Syllabus for Spring 2022 MATH 1100 Section 12756

Cuyahoga Community College Business, Technology & Mathematics Eastern Campus

Course: MATH 1100 Mathematical Explorations
Lecture Hours: 03 hours **Laboratory Hours:** 00 hours

Instructor: Mike McCraith

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

Office Hours (on campus): MTWR 12 – 1 pm, 2:45 – 4:00 pm
Office Hours (online): M 6 – 7 pm; OR BY APPOINTMENT

Email: mike.mccraith@tri-c.edu

Website: http://www.mathaccordingtomike.com

Text: Mathematical Ideas 14th Ed, Miller, Heeren, Hornsby (please only get the MyMathLab access to save money)

Section 12756: Online Asynchronous

Prerequisites

Math 0955 Beginning Algebra, or Math 0990 Math Literacy for College Students, or sufficient score on math placement test; or departmental approval.

Course Description

Survey of mathematical topics to develop a broader appreciation of mathematics by exploring ways in which the artistic, aesthetic, and intellectual aspects of mathematics are as important as its utility. Students will have the opportunity to study basic concepts and skills of problem solving, set theory, logic and number theory with the purpose of introducing them to the nature of mathematics as it applies to both the practical and the abstract. This course is designed for students whose majors do not require courses in Statistics or STEM and will count towards the requirements for Associate's degrees requiring a 1000-level math.

Course Schedule

This course has videos on my website (above and also on YouTube). There will be two types of videos: mini lectures and example videos. Watch both types, read the book, and take notes as if it were a traditional class prior to attempting the homework and quizzes. Once you've completed a section's worth of videos and reading, then try the homework. Once you've completed an entire chapter's worth of homework, take this quiz. In the middle of the semester, there will be a midterm and at the end of the semester, there will be an accumulative Final.

Learning Outcomes for Math 1100

Upon satisfactory completion of MATH 1100 Mathematical Explorations, the student should be able to perform the following outcomes and supporting objectives:

A. Solve problems utilizing various techniques.
B. Demonstrate knowledge in the basic concepts of set theory.
C. Demonstrate a knowledge of the basic principles and terminology of symbolic logic.
D. Convert between various bases.
E. Categorize numbers using various topics in number theory.
F. Demonstrate and use the principles of transformational, non-Euclidean, and fractal geometries in modeling the universe.

For a more detailed Objective list, please visit https://forms.tri-c.edu/OfficialCourseOutlines/

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. To be marked as Attended, you **must** complete the following tasks. All items are due on February 7, 2022 by 11:59 pm.

- Send me an email to the address above copying the contract found in both the Welcome Email and Blackboard message;
- Complete the About Me and Weekly Planner on mathaccordingtomike.com;
- Complete the Syllabus Quiz on Blackboard; and
- Complete the first week's homework assignment with at least a 70% or higher for each section.

Homework, Quizzes, and Project

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 mccraith23986.** 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 Tuesday, May 10, 2022 at 11:59 pm.

A project based on the material in Section 4.4 will be given on Monday, April 18, 2022 and will be due Monday, April 25, 2022 at 11:59 pm. More information on the project will appear on Blackboard. The project cannot be turned in late for credit.

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

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.**

Assistance

Free online tutoring is available with a link under Student Services in My Tri-C Space through eTutoring and Smarthinking.

Tests

This course will only have a midterm and a Final. The midterm will be worth 150 points and the comprehensive Final will be worth 200 points. These tests are paper/pencil and will be conducted ON EAST CAMPUS in a proctored environment. The room for the test will be announced on Blackboard.

You can either choose between a 10 am or 6 pm testing time and one of two days. You'll have two hours to complete the exam. Be sure to arrive to the exam room on time. You'll need to bring with you pencils, a calculator, and a photo ID (driver's license, Tri-C ID, passport, etc.) **A test will not be given if the student does not have a valid photo ID.** In the Syllabus Quiz, you'll need to declare which day and time you plan to take the exam.

You may choose from the following:

MIDTERM:	Monday, March 7 at 10 AM
	Monday, March 7 at 6 PM
	Tuesday, March 8 at 10 AM
	Tuesday, March 8 at 6 PM
FINAL:	Monday, May 9 at 10 AM
	Monday, May 9 at 6 PM
	Tuesday, May 10 at 10 AM
	Tuesday, May 10 at 6 PM

It's recommended that you view the previous tests on my website. On the website, click on "Classes" and then on "Math 1100". Take those tests and use the answer keys to check your work. **The midterm will cover Chapters 1, 2, and Sections 3.1 – 3.3. The Final is accumulative and covers each chapter equally.** Please allow one week for your midterm to be returned.

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, and the overall 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. Email me a photo of a lion cub by the end of the first Friday of Week 1 for some extra credit. 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.

Student Accessibility Services (SAS)

Tri-C is committed to providing online services, software, and electronic information that is accessible and usable by all of our students, including those with disabilities. It is our mission to provide accessible opportunities and services by complying with Federal and State accessibility guidelines. If you need any special course adaptations or accommodations because of a documented disability, please contact Student Accessibility Services (SAS) (https://www.tri-c.edu/student-accessibility-services) or SAS via email at CCCSAS@TRI-C.EDU. Students have the right to request accommodations at any point in the semester; however, accommodations are not retroactive.

