

Broward College

MAC 1140 – Pre Calculus Algebra

Instructor:	Carlos Sotuyo	Term/Session:	Spring Term 2021/Session 2
Instructor's BC E-mail:	csotuyo@broward.edu	Reference No.:	668984
Office Hours:	10:25 AM – 10:55 AM MTWR	Class Days:	M T W R
Location:	Blgn 1008, Room 307	Class Time:	11:00 AM-12:15PM
Math Department Phone Number:	(954) 201-6029	Classroom:	1008-003070
Emergency Phone Number:	(954) 201-4357 (Safety) (954) 201-4900 (Hotline)	Withdrawal Date, 100%: Withdrawal Date, with W	Jan 13th Feb 8th

COURSE DELIVERY METHOD: This class will meet on Central Campus Mondays, Tuesdays, Wednesdays and Thursdays. The class consists of a brief lecture followed by a class activity called practice. PDF files of the practices will be posted on the class webpage @ imathesis.com

Academic Calendar at https://www.broward.edu/registrar/_docs/printable-calendars/2020-21-academic-calendar.pdf

Class web page: <http://www.imathesis.com/mac1140.html>

COURSE DESCRIPTION:

This course, in conjunction with MAC1114, is designed to prepare the student for the study of calculus. Topics include sequences, series, mathematical induction, matrices, determinants, and systems of equations. Also included are polynomial, rational, exponential, and logarithmic functions and equations and polynomial and rational inequalities. Functions and graphs are emphasized. A graphing calculator may be required. Recommendation of the Mathematics Department or at least a grade of C in the prerequisite course is required.

GENERAL OUTCOMES:

Units	General Outcomes
	The student shall be able to:
Unit 1. Properties and Graphs of Polynomial, Rational, and Other Algebraic Functions	<ul style="list-style-type: none"> Recognize and graph polynomial, rational, and other algebraic functions, and write functions that satisfy specific characteristics
Unit 2. Polynomial and Rational Functions, Equations, and Inequalities	<ul style="list-style-type: none"> Identify the zeros of polynomial functions, determine solutions to polynomial and rational inequalities, and find the partial fraction decompositions of rational expressions
Unit 3. Exponential and Logarithmic Functions	<ul style="list-style-type: none"> Recognize and graph exponential and logarithmic functions, and solve exponential and logarithmic equations
Unit 4. Conic Sections	<ul style="list-style-type: none"> Manipulate and graph equations of conic sections
Unit 5. Matrices, Determinants, and Systems of Equations	<ul style="list-style-type: none"> Perform matrix operations, and apply the theories and techniques used in solving systems of equations
Unit 6. Mathematical Induction, Sequences and Series, and the Binomial Theorem	<ul style="list-style-type: none"> Write proofs using mathematical induction, apply properties of sequences and series, and demonstrate the use of the binomial theorem

PREREQUISITE:

MAC1105 or MAC1105C with a grade of C or higher.

TEXTBOOK:

Textbook: *Algebra and Trigonometry*, 6th Edition, Blitzer, Pearson

Learning System: An online educational program titled MyMathLab (MML) that includes an electronic version of the textbook (e-book): Required

SUPPLEMENTAL MATERIAL:

Scientific Calculator is permitted for this course. No sharing and no cell phone calculators.

HOMEWORK:

Required homework assignments are posted on MyMathLab and will be counted towards your grade in this class. The homework grade is determined by the percentage of completed assignments. An assignment is considered completed once the student reaches 80% or above on it. The Pearson overall average is Not the HW grade. Homework assignments are due always the night before a test at 11:59pm. After the due date, the student cannot change the grade but can still review it.

Register at www.pearson.com/mylab instructor's **course ID**: sotuyo92755 Registration deadline: Jan 15th

ASSISTANCE:

Academic Success Center (ASC):

The ASC centers at Broward College are here to ensure your success in this class. You will benefit from an array of academic support services provided in a comfortable, collaborative atmosphere specifically designed to advance your academic achievement: <http://www.broward.edu/studentresources/lrc/Pages/default.aspx>

Here are just some of the services provided at the ASC:

- Academic Support Labs (Science Center, Math Lab, Writing Center)
- Collaborative Project Space
- Open Computer Centers (Printing)
- Study Groups
- Textbook Reserves
- Tutoring by Certified Tutors (All subject areas)

CELL PHONE POLICY:

Put your cell phone away on "silent-mode". Cell phones, smart phones, iPod, and other similar devices are not allowed to be used as calculator during class time and Tests.

