

Pre-Calculus

Syllabus Spring 2023

January 9 – May 4

I. Course Information

Course Title: Pre-Calculus

Course No. & Section: MAC1140-40

Credit Hours: 3

Meeting Dates: MW 9:30-10:45AM

Course Location: 3-207

Meeting Dates: 1/9/23-5/4/23

Instructor Name: Mrs. McRae

Office Location: Room 3-208-H

Office Hours: MW 12:15-1:45pm &
TH 10:45am-12:15pm;

Virtual by appointment MT 3:30-4:30 &

TH 12:15-1:45pm

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Please use Canvas Inbox

Extended Emergency Closure

“For emergency campus closings (natural disasters, etc.) call 352-291-4499 or 800-831-9244 or check our website (CF.edu).”

II. Course Description

This lecture course is designed for students who need to develop the appropriate background for the calculus curriculum. This course includes discussion of functions (from analytical, numerical and graphical perspective) that are needed in upper mathematic courses, conic sections, matrices and determinants, sequences and series, mathematical induction and the Binomial Theorem. Graphing calculator and/or computer algebraic system work is required in the course. Gordon Rule applies.

Prerequisite: MAC1105, MAC1114 or appropriate math placement score.

Textbook (optional): Precalculus
Graphs & Models

Author: Bittenger

Edition: 6th

ISBN No.: 9780135834411

Required Material: MyMathLab
access code and a Scientific
Calculator, TI-30XS Multiview

You do not need to buy a hard copy of the book. The textbook is online on the MyMathLab website. When you buy your access code you will have access to the textbook online.

III. Student Learning Outcomes/Course Objectives

The following list offers students a consistent way to see how CF's global learning outcomes are assessed in each class. This is for information purposes only and does not change the grading system used in this class. Only those learning outcomes relevant to this course are included below.

Learning Outcome	Quiz	Exam
Quantitative and Analytical Reasoning: The student will understand and apply mathematical and scientific principles and methods.		
1. Perform accurate computations using order of operations with and without technology.	X	X
2. Identify and organize relevant information and complete the solution of an applied problem.	X	X
3. Interpret and communicate understanding of visual representations of data.	X	X
4. Demonstrate mathematical number sense and unit sense.	X	X

IV. Assessment

Attendance: Each student is required to attend all class meetings. Attendance is required for all tests and **there will be NO make-up tests**. Non-attendance/participation does not constitute withdrawal from this course. It is the student's responsibility to complete the withdrawal forms by the appropriate date (Attendance accounts for 5% of the Final Grade.).

Grading Information: Homework, quizzes and tests will be assigned online through Pearson's MyMath Lab. They must be completed by the due date.

1. During class we will discuss each section. Students are expected to take notes and then read each section as needed. There are practice problems at the end of

each section (the answers to the odd problems are worked out in the Student Solutions Manual) as well as online.

2. Each section will have assigned homework problems. The graded homework problems are online and will be checked as you finish each problem. You can use the help on MyMathLab to do these problems. If you get a problem wrong you can try a similar problem and work until you get that problem type correct. You can retry homework problems until the due date and there are additional practice problems available in the online text book. Your lowest homework score will be dropped at the end of the semester.

3. There will be at least one online quiz for each chapter. The quiz problems will be similar to homework problems. You will not have the help buttons available when taking a quiz. You will have two attempts at each quiz; the better of the two scores will count towards your grade. The quiz must be completed before the questions are graded. If you use the second attempt you will need to do the whole quiz over, not just one particular problem. The problems will be similar, but probably not exactly the same. Each quiz must be completed by the due date. Your lowest quiz score will be dropped at the end of the semester.

4. There will be five online tests. You must take your tests in the designated testing lab during our regularly scheduled assessment dates. Test questions will be similar to those you have worked on for homework and quizzes and lecture notes. **If you are caught cheating, your grade on the test will be a 0.** Your lowest of these five tests will be dropped at the end of the semester.

5. There will be an online comprehensive final exam in the designated testing lab on the date of your scheduled final. The exam will include questions from each of your tests. Your test reviews will serve as your final exam review, so you will know the topics that will be covered on the exam. This exam is required and cannot be your dropped test.

