

Syllabus for Fall 2019 MATH 1530 Section 83206

Cuyahoga Community College Business, Technology & Mathematics Eastern Campus

Course: MATH 1530 College Algebra

Lecture Hours: 04 hours Laboratory Hours: 00 hours

Instructor: Mike McCraith

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: *Precalculus 5th Ed.*, Beecher, Penna, Bittinger

Graphing calculator is required - TI-83 or above is recommended

Section 83206: TTH 1:00 - 2:40 PM EMHC 117

Prerequisites

MATH-0965 Intermediate Algebra or sufficient score on math placement test; or departmental approval for equivalent coursework

Course Description

Topics include extensive function (linear, quadratic, polynomial, radical, roots, power, piece-wise, exponential, logarithmic) representation including verbal, numeric, graphic, and algebraic, identifying properties of the different function types, transformation of functions, solve polynomial, rational, absolute value, exponential and logarithmic equations. Solve quadratic, polynomial, and rational inequalities in one variable. Determine and graph conic sections, solve non-linear systems of equations and inequalities and solve systems of equations using matrices, arithmetic and geometric sequences and series. Includes applications and activities to build skills in problem solving.

Class Schedule

For the first five minutes of class (on non-test days), I will go over exercises that the student could not complete. The person who asks a question may be asked what they didn't like about the problem or what they didn't understand. The test will be given at the beginning of the class period and you will have the entire class time to take the exam.

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.

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. For in-person and blended-learning courses, students are required to attend the course by the 15th day of the semester (or equivalent for terms shorter than five weeks) to be considered attending. Students who have not met all attendance requirements for in-person and blended courses, as described herein, within the first two weeks or equivalent, will be considered not attending.

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, Quizzes, Project, and PowerPoint Package

Homework is posted on MyMathLab: <http://www.mymathlab.com>. The Course ID is **mccraith24227**. I highly recommend printing out the homework, selecting "Save", doing the problems on paper, and then logging back in to submit answers. Each section is worth 3 points. You'll have one week to do every homework assignment.

Quizzes are also posted on the MyMathLab site. Quizzes cover the material on the exam, are worth 5 points, and you have only 3 hours to complete the quiz with 1 attempt. Make sure you stay organized as you do your homework and quizzes to ensure full credit is received. Do not start the quiz until you are ready to do so.

You may work on the project with only people from our class, by yourself, or you may ask me for help. **You may not seek outside help including, but not limited to, tutors, friends, family, or the internet.** Due dates on the project will be announced. More information will be given as the course progresses.

All of the planned class examples have been recorded and the videos are on YouTube and also on my website. Corresponding to each section of the text is a PowerPoint slide with the examples already typed. You can find these slides on Blackboard. You will be required to come to class with these slides and write the answer to the exercise as we work it out together in class. They are worth 5 points per collection. **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.**

Grade Replacement Policy

If all homework assignments have a score of 70% or higher, then the lowest test score is **replaced** by the Final if the Final is higher. Otherwise, all scores are kept. Ensure that every homework assignment is at least 70% prior to the due date. If, for any reason, at least one section is below 70%, the Policy is lost and cannot be regained.

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 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. 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 must use the calculator to get the answer, and thus in those cases, the policy does not apply.

Tests

Tests will generally cover one to two chapters. Please make a note of due dates and plan accordingly. A 200-point Final will be given at the end of the semester. 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 1530". Take those tests and use the answer keys to check your work.

Make-ups/Late Material

There will be no make-up exams offered. No late assignments will be accepted **for any reason**. Be sure to have all materials on the day and by the time that they are required. Materials turned in after the due date will not be graded. **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—whether or not you are using them. For instance, if you borrow a calculator, you are obligated to make sure there are no formulas in the calculator. Make sure to use common sense while test taking. Do not, for any reason, look over at another student. Otherwise, you will be considered to be cheating.

Misuse of external resources (including, but not limited to, the back of the book, other textbooks, another student's work, the internet, and the solution manual) by submitting work that is not their own also constitutes cheating. For example, if a student copies the answers from the back of the book 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. I would rather you leave a problem blank than write the copied answer from an external source. It is your responsibility to make sure you have all of your questions answered **before** the assignment is due.

