not be returned.

When corresponding through email, refrain from using "internet speak". Any such email will be returned.

## Grading

Grades will be based on the following<sup>†</sup>: Final grades are based on:

About Me*	12
Weekly Planner*	10
Syllabus Quiz	10
Homework	78
Quizzes	50
Midterm	150
Final	200
<b>Total</b>	<b>510</b>

Percent	Points	Final Grade
90 - 100	459 - 510	A
80 - 89	408 - 458.99	B
70 - 79	357 - 407.99	C
60 - 69	306 - 356.99	D
0 - 59	Below 306	F

\*\*Passing Grade starting Summer 2005

† Total point value subject to change due to time

\* Graded on an all-or-nothing basis

Grades shown on MyMathLab are not your current grade—they only show the grade for what you completed, which may not be close to your actual grade. If you want to know your current class grade, please email me.

## College Calendar

Date	Calendar Description
January 19, 2020	Spring Semester Begins
February 1, 2020	Last Day to Withdraw from Full Term with NO RECORD
TBA	Academic Progress Reporting for Full Term Due
April 9, 2020	Last Day to Withdraw from Full Term Course with a "W" Grade
May 3 - 9, 2020	Final Exam Week - Full Term
May 9, 2020	Spring Semester Ends
May 11, 2020	Final Grades Due

## Assistance

Tutoring is available in the Learning Center (ESS 1202) on a free, walk-in basis. Free online tutoring is available with a link under Student Services in My Tri-C Space through eTutoring and Smarthinking.

## Student Accessibility Services (SAS)

If you need any special course adaptations or accommodations because of a documented disability, please notify your instructor within a reasonable length of time, preferably the first week of the term with formal notice of that need (i.e. an official letter from the Student Accessibility Services (SAS) office). Accommodations will not be made retroactively. For specific information pertaining to ADA accommodation, please contact your campus SAS office or visit online at <http://www.tric.edu/accessprograms> (<http://www.tri-c.edu/accessprograms/>). Blackboard accessibility information is available at <http://access.blackboard.com>.

## Incomplete Grades

The grade "I" is only given if a student meets **both** of the following conditions:

- a) The student has a **passing status** in the class and has completed at least 70% of the course work, AND
- b) The student is unable to complete the rest of the required course work due to circumstances *judged by me* to be beyond his/her control.

A notation of "I" indicates that you must complete the course requirements within five (5) weeks of the next semester (summer excluded) or the "I" will be automatically changed to an "F". See Student Handbook for more information.

## Academic Course Credit

In order to award one semester hour of college credit, the Ohio Board of Regents requires two hours of significant student study outside of class for each one hour in class for the equivalent of an academic semester (16 weeks). This is a six credit hour class taught in sixteen weeks. Therefore, the required course load requirement is 6 hours in class each week and an average of 12 hours each week outside of class for the semester to earn six semester hours of college credit. Thus, this six credit hour course requires an average of 18 hours of effective student effort per week for the entire semester. The standard expectation for an online course is that you will spend 3 hours per week for each credit hour.

## Concealed Carry Statement

College policy prohibits the possession of weapons on college property by students, faculty and staff, unless specifically approved in advance as a job-related requirement (i.e., Tri-C campus police officers) or, in accordance with Ohio law, secured in a parked vehicle in a designated parking area only by an individual in possession of a valid conceal carry permit.

As a Tri-C student, your behavior on campus must comply with the student code of conduct which is available on page 29 within the Tri-C student handbook, available at <http://www.tri-c.edu/student-resources/documents/studenthandbook.pdf>. You must also comply with the College's Zero Tolerance for Violence on College Property available at <http://www.tri-c.edu/policies-and-procedures/documents/3354-1-20-10-zero-tolerance-for-violence-policy.pdf>

## Coronavirus/Covid-19 Statement

Students are responsible for adhering to all College health and safety guidance, including that which relates to the COVID-19 pandemic. Public health requirements and standards are changing rapidly, and the College is adapting its guidance accordingly. Please check your Tri-C email and visit [tri-c.edu/coronavirus](http://www.tri-c.edu/coronavirus) regularly for updates.

