

COURSE SYLLABUS

**** Please read the following carefully, as you are responsible for its content!****

MAT* 173 College Algebra Online with Campus Requirement (CRN # 2096)

Department	Course No.	Course Title
4	4	
Credit Hrs.	# lecture hrs./week	

Prepared by	Dr. Joseph Murfin	May 2019
	Faculty Member	Date

Course prerequisites: **Eligible for either ENG*101E or ENG*101 and either MAT*137E or MAT*137 with a grade of "C" or better OR eligible for either ENG*101E or ENG*101 and Math placement.**

Course Location (building/room number): **Online**

Meeting time (days/hours): **Online with On-Campus Requirement (for Final Exam)**

Description of course:

This course continues the algebra sequence. It is primarily intended for students who plan to continue on to Precalculus. Topics include operations with complex numbers; functions; numeric, algebraic, and graphic techniques as applied to the following functions: polynomial, rational, radical, piecewise, and absolute value; modeling and applications using the above functions; exponential expressions and equations; logarithmic expressions and equations; Optional: conic sections. A graphing calculator is required for this course.

Textbooks and other required readings/computer software/materials/library reserve room:

- ***Precalculus with Modeling and Visualization 6th Edition*, by Gary Rockswold; Pearson, 2018**
E-text (included with MyMathLab Access) or Hard Copy (optional)
- **MyMathLab Account**
-Access card purchased individually or bundled with hard copy textbook
- **Graphing Calculator (TI 83 or TI 84 only)**
-Available for free check out from the library or for rent from the bookstore
-No other graphing calculators will be allowed on final exam.

Office Location	Wheaton Hall, Room 310	Office Hours	Virtual Office Hours by Appointment
Office Telephone:	860-343-5744	Office e-mail:	jmurfin@mxcc.comnet.edu

Blackboard Learn: The course is set up using Blackboard Learn. I am often going to abbreviate this to Bb. In Bb you will find links to complete your homework and assessments, read brief summaries on your weekly topics, follow the calendar, contact me and post discussions. It is your responsibility to be logging on to Bb and checking for announcements and following along with the course calendar

General Expectations: College Algebra can be a very challenging course when taken in a traditional classroom. Taking the course online can make it that much more difficult to stay on top of the material. In addition, this course is accelerated (about twice as fast as a normal course!). It is crucial that you are doing work **EVERY DAY** this semester to be successful in the course. Do not wait until the day the assignments are due to complete them. If we were to meet in a classroom, **you would be spending about 8 hours per week in class, and a minimum of another 8-16 hours outside of class doing work each week.** Please keep that in mind to give yourself a guideline as to how many hours you will need to dedicate to this course each week and each day.

Student Email Accounts: All Connecticut Community College students now have an official email address (prefix@mail.ct.edu) to which all college-based communications will be sent. You are expected to check this email account frequently as this will serve as the primary method of contact between instructor and students. For more information on accessing your college email account, please visit <http://mxcc.edu/student-email>.

Homework: Homework problems will be completed on MyMathLab (MML). Students are required to complete these problems. Access is either purchased with or without the book. The first time you access MyMathLab, you will access it through the Blackboard Shell. Afterwards, you may access it through Blackboard or directly at <http://mymathlab.com>. You may access MyMathLab for two weeks for free before needing to buy the access code.

Quizzes: Quizzes will be assigned regularly throughout the semester. They will be completed online on MyMathLab (MML). You may take each quiz up to 5 times. I will keep the highest score in my grade book.

Exams: There will be 3 exams given throughout the semester. These will contain problems similar to quiz problems and homework problems. The exams will be given online on MyMathLab (MML) and will be timed. You will generally be given around 2 hours to complete each exam.

IMPORTANT! NO LATE EXAMS /QUIZZES WILL BE ACCEPTED EXCEPT IN THE MOST EXTREME CIRCUMSTANCES!

Discussions: You will have weekly discussions throughout semester. Go to “Discussions” on the navigation bar in Blackboard (Bb) to get full descriptions and to post your response to the discussion. Some of these discussions will be open ended questions like “Tell the class one thing that you are having difficulty with this week”, and some might be problems that relate to the material we are covering.