Never give me or the testing center the impression that you are cheating. Never look over at other student's work and never talk during the quiz or test **for any reason**.

On the first instance of cheating, the grade received for that **entire** assignment/exam will be a zero, the student will no longer qualify for the Grade Replacement Policy, and the student's overall grade will be dropped 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 a complete definition of cheating and other information.

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.

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. This is the best way to take more out of the day's lecture. 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.

As for a hint: be sure not to only write down what I write down on the board, but also what I say *in between* the steps. This will greatly help you as you study. Also, if you need to audio record the class, feel free to do so. Believe it or not, this could help you fill in the gaps to your notes. Please, no children in the class.

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

Grading

Grades will be based on the following:

About Me ‡	6
Weekly Planner ‡	6
Syllabus Quiz	5
Quizzes	40
Homework	108
Project	15
PowerPoint Package ‡	20
4 Exams	400
Final	200
TOTAL †	800

Final grades are based on:

Percent	Points	Final Grade
90 - 100	720 - 800	A
80 - 89	640 - 719	B
70 - 79	560 - 639	C
60 - 69	480 - 559	D
0 - 59	Below 480	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 26, 2019	Fall Semester Begins	November 15, 2019	Last Day to Withdraw from Full Term (16 Weeks) Course with a "W" Grade
September 2, 2019	Labor Day - College Closed - No Classes Scheduled	November 28-December 1, 2019	Thanksgiving Recess - College Closed - No Classes Scheduled
September 9, 2019	Last Day to Withdraw from Full Term with NO RECORD	December 9-15, 2019	Final Exam Week - Full Term
October 25, 2019	Academic Progress Reporting for Full Term (16 Weeks) Due	December 15, 2019	Fall Semester Full Term Ends
November 11, 2019	Veteran's Day - College Closed - No Classes Scheduled	December 17, 2019	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:

- 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.

Academic 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. For laboratory hours, one (1) credit shall be awarded for a minimum of three laboratory hours in a standard week for which little or no out-of-class study is required since three hours will be in the lab (i.e. Laboratory 03 hours). Whereas, one (1) credit shall be awarded for a minimum of two laboratory hours in a standard week, if supplemented by out-of-class assignments which would normally average one hour of out-of-class study preparing for or following up the laboratory experience (i.e. Laboratory 02 hours). 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.

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>

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.

Essential Learning Outcome Mapping

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Quantitative Reasoning: Analyze problems, including real-world scenarios, through the application of mathematical and numerical concepts and skills, including the interpretation of data, tables, charts, or graphs.

Oral Communication: Demonstrate effective verbal and nonverbal communication for an intended audience that is clear, organized, and delivered effectively following the standard conventions of that language.

Things you ABSOLUTELY NEED TO KNOW from Math 0965/1200/1270/1280 (Intermediate Algebra)

1. Algebraic expressions.
2. Demonstrate an understanding of and simplify exponential and radical expressions.
3. Solve equations and inequalities in one variable of degree greater than or equal to one.
4. Find and sketch the graph of the solution set for linear equations and inequalities.
5. Identify graphs and equations of the parabola, circle, ellipse, and hyperbola; graph parabolas and circles.
6. Evaluate functions and sketch their graphs.
7. Use the relationship between exponential and logarithmic functions to solve equations and applications.
8. Find the solution set for systems of linear and quadratic equations algebraically and graphically.
9. Sketch the graph of the solution set of systems of linear inequalities.
10. Explain ways that the calculator/computer may be used to solve algebraic problems.

Objectives for this course

Upon completion of MATH 1530 College Algebra, the student should be able to:

- A. Represent functions verbally, numerically, graphically and algebraically.
- B. Solve Equations.
- C. Solve Inequalities.
- D. Define, Determine, and Graph Conic Sections and solve Non-linear Systems of Equations and Inequalities.
- E. Solve systems of linear equations using matrices.
- F. Recognize and differentiate arithmetic and geometric sequences and series, and determine specified terms and their sums if they exist.