All students must adhere to the following general guidelines, until further notice:

- Remain at home. Do not attend any in-person class or gathering.
- Notify your instructor if you are ill, have tested positive for COVID-19, or have been exposed to an individual who has tested positive for COVID-19.
- Wear a mask or face covering at all times, including, but not limited to: upon entering and exiting any Tri-C facility, in class, and in all common areas.
- Maintain a distance of at least six feet between yourself and others at all times.
- Provide the College with relevant information about your current health status and participate in any required on-site checks (e.g., temperature checks).
- Use only designated areas of Tri-C facilities, including entrances and exits. Sign in and out of Tri-C facilities as directed.

The general guidelines listed above do not encompass all coronavirus-related guidance. These guidelines are subject to change at the discretion of the College and under the direction of public health authorities. Students who fail to adhere to this guidance may be subject to disciplinary action under the College's Student Code of Conduct and the Student Judicial Code.

## Extra Information

Office hours! Use them to your advantage. Let no question go unasked. **Be sure to have your questions prepared in advance to maximize efficiency during office hours.** There is not time to redo the lecture during office hours so come prepared to ensure all students are given a chance for help. You'll find a link to my Zoom account in the Tests section above and also on Blackboard. You don't need an appointment if you come by during office hours. Just pop in anytime you have a question.

I am also available for online tutoring using Zoom. If you wish to meet with me outside of my office hours, please give me advance notice by emailing me at my Tri-C address. Please let me know which day(s) and time(s) you wish to meet. I do not log on unless I know someone is there.

The syllabus is a fluid document and is subject to change. Any changes/clarifications that need to occur will be posted in Blackboard. Be sure to check there throughout the course as not all announcements are emailed out.

An important note: **You are not bothering me!** Some students feel that they ask too many questions. I'd rather you ask than not ask.

## Withdrawal

Students may withdraw from any semester course prior to the end of week 12 of the full semester or 80 percent of any instructional part of semester. Specific withdrawal dates are available by semester in any Enrollment Center or published in the schedule of courses. Students must submit a completed withdrawal form or follow the approved electronic process when available. The refund schedule for all parts of semester and the Summer Session is determined in proportion to the full semester schedule as established by College procedure. Up to the last day of week 12 of the full semester, a student may withdraw from a course(s) for any reason. Withdrawal from a course prior to the last day of the second week of the semester will have no notation made noted with a "W." Regular class attendance is expected. Tri-C is required by law to verify the enrollment of students who participate in Federal Title IV student aid programs and/or who receive educational benefits through other funding sources. Tri-C is responsible for identifying students who have not attended or logged into a class for which they are registered. At the conclusion of the first two weeks of a semester, instructors may report any registered students who have "Never Attended" a class so that those reported students will be administratively withdrawn from that class. However, it is the student's responsibility to withdraw. Withdrawals related to student conduct are administrative withdrawals processed by the Dean of Student Affairs, using the appropriate Tri-C form, from any class which she/he is no longer attending or risk receiving a failing grade in that class. Student's wishing to withdraw must complete and submit the appropriate Tri-C form by the established withdrawal deadline. All transactions involving withdrawal from courses shall be done in writing and on forms provided by Tri-C or through electronic means. A student's failure to attend classes shall not constitute an official withdrawal. (Student Handbook)

## Objectives for Math 1470

Upon successful completion of Math 1470, the student should be able to:

1. Analyze, define, and utilize functions of various types
2. Analyze, define, solve, and utilize exponential and logarithmic equations and functions.
3. Interpret, evaluate, and apply various formulas related to the mathematics of finance.
4. Analyze, graph, solve, and apply systems of linear equations, including utilization of matrices.
5. Analyze, graph, solve, and apply systems of linear inequalities.

