

# Syllabus for Summer 2017 MATH 1240 Section 51767

Cuyahoga Community College Business, Technology & Mathematics Eastern Campus

Course: MATH 1240 Contemporary Mathematics

Lecture Hours: 03 hours Laboratory Hours: 00 hours

Instructor: Mike McCraith

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

Office Hours: TTH 9:20 - 11:00 am, 1:40 - 2:00 pm

Online Hours: By Appointment (using Skype)

Email: [mike.mccraith@tri-c.edu](mailto:mike.mccraith@tri-c.edu)

Website: <http://www.mathaccordingtomike.com>

Text: Contemporary Mathematics 1st Edition, McCraith, Van Pelt

Scientific calculator required (multi-lined preferred)

Section 52176: MW 10:00 am - 1:20 pm EMHC 236

## 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

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 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.** Tests will be the first 90 minutes of class. The last 30 minutes (on non-test days) will be used to preview the next sections.

## 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. Attendance will be taken throughout the semester for record-keeping purposes.

## Worksheets and PowerPoint Package

Every Tuesday, the class will be given a worksheet based on the material for that week. The worksheets are due the following Tuesday. 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 20 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.

There are two types of videos online: lecture videos and example videos. Lecture videos will be made as the course progresses. Example videos are already online and they correspond to the PowerPoint slides. You can find the remaining slides 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.** Class begins at \_\_\_\_\_.

## Partial Credit Policy

While grading quizzes, projects, and 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 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.

## 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 on the last day of class. 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 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 will be dropped unless the student has been found cheating during the semester. See Cheating Policy below.

## 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. 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 cite 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 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 another student and then turns it in as their work, 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 grade received for that entire assignment/exam will be a zero, the final grade will be lowered by one letter, the student is reported to the Dean of Student Affairs, and the lowest test score is not dropped. 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.)

Be sure the worksheets are done in a timely manner and that you adequately schedule your time to include watching videos 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.

Since this is not a traditional lecture, you absolutely need to make the time to watch the videos before walking into the classroom. Failure to do so will be reflected in your grade. Students who are choosing not to watch the videos will be grouped together.

### Grading

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

About Me*	10
Syllabus Quiz	10
Worksheets	140
PowerPoint Package*	50
4 Exams	500
Final	200
<b>TOTAL</b>	<b>910<sup>†</sup></b>

Percent	Points	Final Grade
90 - 100	819 - 910	A
80 - 89	728 - 818	B
70 - 79	637 - 727	C
60 - 69	546 - 636	D
0 - 59	Below 546	F

<sup>†</sup> Total point value subject to change due to time

\* Graded on an all-or-nothing basis

### College Calendar

Date	Calendar Description
June 12, 2017	Session L (8 Weeks) Begins
June 26, 2017	Last Day to Withdraw from Session L (8 Weeks) with NO RECORD
July 4, 2017	Independence Day (NO CLASS)
July 23, 2017	Last Day to Withdraw from Session L (8 Weeks) Course with a "W" Grade
August 6, 2017	Summer Session Full Term, Session K (Second 5 Weeks) and Session L (8 Weeks) End
August 8, 2017	Final Grades Due: Full Term, Session K (Second 5 Weeks) and Session L (8 Weeks)
August 10, 2017	Grades (Full Term, Session K and Session L) available to students

### 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.

### 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.

### Optional Extra Credit

Using the website <http://www.mymathlab.com> or linking clicking on the Blackboard link called Optional Extra Credit and the course ID [mccraith27512](#), there will be extra homework problems given corresponding to each chapter. Up to 5 points per chapter can be earned where the percent score earned multiplied by 10 will be the number of points received. For example, if the score was 80%, then  $0.80 \cdot 10 = 8$  points. **Answers must be submitted online to earn credit. Work corresponding to these homework problems is due on the day of the test using the same rules as the PowerPoint Package.** Worked turned in late will result in no points being earned.

### 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.

#### 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.

# Math 1240 Extremely Tentative Schedule:

Day of	Sections Covered
June 13, 15	<i>Watch Videos 1 - 38</i> Introduction 1.1 Simple Interest 1.2 Compound Interest 1.3 Consumer Loans 1.4 More About Home Loans 1.5 Saving for Retirement 1.6 Average Daily Balance
June 20, 22	<i>Watch Videos 39 - 53</i> 2.1 The Mean, Median, Midrange, and Mode 2.2 Measures of Variability 2.3 Grouped Data Test 1 Chapter 1
June 27, 29	<i>Watch Videos 54 - 80</i> 2.4 Graphical Displays of Data 2.5 Linear Regression 3.9 The Standard Normal Distribution 3.10 The Normal Distribution 3.1 Probability Basics Test 2 Take Home: Sections 2.2, 2.3, 2.5
July 4, July 6	July 4 <sup>th</sup> No Class <i>Watch Videos 81 - 95</i> 3.2 Probability with OR 3.3 Probability with NOT Test 2 In-Class: Sections 2.1, 2.4, 3.9, 3.10
July 11, July 13	<i>Watch Videos 96 - 144</i> 3.4 The Fundamental Counting Principle 3.5 Conditional Probability 3.6 Permutations and Combinations 3.7 Probabilities with Permutations and Combinations 3.8 Binomial Probability 3.11 Expected Value
July 18, July 20	<i>Watch Videos 145 - 169</i> 4.1 Introduction to Graph Theory and Networks 4.2 Paths, Circuits, Euler Paths, and Euler Circuits 4.3 Hamilton Paths, Hamilton Circuits, and the Traveling Salesman Problem Test 3: Sections 3.1 - 3.8, 3.11
July 25, July 27	<i>Watch Videos 170 - 192</i> 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 Review
August 1	Test 4: Chapters 4 and 5 Review
August 3	<b>FINAL 11:00 am - 1:00 pm</b>