

# Syllabus for Fall 2018 MATH 1240 Section 83426

Cuyahoga Community College Business, Technology & Mathematics Eastern Campus

Course: MATH 1240 Contemporary Mathematics

Instructor: Mike McCraith

Lecture Hours: 03 hours    Laboratory Hours: 00 hours

Office: EMHC 210    Office Phone: 216-987-2320

Office Hours: MW 9:00 - 10:00 am, 11:40 am - 1:00 pm

TTH 9:00 - 10:00 am, 11:15 am - 1:00 pm

Email: mike.mccraith@tri-c.edu

Website: mathaccordingtomike.com

Text: Contemporary Mathematics 1<sup>st</sup> Edition, McCraith, Van Pelt

Scientific calculator required (multi-lined preferred)

Section 83426: MW 1:00 pm - 2:15 pm EMHC 117

## Prerequisites

Math 0955, 0960, Math 0980 or placement exam.

## Course Description

Applications of mathematics in contemporary life. Introduction to financial literacy, dimensional analysis as applied to measurement and unit conversions, graph theory, topics in probability and descriptive statistics.

## Course Schedule

The beginning of class will be used for questions. After, this course will be taught in a flipped class setting. That means the lecture will happen at home while worksheet assignments will be done in the physical classroom. By going to the website above or doing a search on YouTube for "Math 1240 Flipped", you'll find the necessary videos for the course. **The student will need to watch the videos before coming to class and while in class, the students will get into groups and work together on a worksheet based on what they watched.**

## Attendance

It is your responsibility to attend every class. The more classes you attend, you increase the chance of a better grade. You are also responsible to find out what you missed and your responsibility to contact a classmate for any notes you have missed. Students are expected to arrive on time and stay for the entire class.

According to the Ohio Department of Higher Education, one (1) semester hour of college credit will be awarded for each lecture hour. Students will be expected to work on out-of-class assignments on a regular basis which, over the length of the course, would normally average two hours of out-of-class study for each hour of formal class activity. Credit is also awarded for other hours such as directed practice, practicum, cooperative work experience, and field experience. The number of hours required to receive credit is listed under Other Hours on the syllabus. The number of credit hours for lecture, lab and other hours are listed at the beginning of the syllabus. Make sure you can prioritize your time accordingly. Proper planning, prioritization and dedication will enhance your success in this course.

## Worksheets and PowerPoint Package

Every Monday, the class will be given a worksheet based on the material for that week. The worksheets are due the following Monday. Students will be placed into assigned groups to work on the worksheet in class. The worksheets will consist of homework-style problems, theoretical questions, and also questions to determine if a concept is understood. Each member of the class must turn in their own worksheet. Each worksheet is worth 15 points. It is extremely likely that a worksheet may not be finished during the class time. If that is the case, the student will need to finish it on their own or try to meet with their group outside of class. Do not come in late on the days items are due. Class starts at 1:00:00 pm.

There are two types of videos online: lecture videos and example videos. Example videos are already online and they correspond to the PowerPoint slides. **In order to do well in this course, you absolutely need to watch the videos PRIOR to coming to class. Otherwise, you will not do well on the worksheets. Failure to watch the videos BEFORE the class is the equivalent of not attending the lecture of a traditional course.** You can find the slides for Chapters 2 - 5 on Blackboard. They are worth 10 points per chapter. **Whatever sections the test covers is what you will need to turn in for the PowerPoint Package on the day of the test. Do not come late on test day. Any material submitted after the class has begun will not be accepted for credit.**

## Partial Credit Policy

While grading tests, 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, including the setup to the problem, will receive very few points—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. Algebraic 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 must 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.**

## Tests

A test will be given approximately two classes after the final section the test will include is covered in class. A 200-point Final will be given during Finals week. Tests may consist of homework-style problems, true/false, and short answer. **The test must be done in pencil. A test not done in pencil or one that is done in poor handwriting will not be graded. 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.)** A test will not be given to a student if the student arrives on the day of the test after the first test has been handed in. Be sure to get to the class early on test days.

It is *highly* recommended that you view the previous tests using the Web site. On the Website, click on "Classes" and then on "Math 1240". Take those tests and use the answer keys to check your work. The lowest test score will be replaced by the Final if the Final is higher and if no cheating occurred during the semester.