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

Academic Credit 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. The standard expectation for an online course is that you will spend 3 hours per week for each credit hour. Courses offered in other part of terms (e.g. 14-week, 8-week, flexibly scheduled, etc.) ensure equivalent workloads. Students should prioritize their time accordingly, particularly when taking part of term courses.

Grading

Grades will be based on the following†:

Syllabus Quiz	12
About Me*	11
Weekly Planner*	10
Homework	66
Quizzes	50
Project	11
Midterm	150
Final	200
TOTAL	510

Final grades are based on:

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

† 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.

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.

College Calendar

Date	Calendar Description
January 31, 2022	Session O (14 Weeks) Begins
February 14, 2022	Last Day to Withdraw from Session O (14 Weeks) with NO RECORD
March 14 - 20, 2022	Spring Break - No Classes Scheduled
April 22, 2022	Last Day to Withdraw from Session O (14 Weeks) Course with a "W" Grade
May 9-15, 2022	Final Exam Week - Full Term
May 15, 2022	Spring semester Full Term, Session B (Second 8 Weeks) and Session O (14 Weeks) End
May 17, 2022	Final Grades Due: Full Term, Session B (Second 8 Weeks) and Session O (14 Weeks)
May 19, 2022	Commencement

MATH 1100 Schedule

Week of (Mondays)	Sections Covered	Week of (Mondays)	Sections Covered
January 31	1.1 Solving Problems by Inductive Reasoning *Videos 64, 1 - 2* 1.2 An Application of Inductive Reasoning: Number Patterns *Videos 65, 3 - 4*	March 28	3.5 Analyzing Arguments with Euler Diagrams *Video 72, 42*
February 7	1.3 Strategies for Problem Solving *Videos 65, 5 - 9* 1.4 Numeracy in Today's World *Videos 66, 10 - 12* 2.1 Symbols and Terminology *Videos 66, 13 - 14*	April 4	3.6 Analyzing Arguments with Truth Tables *Videos 73, 43 - 46*
February 14	2.2 Venn Diagrams and Subsets *Videos 67, 15 - 17* 2.3 Set Operations *Videos 67, 18 - 22*	April 11	4.4 Conversion Between Number Bases *Videos 74, 47 - 54* 5.1 Prime and Composite Numbers *Videos 75, 55 - 56*
February 21	2.4 Surveys and Cardinal Numbers *Videos 68, 23 - 24* 3.1 Statements and Quantifiers *Videos 68, 25 - 30*	April 18	**Work on the Section 4.4 Project** 5.2 Large Prime Numbers *Videos 76, 57*
February 28	3.2 Truth Tables and Equivalent Statements *Videos 69, 31 - 35* 3.3 The Conditional and Circuits *Videos 70, 36 - 39*	April 25	5.3 Selected Topics from Number Theory *Videos 76, 58* 5.4 Greatest Common Factor and Least Common Multiple *Videos 77, 59 - 63*
MONDAY, March 7	MIDTERM at either 9 AM or 6 PM Chapters 1 and 2 and 3.1 - 3.3	May 2	5.5 The Fibonacci Sequence and the Golden Ratio *Video 78* **PREPARE FOR THE FINAL-TAKE ALL PRACTICE TESTS**
March 21	3.4 The Conditional and Related Statements *Videos 71, 40 - 41*	MONDAY, May 9	**Final at either 10 AM or 6 PM** **Accumulative**

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	
Jan 31 - Feb 7	Sections 1.1 - 1.2
Feb 7 - Feb 14	Sections 1.3 - 1.4, 2.1
Feb 14 - Feb 21	Sections 2.2 - 2.3
Feb 21 - Feb 28	Sections 2.4, 3.1
Feb 28 - Mar 7	Sections 3.2 - 3.3
Mar 21 - Mar 28	Section 3.4
Mar 28 - Apr 4	Section 3.5
Apr 4 - Apr 11	Section 3.6
Apr 11 - Apr 18	Sections 4.4, 5.1
Apr 18 - Apr 25	Section 5.2
Apr 25 - May 2	Sections 5.3 - 5.4
May 2 - May 9	Section 5.5

Quiz Availability Dates	
Chapter 1	Feb 7 - Feb 14
Chapter 2	Feb 21 - Feb 28
Sections 3.1 - 3.3	Feb 28 - Mar 7
Sections 3.4 - 3.6	Apr 4 - Apr 11
Section 4.4, Chapter 5	May 2 - May 9
Project Availability Dates	
Apr 18 - Apr 25	

The first date is when the assignment is available. The second date is when it is due.

Homework and quizzes are due at 11:59 pm of the second date listed.

After the second date listed, homework and quizzes are penalized 30% (See Homework and Quizzes). The project cannot be turned in late for credit. No makeups for exams. No exceptions for any reason.

Last day to submit outstanding homework and quizzes: Tuesday, May 10, 2022 at 11:59 PM

For more information concerning Tri-C's Academic Credit, Accessibility, Attendance, Learning Outcome Assessment, Concealed Carry, and COVID-19 statements, please visit https://www.tri-c.edu/student-resources/curriculum/documents/syllabus-part-b.pdf.