For a more detailed Objective list, please visit <http://www.tri-c.edu/student-resources/curriculum/>.

# Math 1470 Schedule

Week of (Mondays)	Sections Covered	Videos to Watch
January 18	Check your Tri-C email for important instructions 3.1 Functions 3.2 Graphs of Functions	1 - 6
January 25	3.3 Applications of Linear Functions 3.4 Quadratic Functions and Applications	7 - 19
February 1	3.5 Polynomial Functions 3.6 Rational Functions 4.1 Exponential Functions	20 - 28
February 8	4.2 Applications of Exponential Functions 4.3 Logarithmic Functions	29 - 37
February 15	4.4 Logarithmic and Exponential Equations 5.1 Simple Interest and Discount 5.2 Compound Interest	38 - 55
February 22	5.3 Annuities, Future Value, and Sinking Funds 5.4 Annuities, Present Value, and Amortization	56 - 65, 99
March 1	<b>MIDTERM-TUESDAY, March 2, 2021</b> <b>10 am or 6 pm</b>	
March 8	6.1 Systems of Two Linear Equations in Two Variables	100, 66 - 69
March 15	6.2 Larger Systems of Linear Equations 6.3 Applications of Systems of Linear Equations	101, 70 - 73
March 22	6.4 Basic Matrix Operations 6.5 Matrix Products and Inverses	102 - 103, 74 - 79
March 29	6.6 Applications of Matrices 7.1 Graphing Linear Inequalities in Two Variables	103 - 104, 80 - 82
April 5	7.2 Linear Programming: The Graphical Method 7.3 Applications of Linear Programming	105, 83 - 88
April 12	7.4 The Simplex Method: Maximization 7.5 Maximization Applications	106, 89 - 95
April 19	7.6 The Simplex Method: Duality and Minimization	107, 96 - 98
April 27	Prep for the Final. Make sure every section of homework and quiz are completed. Take <u>all</u> of the practice tests on my website. Let me know if there questions.	
Tuesday, May 4, 2021	<b>FINAL-TUESDAY, May 4, 2021</b> <b>10 am or 6 pm</b>	
<b>Last day to submit outstanding homework and quizzes:</b> <b>Wednesday, May 5, 2021</b>		

# Homework and Quiz Due Dates

Step 1: Get a daily planner

Step 2: Write these dates in the planner

Step 3: Become organized

Homework Assignments Availability Dates		Quiz Availability Dates	
Jan 18 - Jan 25	3.1 - 3.2	Chapter 3	Feb 1 - Feb 8
Jan 25 - Feb 1	3.3 - 3.4	Chapter 4	Feb 15 - Feb 22
Feb 1 - Feb 8	3.5 - 3.6, 4.1	Chapter 5*	Feb 22 - Mar 8
Feb 8 - Feb 15	4.2 - 4.3	Chapter 6	Mar 29 - Apr 5
Feb 15 - Feb 22	4.4, 5.1 - 5.2	Chapter 7	Apr 19 - Apr 26
Feb 22 - Mar 1	5.3 - 5.4	*Extra week given for Chapter 5 quiz since you have the Midterm the same period	
Mar 1 - Mar 8	Homework break!	<p>The first date is when the assignment is available. The second date is when it is due.</p> <p>Homework and quizzes are due at 11:59 pm of the second date listed.</p> <p>After the second date listed, homework and quizzes are penalized 30% (See Homework and Quizzes). No exceptions for any reason.</p>	
Mar 8 - Mar 15	6.1		
Mar 15 - Mar 22	6.2 - 6.3		
Mar 22 - Mar 29	6.4 - 6.5		
Mar 29 - Apr 5	6.6, 7.1		
Apr 5 - Apr 12	7.2 - 7.3		
Apr 12 - Apr 19	7.4 - 7.5		
Apr 19 - Apr 26	7.6		
Apr 26 - May 5	Finish up all remaining assignments!		

