

Broward College

MAC 2311 – Calculus and Analytical Geometry I

Instructor:	Carlos Sotuyo	Term/Session:	Fall 2019, Session 1
Instructor's BC E-mail:	csotuyo@broward.edu	Reference No.:	640273
Office Hours:	Mond: 4:10 pm – 4:50 pm	Class Days:	Mondays, Wednesdays
Office:	Bldng 69, 237	Class Time:	5:00 pm – 7:20 pm
Math Department Phone Number:	(954) 201-8920 (954) 201-8975 (FAX)	Classroom:	Bldng 70, room 111
Emergency Phone Number:	(954) 201-4357 (Safety) (954) 201-4900 (Hotline)	Withdrawal Date: Credit to Audit Date:	Aug 26, withdraw 100% refund Oct 23, withdraw with W.

Academic Calendar at <http://www.broward.edu/calendar/Pages/term-dates.aspx>

Class web page: <http://www.imathesis.com/mac2311.html>

COURSE DESCRIPTION:

This is the first of a three-course sequence in calculus. Students may need to a graphing calculator throughout the sequence of courses. Topics include: analytic geometry, functions, limits, continuity, derivatives and their applications, transcendental functions, antiderivatives, and definite integrals. Certain sections of this course may require the use of a graphing calculator. Recommendation of the Mathematics Department or at least a grade of C in each of the prerequisite courses is required.

GENERAL OUTCOMES:

Units	General Outcomes
	The student shall be able to:
Unit 1. Functions, Limits, and Continuity	<ul style="list-style-type: none"> Evaluate limits and determine when a function is continuous
Unit 2. The Derivative and Differentiation	<ul style="list-style-type: none"> Derivatives using the definition of a derivative and special formulas, and apply derivatives to geometrical and physical problems
Unit 3. Extreme Function Values and Techniques of Graphing	<ul style="list-style-type: none"> Find relative and absolute maxima and minima of a function, solve related geometrical and physical problems, and sketch graphs using the techniques of calculus
Unit 4. The Definite Integral and Integration	<ul style="list-style-type: none"> Demonstrate knowledge of the theory of antiderivatives and skills in evaluating and applying antiderivatives
Unit 5. Transcendental Functions	<ul style="list-style-type: none"> Differentiate and integrate transcendental functions
Unit 6. Inverse Trigonometric Functions	<ul style="list-style-type: none"> Differentiate and integrate inverse trigonometric functions

PREREQUISITE:

MAC 1114 and MAC 1140, or MAC 1147 with a minimum grade of "C" or better.

COURSE MATERIAL:

Textbook: *University Calculus* (4th Ed.) by Hass, Heil, Bogacki, Weir, Thomas, Pearson.

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

SUPPLEMENTAL MATERIAL:

Graphing calculator is required. No sharing and no cell phone calculators.

HOMEWORK:

Homework will be assigned on MyMathLab for each topic covered in class. Register at www.pearson.com/mylab instructor's course ID: sotuyo87218.

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)

Seahawk Support Program:

The Seahawk Support Program is a coordination between students, faculty, the Office of Student Success, and the ASC designed to support students in order to increase their chances of success. If you are contacted by a representative of the Office of Student Success or the ASC, please take full advantage of this excellent opportunity to improve your success in this course.

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.

Assessment	Grade Points	Percent of Final Grade
3 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 – 89.9%
C	70 – 79.9%
D	60 – 69.9%
F	0 – 59.9% or if a student commits an act of cheating/plagiarism
W	Official Withdrawal by the student by the Withdraw date
WN	Administrative Withdrawal for Non-Attendance

Dates	Section	Homework
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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 www.broward.edu/catalog/).

Course Schedule/Suggested Homework (next page):

8/19	2.1: Rates of Change and Tangent Lines to Curves	# 1 – 19 all
8/21	2.2: Limits of Functions and Limit Laws 2.3: The Precise Definition of a Limit	# 3 – 63, 64, 67, 69 # 3 – 48, and 49
8/26	2.4: One-Sided Limits 2.5: Continuity	# 1 – 19 odd, 23 – 45 odd, and 53 # 1 – 4 all, 6, 9, 15 – 33, 41, 45 – 57, 61, 73
8/28	2.6: Limits Involving Infinity; Asymptotes of Graphs	# 1, 3 – 90, 95, 105
9/4	Review	
9/9	Test 1	
9/11	3.1: Tangent Lines and the Derivative at a Point 3.2: The Derivative as a Function	# 3 – 21, 25, 27, 29, 31, 39, 41 # 1, 3 – 21, 27 – 32 all, 42 – 48, 50, 55
9/16	3.3: Differentiation Rules 3.4: Derivative as a Rate of Change	# 1 – 12, all 18 – 39, 53 – 58 all, 61, 64, 71, # 1 – 9 all, 10, 13, 15, 15 – 20 all
9/18	3.5: Derivatives of Trig Functions	# 1 – 37 odd, 47, 48
9/23	3.6: Chain Rule	# 24 – 78
9/25	3.7: Implicit Differentiation	# 3 – 48
9/30	3.8: Derivatives of Inverse Functions and Logarithms	# 1 – 10 all, 12 – 99
10/2	3.9: Inverse Trigonometric Functions	# 21 – 42
10/7	3.10: Related Rates	# 1 – 10 all, 12 – 45
10/9	3.11: Linearization and Differentials	# 3 – 12, 14, 21 – 42
10/14	Review	
10/16	Test 2	
10/21	4.1: Extreme Values of Functions	# 3 – 54 # 1 – 15 all, 21 – 28 all, 43, 45, 47 – 56 all
10/23	4.2: The Mean Value Theorem 4.3: Monotonic Functions and the First Derivative Test	# 3 – 66, 67, 68 # 3 – 69, 97 – 102 all, 117, 118, 121, 122
10/28	4.4: Concavity and Curve Sketching	# 3 – 45, 61 – 64 all
10/30	4.6: Applied Optimization	# 3 – 12, 21, 22, 24 – 48, 55, 56, 61, 63 – 81,
11/4	4.8: Antiderivatives	– 111, 120 – 126
11/6	Review	
11/13	5.1 Area and Estimating with Finite Sums 5.2 Sigma Notation and Limits of Finite Sums	# 1 – 8 all, 9, 11, 13, 15 – 17 # 1 – 49 odds
11/18	5.3 The Definite Integral	# 2, 3, 7, 9, 13, 17, 21, 22 23, 27, 29, 35, 40, 41, 43, 48, 51
11/20	5.4 The Fundamental Theorem of Calculus 5.5: Indefinite Integrals and the Substitution Method	# 1 – 59 odd, 67, 70, 77
11/25	5.6: Definite Integral Substitutions 7.1: The Logarithm Defined as an Integral	# 3 – 66, 75, and 78 # 3 – 48, and 49 – 52 all # 3 – 51
11/27	Review Test 3	
12/2	Test 3	
12/4	Review Final Exam	
12/9	Final Exam	

NOTE: Any changes in the Course Outline and Syllabus will be announced.