Final Exam: You will be required take your final exam on campus on Monday, **Aug 5 from 12:00-2:30 in Wheaton Hall room 306.** Please make every feasible effort to be available for this exam time. If you can absolutely not make this time, please contact me within the first week of classes. The format of the exam will be exactly the same as every other exam and taken on MyMathLab. The exam will be cumulative, and a set of review questions will be provided in MML.

IMPORTANT! YOU MUST EARN AT LEAST A 60% ON THE FINAL EXAM IN ORDER TO PASS THE COURSE. Failure to earn a 60% will result in an F for the course, regardless of your calculated average.

Teaching Philosophy/Course Format: I will provide online learning modules, videos, and other educational guides for you to use throughout the course. These, along with the learning guides and e-text will be your primary learning guides throughout the semester. I am also available to answer questions and help in any way that I can. It is imperative that you set aside time each day to teach yourself the material, practice, and seek help from the instructor.

Evaluation :

Homework Average:	15%
Quiz Average	15%
Unit Exams Average (3 exams)	30%
Discussions	10%
Final Exam (In-Person/Cumulative):	30%

Grading:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
93 – 100	90 – 92	87 – 89	83 – 86	80 – 82	77 – 79	73 – 76	70 – 72	67 – 69	63 – 66	60 – 62	< 60

NOTE: The instructor reserves the right to make changes to the above syllabus as necessary.

IMPORTANT COLLEGE POLICIES!! PLEASE READ CAREFULLY!

For information about the college's policies and procedures regarding academic honesty, accessibility/disability services, attendance, audio-recording in the classroom, grade appeals, plagiarism, religious accommodations, weather and emergency closings, and more, please go to the following website:
<http://mxcc.edu/catalog/academic-policies>.

Also, please become familiar with the policies regarding nondiscrimination, sexual misconduct, and general student conduct at the following website: www.mxcc.edu/nondiscrimination/.

NON-DISCRIMINATION STATEMENT

Middlesex Community College does not discriminate on the basis of race, color, religious creed, age, sex, national origin, marital status, ancestry, present or past history of mental disorder, learning disability or physical disability, sexual orientation, gender identity and expression or genetic information in its programs and activities. In addition, the College does not discriminate in employment on the additional basis of veteran status or criminal record.

The following people have been designated to handle inquiries or complaints regarding non-discrimination policies and practices:

- *Primary Title IX Coordinator*
Dr. Adrienne Maslin
Dean of Students/Title IX and Section 504/ADA Coordinator
amaslin@mxcc.edu; 860-343-5759; Founders Hall Room 123
- *Anastasia Pych*
Director of Human Resources and Labor Relations, Middlesex Community College
apych@mxcc.edu; 860-343-5751; Founders Hall Room 115

COURSE OUTLINE

MAT*	173	College Algebra	4
Dept. Abbr.	Course No.	Course Title	Credits
Prepared by	Math		Jan 2013
	Department	Faculty	Program Coordinator
		Division Chairperson	Date

Course Description

This course continues the algebra sequence. Topics include operations with complex numbers; functions; numeric, algebraic, and graphic techniques as applied to the following functions: polynomial, rational, radical, piecewise, and absolute value; modeling and applications using the above functions; absolute value, quadratic, and rational inequalities; exponential expressions and equations; logarithmic expressions and equations. There will be an emphasis on modeling and applications for all topics. Optional: conic sections, systems of non-linear equations. A graphing calculator is required for this course.

Prerequisite: Eligible for ENG*101 and MAT*137 (or higher) with a grade of “C” or better OR eligible for ENG*101 and math placement.

General Objectives of the Course

Students in this course will:

- Define and represent different functions numerically, verbally, symbolically and graphically
- Understand and recognize the characteristics of key functions and their interrelations by examining patterns among the functions and their corresponding graphs by way of inductive reasoning
- Identify, interpret and model various types of quantitative relationships within applications
- Use technology to explore and draw reasonable conclusions from graph, tables and equations
- Provide clear, logical and organized explanations through verbal and written responses

General Education Competencies

Students in this course will:

- Quantitative Reasoning (D)
 - (1) Represent mathematical and quantitative information symbolically, graphically, numerically, and verbally.
 - (2) Apply quantitative methods to investigate routine and novel problems. This includes calculations, procedures, mathematical and /or statistical modeling, prediction, and evaluation.
 - (3) Interpret mathematical and quantitative information and draw logical inferences from Representations such as formulas, equations, graphs, tables and schematics
 - (4) Evaluate the results obtained from quantitative methods for accuracy and/or reasonableness.
- Critical Analysis and Logical Thinking (E)
 - (2) Formulating arguments: Formulates good arguments, including a significant focus on inductive reasoning.
 - (3) Analysis: Break subject matter into components and identify their interactions to ascertain the defining features of the work and their contributions to the whole.
- Written Communication (E)
 - (3) Craft Logical Arguments

- Generate a controlling idea or thesis
- Provide clear and logical evidence, support, or illustration for their assertions
- Choose appropriate and effective organizing methods, employing effective transitions and signposts.

Unit No	Instructional Unit	Specific Objectives of Instructional Unit (The specific objectives reflect the behavioral outcomes, which include what the student will be able to do at the completion of the unit. Evaluation is then to be based on the student's accomplishment of these objectives. Assume that each statement is prefixed with "The student will be able to".)
1	Complex Numbers	<ul style="list-style-type: none"> ● Demonstrate understanding of the concept of complex numbers. ● Perform operations with complex numbers.
2	Functions and Inequalities	<ul style="list-style-type: none"> ● Define function, domain, range. ● Evaluate and graph piecewise defined functions. ● Combine functions by composition. ● Define inverse functions and find the inverse of elementary functions. ● Produce graphs of power, quadratic, and absolute value functions both by hand and with technology. ● Produce graphs involving shifting, reflecting, stretching, and shrinking of known graphs. ● Solve absolute value inequalities. ● Solve quadratic and rational inequalities. ● Identify intervals on which a function's graph increases and decreases.
3	Additional Function Concepts	<ul style="list-style-type: none"> ● Graph polynomial, rational, radical, and piecewise-defined functions both by hand and with technology. ● Polynomial functions: find real and complex zeros, apply the leading coefficient test, remainder theorem, factor theorem, and rational root test. ● Rational functions and their graphs: determine the domain and range; find zeros; find equations of vertical, horizontal, and oblique asymptotes. ● Radical functions and their graphs: determine domain and range; find zeros. ● Apply polynomial, rational, radical, and piecewise-defined functions as mathematical models.
4	Exponential expressions and equations	<ul style="list-style-type: none"> ● Simplify exponential expressions. ● Solve basic exponential equations in one variable. ● Demonstrate understanding of the number e. ● Graph exponential equations in two variables.
5	Logarithmic expressions and equations	<ul style="list-style-type: none"> ● Demonstrate understanding of the concept of logarithm. ● Rewrite logarithmic expressions in exponential form, and vice versa. ● Explain the difference between common and natural logarithms. ● Apply the properties of logarithms to simplify logarithmic expressions. ● Solve basic logarithmic equations in one variable. ● Graph logarithmic equations in two variables.

Blackboard Learn

Blackboard Learn (BB) will be used in this class. If you have not used this before you can follow the directions below on how to access this resource:

Access Blackboard Learn

1. Open a web browser.
2. Go to **my.comnet.edu**.
3. Enter your **NetID** and **password**, click Login.

NetID: BannerID@student.comnet.edu,

Do not know your NetID? Visit this site to find out:

<https://www.comnet.edu/netid/lookupnetid.asp>

Password: The same password to log on to a campus computer at any of 12 Connecticut community colleges.

If you have never logged on to a campus computer, the initial password is a combination of your first 3 letters of birth month (capitalize the first letter), & (shift+7), and last four digit of your social security number.

For example, if you are born in April and the last four digits of your social security number are 4575, then your initial password is Apr&4575 (case sensitive).

After you logon with the initial password, you will be prompted to change to a new password. The new password **MUST** have 8 or more characters and satisfy 3 of the 4 rules as follows: Upper case, Lower case, Numbers, and Special character (Example: Flower2010).

4. Access Blackboard

Once you are in myCommNet, click **Blackboard** icon at upper right. Click on your **course name**. To go to another course, click **My Blackboard** (upper right) and click on the course name (MAT*173 for this course).

For technical assistance with logging on and use of Blackboard Learn, visit

www.mxcc.comnet.edu/distance