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

Due Dates

Sections	Availability	Sections	Availability
1.1 - 1.4	Tues, Aug 27 - Tues, Sept 3	5.3 - 5.5	Tues, Oct 15 - Tues, Oct 22
2.1 - 2.5	Tues, Sept 3 - Tues, Sept 10	5.6, 9.2 - 9.3	Tues, Oct 22 - Tues, Oct 29
3.1 - 3.2	Tues, Sept 10 - Tues, Sept 17	9.8, 10.1	Tues, Oct 29 - Tues, Nov 5
3.3 - 3.5	Tues, Sept 17 - Tues, Sept 24	10.2 - 10.3	Tues, Nov 5 - Tues, Nov 12
4.1 - 4.3	Tues, Sept 24 - Tues, Oct 1	10.4, 11.1	Tues, Nov 12 - Tues, Nov 19
4.4 - 4.6	Tues, Oct 1 - Tues, Oct 8	11.2	Tues, Nov 19 - Tues, Nov 26
5.1 - 5.2	Tues, Oct 8 - Tues, Oct 15	11.3	Tues, Nov 26 - Tues, Dec 3

Quiz Chapter 1: Tues, Aug 27 - Thurs, Sept 12

Quiz Chapter 3: Tues, Sept 10 - Thurs, Oct 10

Quiz Chapter 5: Tues, Oct 8 - Thurs, Nov 7

Quiz Chapter 10: Tues, Oct 29 - Tues, Dec 3

Quiz Chapter 2: Tues, Sept 3 - Thurs, Sept 12

Quiz Chapter 4: Tues, Sept 24, - Thurs, Oct 10

Quiz Chapter 9: Tues, Oct 22 - Thurs, Nov 7

Quiz Chapter 11: Tues, Nov 12 - Tues, Dec 3

All items due on the second day listed at 11:59 pm

Math 1530 Schedule

Day of	Sections Covered
August 27, 29	Introduction 1.1 Introduction to Graphing 1.2 Functions and Graphs 1.3 Linear Functions, Slopes, and Applications 1.4 Equations of Lines and Modeling
September 3, 5	2.1 Increasing, Decreasing, and Piecewise Functions; Applications 2.2 The Algebra of Functions 2.3 The Composition of Functions 2.4 Symmetry 2.5 Transformations
September 10, 12	3.1 The Complex Numbers 3.2 Quadratic Equations, Functions, and Models Test 1: Chapters 1 and 2
September 17, 19	3.3 Analyzing Graphs of Quadratic Functions 3.4 Solving Rational and Radical Equations 3.5 Solving Equations and Inequalities with Absolute Value
September 24, 26	4.1 Polynomial Functions and Models 4.2 Graphing Polynomial Functions 4.3 Polynomial Division; The Remainder and Factor Theorems
October 1, 3	4.4 Theorems about Zeros of Polynomial Functions 4.5 Rational Functions 4.6 Polynomial and Rational Inequalities
October 8, 10	5.1 Inverse Functions 5.2 Exponential Functions and Graphs Test 2: Chapters 3 and 4
October 15, 17	5.3 Logarithmic Functions and Graphs 5.4 Properties of Logarithmic Functions 5.5 Solving Exponential and Logarithmic Equations
October 22, 24	5.6 Applications and Models: Growth and Decay, and Compound Interest 9.2 Systems of Equations in Three Variables 9.3 Matrices and Systems of Equations
October 29, October 31	9.8 Partial Fractions 10.1 The Parabola
November 5, 7	10.2 The Circle and the Eclipse 10.3 The Hyperbola Test 3: Chapters 5 and 9
November 12, 14	10.4 Nonlinear Systems of Equations and Inequalities 11.1 Sequences and Series
November 19, 21	11.2 Arithmetic Sequences and Series November 21—No Class (Happy Thanksgiving!)
November 26, 28	11.3 Geometric Sequences and Series
December 3, 5	Test 4: Chapters 10 and 11 Review
<u>Tuesday, December 10</u>	Final 1:45 pm - 3:45 pm Same Classroom!