## Make-ups

There will be no make-up exams offered. No make-up assignments will be accepted for any reason. Be sure to have all materials on the day and by the time that they are required. All materials are due at the beginning of class, which is 1:00:00 pm. Materials turned in after the class has begun will not be graded. If you know you will not be able to make it to class when an assignment is due, you can send a scanned copy of your work to my email. Make sure the file size is not large or the email may not be received. The deadline for scanned material remains the same as if you were in class. **Extra time will NOT be given for any reason.**

## Cell Phone Policy

Tests are already stressful parts of any math class, but, a disruption, like a cell phone, can make the entire experience worse. Due to this, if any disruption is caused during a test from a cell phone, the student with the cell phone will be required to write a paper. See below for information on the paper. If the paper is not turned in within one week, the student will receive a zero on the test.

The paper should focus on disruptions during a test caused from cell phones. You may also briefly discuss other forms of disruptions. End the paper with a summary of what you have learned in this process. The paper is to be three pages in length, double-spaced, with an additional page of references. You must site two references using the MLA format.

If after all of this and the same student allows their cell phone to disrupt another test, the student will be asked to leave the class and will receive a zero on their test.

A disruptive cell phone includes one that rings and one that is on vibrate. I completely understand that life occurs outside of the classroom. If it is a test day and you are expecting an important call, simply place the cell phone on your desk and put it on silent. The cell phone will still light up to let you know there's an incoming call or text. If that occurs, turn your test over and quietly leave the room to answer the call. That way, you will minimize the disruption and it should not break the concentration of fellow students.

During class, cell phones are considered to be participating in disruptive behavior and will not be tolerated in class. Cell phones may not be used on quizzes and tests. They also may not be used during class to take photos of the board. They must be turned off or on silent- not vibrate. **Anyone using one to text message during any class period will be asked to leave for that day.**

## Student Solution Manual/Back of Book

In a math class, you can never learn by working towards the answer. Make sure that you understand where the answer came from as I am highly likely to ask conceptual questions. Be sure to use the student solution manual as a guide. Copying from the student solutions manual will be deemed as cheating. Please see the Cheating policy for more information.

## 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.

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

Please be courteous to all members of the class. Actions deemed rude such as disruptive behavior, including talking, whispering, tardiness, early departure or insulting or disrespectful comments or actions towards anyone will not be tolerated. Math is a difficult subject for most people, so I strongly encourage you to ask any questions you may have (without having to worry.)

Come to class prepared for the day's lesson by reading ahead and watching the videos. This is the best way to take more out of the group time for the class. 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.

Per College policy, no children in the class.

## Grading

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

About Me*	10
Contract*	10
Weekly Planner	10
Syllabus Quiz	10
Worksheets	210
PowerPoint Package*	50
4 Exams	400
Final	200
<b>TOTAL</b>	<b>900</b>

Final grades are based on:

Percent	Points	Final Grade
90 - 100	810 - 900	A*
80 - 89	720 - 809	B*
70 - 79	630 - 719	C*
60 - 69	540 - 629	D
0 - 59	Below 540	F
*Passing Grade starting Summer 2005		

† Total point value subject to change due to time

\* Graded on an all-or-nothing basis

## College Calendar

Date	Calendar Description	Date	Calendar Description
August 27, 2018	Fall Semester (16 Weeks) Full Term Begins	November 16, 2018	Last Day to Withdraw from Full Term (16 Weeks) Course with a "W" Grade
September 3, 2018	Labor Day - College Closed - No Classes Scheduled	November 22-25, 2018	Thanksgiving Recess - College Closed - No Classes Scheduled
September 10, 2018	Last Day to Withdraw from Full Term (16 Weeks) with NO RECORD	December 10-18, 2018	Final Exam Week - Full Term
October 26, 2018	Academic Progress Reporting for Full Term (16 Weeks) Due	December 16, 2018	Fall Semester Full Term Ends
November 11, 2018	Veteran's Day - College Closed - No Classes Scheduled	December 18, 2018	Final Grades Due
November 12, 2018	Veteran's Day Observed- College Closed - No Classes Scheduled		

## 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.

## Disabilities

Students with disabilities at Cuyahoga Community College are expected to take an assertive role in communicating with faculty and staff members about their need for reasonable accommodation. If you need course adaptations or accommodations because of a disability, you should contact the ACCESS Office located in ESS 1213-1216. The ACCESS office phone number is 216-987-2052.

## Incomplete Grades

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

- The student has a **passing status** in the class and has completed at least 70% of the course work, AND
- 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.

## 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.

I am also available for online tutoring using Skype. Use my Tri-C email address to find me on Skype. **If you wish to meet with me, please give me advance notice by emailing me at my Tri-C address.** I do not log on unless I know someone is there.

I will also be making videos for this course. On the website, click on "Videos" and select your course. These will be updated on a weekly basis.