METHOD OF INSTRUCTION AND EVALUATION:

In this class, you will engage in structured in-class and out-of-class activities. You will achieve the course objectives through interactive lecture, in class practice problems, class participation, homework assignments, and assessments All exams are mandatory. Missing an exam for any reason will result in a zero score for that exam. If you miss an exam due to an emergency that would qualify as an excused absence, you must inform your instructor within 24 hours of the scheduled exam. In the case of an excused absence for an exam, the make-up exam will be administered during the final week of the course. You may not be excused from the final. Excused absences for exams: the student's serious illness documented by a medical Doctor, death in immediate family, religious holiday observance of one's own faith or attendance to statutory governmental responsibilities.

Assessment	Grade Points	Percent of Final Grade
5 Tests	600	60%
MyMathLab Homework	200	20%
Final Exam	200	20%
Total	1000	100%

GRADING POLICY:

Your grade will be determined by taking the average of your test scores, homework and Final Exam:

Grade	Grading Scale
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	< 60% or if a student commits an act of cheating/plagiarism

COURSE WITHDRAWALS:

During the second week of class, professors are required to report students who have never attended, and these students will be administratively withdrawn. Following this attendance verification, it is the student’s sole responsibility to withdraw from the course and to verify that the withdrawal is properly recorded through the Registrar’s Office prior to the withdrawal deadline. The professor cannot process withdrawals from any reason other than the above-stated student non-attendance. A withdrawal is considered an attempt.

ACADEMIC ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

If you are requesting academic accommodations, you must first register with Accessibility Resources (contact information is provided below). Accessibility Resources will evaluate your request and determine eligibility. If approved, you will be provided with an Accommodation Plan that you must deliver to me either electronically or in person. Once received, we will discuss which accommodations you are requesting for this class, and in accordance with Broward College policy 6Hx2-5.09 you will be provided with the appropriate accommodations. Students who wait until after completing the course, or an activity, to request accommodations should not expect any grade to be changed, or to be able to retake the course or activity.

South Campus; Miramar Centers; Pines Center; Weston Center: 954-201-8913

ATTENDANCE POLICY:

You are required to attend all classes. There will be no penalty for a student who is absent from academic activities because of religious holiday observances in his/her own faith, the student’s serious illness, death in immediate family, or attendance to statutory governmental responsibilities. The students must notify the instructor of these absences, providing necessary documentation. It is the student’s responsibility to make up the missed work.

STATEMENT OF ACADEMIC DISHONESTY:

Broward College expects its students to be honest in all of their coursework and activities. Breaches of academic honesty include, but are not limited to, cheating, plagiarism, misrepresentation, bribery, and the unauthorized possession of examinations, papers, or other class materials that have not been formally released by instructors. A student’s academic work must be the result of his or her own thought, research, or self-expression. The term “cheating” includes but is not limited to, copying homework assignments from another student; working together with another individual on a take-home test or homework when specifically prohibited from doing so by the instructor, looking at test, notes or another person’s paper during an examination when not permitted to do so. (See current BC catalog statement at <https://students.broward.edu/resources/college-catalog/docs/2019-2020-bc-college-catalog/academic-affairs.pdf>).

Course Schedule

Day	Date	Sections and Topics
Day 1	01-06	Syllabus & Introduction 2.5 Transformation of Functions
Day 2	01-07	3.2 Polynomial Functions and Their Graphs
Day 3	01-11	3.3 Dividing Polynomials; Remainder and Factor Theorems
Day 4	01-12	3.4 Zeros of Polynomial Functions
Day 5	01-13	3.5 Rational Functions and Their Graphs
Day 6	01-14	3.6 Polynomial and Rational Inequalities
Day 7	01-19	Review
Day 8	01-20	Test 1
Day 9	01-21	4.1 Exponential Functions 4.2 Logarithmic Functions
Day 10	01-25	4.3 Properties of Logarithms 4.4 Exponential and Logarithmic Equations
Day 11	01-26	4.5 Exponential Growth and Decay; Modeling Data
Day 12	01-27	Review
Day 13	01-28	Test 2
Day 14	02-01	8.1 Systems of Linear Equations in Two Variables 8.2 Systems of Linear Equations in Three Variables
Day 15	02-02	9.1 Matrix Solutions to Linear Systems and Their Applications
Day 16	02-03	9.2 Inconsistent and Dependent Systems and Their Applications
Day 17	02-04	9.3 Matrix Operations and Their Applications
Day 18	02-08	Review
Day 19	02-09	Test 3
Day 20	02-10	10.1 The Ellipse
Day 21	02-11	10.2 The Hyperbola 10.3 The Parabola
Day 22	02-15	Review
Day 23	02-16	Test 4
Day 24	02-17	11.1 Sequences and Summation Notation 11.2 Arithmetic Sequences
Day 25	02-18	11.3 Geometric Sequences and Series
Day 26	02-22	11.4 Mathematical Induction 11.5 The Binomial Theorem
Day 27	02-23	Review
Day 28	02-24	Test 5
Day 29	02-25	Final Exam