Tests	70%
Quizzes	15%
Homework	15%

Grading scale:

A	90%-100%
B+	87%-89%
B	80%-86%
C+	77%-79%
C	70%-76%
D	60%-69%
F	Below 60%

Make-up policy: No make-up work will be given unless there is an emergency or prior approval has been given by the instructor. In such an event, you must notify your professor before the exam or item is due unless the emergency prohibits it and you will be asked to bring proof of the emergency. A make-up exam must be taken within one week of the original exam date unless the emergency prohibits it. Go to www.cf.edu/testing to schedule your exam and provide the testing date to your professor, so the password may be forwarded. While you do not need to disclose personal details, let your professor know as soon as possible if something is preventing you from participating or completing work.

Proctoring: In order to verify student identity on assessments, this course requires proctored assessments. Assessments are proctored online. We will meet as a class in the designated testing lab on our regularly scheduled assessment days.

V. Course Schedule Outline

MAC1140-40 MW 9:30AM

Week	Dates	Section	Activities	Due Date
Week 1	1/9	4.1	Intro to Pre-Calc Quiz Polynomial Functions & Modeling	1/30
	1/11	4.2 4.3	Graphing Polynomial Functions Polynomial Division	1/30
Week 2	1/16		MLK No Classes	
	1/18	4.4 4.5	Zeros of Polynomials Rational Functions Describing the Functions Quiz	1/30
Week 3	1/23	4.5 4.6	Rational Functions Asymptote Quiz Polynomial & Rational Inequalities Chapter 4 Quiz	1/30
	1/25		Review	
Week 4	1/30		Chapter 4 Test	
	2/1	5.1 5.2	Inverse Functions Exponential Functions & Graphs	2/15
Week 5	2/6	5.3 5.4	Inverse, Exponential & Log Quiz Properties of Logarithms Logarithmic Properties Quiz	2/15
	2/8	5.5 5.6	Solving Exponential & Log Equations Quiz Solving Exponential & Log Equations Growth and Decay Applications Applications Quiz	2/15
Week 6	2/13		Review	
	2/14		Professional Development	
	2/15		Chapter 5 Test	
Week 7	2/20	9.1 9.2	Systems of Equations in Two Variables System of Equations in Three Variables	3/20
	2/22	9.3 9.4	Matrices & Systems of Equations Simultaneous Equations Quiz Matrix Operations	3/20
Week 8	2/27	9.4 9.5	Matrix Operations Matrix Operations Quiz Inverses of Matrices	3/20
	3/1	9.5	Inverses of Matrices	3/20

		9.6	Inverse Matrix Quiz Determinants & Cramer's Rule	
Week 9	3/6	9.6	Determinants & Cramer's Rule Determinants Quiz	3/20
		9.8	Partial Fractions	
	3/8		Review	
	3/13-19		Spring Break	
Week 10	3/20		Chapter 9 Test	
	3/22	10.1	Parabolas	4/5
		10.2	The Circle & Ellipse	
Week 11	3/27	10.2	The Circle & Ellipse	4/5
		10.3	Hyperbola	
	3/29	10.3	Hyperbola	4/5
		10.4	Non-Linear Systems of Equations Conics Quiz	
Week 12	4/3		Review	
	4/5		Chapter 10 Test	
Week 13	4/10		No Class	
	4/12	11.1	Sequences & Series	4/24
		11.2	Arithmetic Sequences & Series	
Week 14	4/17	11.3	Geometric Sequences & Series	4/24
		11.7	Binomial Theorem Chapter 11 Quiz	
	4/19		Review	4/24
Week 15	4/24		Chapter 11 Test	
	4/26		Exam Review	
Exam Week	5/3		Final Exam 9:30am	

STATEMENT: Due to unforeseen happenings, it may be necessary for the course assignment schedule to be altered. The instructor will always strive to be fair about any changes.

The College of Central Florida is committed to helping you succeed and achieve your academic, personal and career goals. There are a wide range of resources and support services available to you. When students are connected early to resources and support systems on campus, they are more likely to stay in classes, perform better in those classes, and complete their path more quickly. One example is through an Early Support Program, where you may receive an email indicating your professor or advisor is reaching out directly to help connect you to support services. This may include connecting you to tutoring, financial support, psychological support services, and

disability services just to name a few. Be aware, you can also reach out to these services on your own as well. Additionally, we offer disability services, a testing center, and many other resources which are all available to you. Please refer to the College Resources, Dates, and Policies document in your Canvas course to learn more about these supports.