### Topics you should already know from Math 0955/0960/0980

1. Demonstrate an understanding of real numbers, their operations and basic properties.
2. Simplify and perform basic operations on polynomials and other algebraic expressions.
3. Solve various types of linear equations and inequalities in one variable.
4. Factor polynomials using various techniques.
5. Perform arithmetic operations with algebraic fractions.
6. Graph points, lines and linear inequalities on the rectangular coordinate system.
7. Find the slope and equation of a line.
8. Solve linear systems by graphing, substitution, and elimination.
9. Translate and solve application problems.
10. Understand, simplify and perform operations on radicals and rational exponential expressions.
11. Solve quadratic equations using factoring, completing the square, and quadratic formula.
12. Use techniques for solving quadratic equations to solve equations involving rational expressions.
13. Translate and solve application problems.
14. Graph quadratic functions and inequalities.

### Objectives for Math 1240

Upon completion of MATH 1240 Contemporary Mathematics, the student should be able to:

- A. Identify and apply the different terminology and computational methods associated with graph theory.
- B. Determine and use the correct financial formula depending in various situations.
- C. Compute probabilities of various situations.
- D. Convert between different systems of measurement.
- E. Organize, compute, and interpret numerical data.

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

## Academic Credit

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, in part, based on your 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 the 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. Therefore, attendance will be recorded in the following ways:

For online courses, students are required to login in at least two (2) times per week and submit one (1) assignment per week for the first two (2) weeks of the semester, or equivalent to the 15th day of the term. Students who have not met all attendance requirements for an online course, as described herein, within the first two weeks of the semester, or equivalent, will be considered not attending and will be reported for non-attendance and dropped from the course.

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, 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 class work because of a prolonged absence should confer with the instructor or a counselor.

# Math 1240 Schedule

Day of	Sections Covered	Videos to Watch
August 27, 29	Introduction 1.1 Simple Interest	1 - 5
September 3, 5	Labor Day—No Class 1.2 Compound Interest	6 - 16
September 10, 12	1.3 Consumer Loans 1.4 More About Home Loans 1.5 Saving for Retirement	17 - 35
September 17, 19	1.6 Average Daily Balance 2.1 The Mean, Median, Midrange, and Mode	36 - 44
September 24, 26	2.2 Measures of Variability Test 1: Chapter 1	45 - 48
October 1, 3	2.3 Grouped Data 2.4 Graphical Displays of Data 2.5 Linear Regression	49 - 61
October 8, 10	3.9 The Standard Normal Distribution 3.10 The Normal Distribution Take Home (2.2, 2.3, 2.5)	62 - 69
October 15, 17	3.1 Probability Basics Test 2: In class (2.1, 2.4, 3.9, 3.10);	70 - 80
October 22, 24	3.2 Probability with OR 3.3 Probability with NOT 3.4 The Fundamental Counting Principle	81 - 108
October 29, 31	3.5 Conditional Probability 3.6 Permutations and Combinations 3.7 Probabilities with Permutations and Combinations	109 - 134
November 5, 7	3.8 Binomial Probability 3.11 Expected Value	135 - 144
November 12, 14	Veteran's Day—No Class 4.1 Introduction to Graph Theory and Networks 4.2 Paths, Circuits, Euler Paths, and Euler Circuits	145 - 151
November 19, 21	Test 3: Chapter 3 4.3 Hamilton Paths, Hamilton Circuits, and the Traveling Salesman Problem 4.4 Trees	152 - 169
November 26, 28	5.1 Measuring Length in the English and Metric Systems 5.2 Measuring Area and Volume in the English and Metric Systems 5.3 Measuring Weight and Temperature	170 - 192
December 3, 5	Test 4: Chapters 4 and 5 Review	
<u>Wednesday,</u> <u>December 12</u>	Final 1:45 pm - 3:45 pm Same Classroom!	

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# Contract for Math 1240

A. List your short-term (less than two years) goals that you wish to accomplish.

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B. List your long-term (two years or more) goals that you wish to accomplish.

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C. What is your ideal group setup and how do you plan to become a productive member of your group?

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D. Please mark the appropriate box:

I understand that I am responsible for my grade and performance in this course. I understand that there is a difference between working together and copying. I understand that copying from an external source, such as another student or website, constitutes cheating. If found to have cheated, I understand that it can seriously affect the short and long-term goals above. I know that there are alternatives to copying such as asking the professor for help or just leaving the answer blank. By checking the corresponding box and signing below, I acknowledge that I have read and understood the syllabus and its policies and that I promise that all of my work in this course will be my own.

I do not agree with one or more of the statements stated above. By checking the corresponding box and signing below, I acknowledge that I have read and understood the syllabus and I waive the ability to have my Final replace my lowest test score.

Name \_\_\_\_\_ Date \_\_\_\_\_