

# Broward College

## MAC 2233 – Calculus for Business, Social and Life Sciences

Instructor:	Carlos Sotuyo	Term/Session:	Fall 2019, Session 1
Instructor's BC E-mail:	csotuyo@broward.edu	Reference No.:	640271
Office Hours:	2:00 -2:30 pm	Class Days:	Tues, Thurs
Office:	Bldng 69, 237	Class Time:	5:00 pm – 6:15 pm
Math Department Phone Number:	(954) 201-8920 (954) 201-8975 (FAX)	Classroom:	Bldgn 70 – room 107
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/mac2233.html>

### COURSE DESCRIPTION:

This is a general education course which includes the college-level skills of calculus such as: functions, graphs, limits, differentiation, integration, average and instantaneous rates of change and other applications. 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:
<b>Unit 1.</b> Functions, Graphs, Limits	<ul style="list-style-type: none"> <li>Demonstrate knowledge of the concepts of functions, graphing and limits</li> </ul>
<b>Unit 2.</b> Derivatives	<ul style="list-style-type: none"> <li>Demonstrate knowledge of the meaning of derivatives, their applications, and rules of differentiation</li> </ul>
<b>Unit 3.</b> Integration	<ul style="list-style-type: none"> <li>Demonstrate knowledge of integrals and their applications</li> </ul>
<b>Unit 4.</b> Exponential and Logarithmic Functions	<ul style="list-style-type: none"> <li>Demonstrate knowledge of exponential and logarithmic functions, their derivatives, integrals and applications</li> </ul>

### PREREQUISITE:

Grade of "C" or better in MAC1105 (College Algebra) or recommendation of the Mathematics Department.

### TEXTBOOK:

**Textbook:** Calculus for Business, Economics, Life Sciences, and Social Sciences. Barnett, Zeigler, Byleen and Stocker. 14<sup>th</sup> Edition. Pearson.

**Learning System:** An online educational program titled MyMathLab-MML (MML + E-Book): Required

### HOMEWORK:

Required homework assignments are posted on MyMathLab and will be counted towards your grade in this class. Register at [www.pearson.com/mylab](http://www.pearson.com/mylab) instructor's course ID: sotuyo97287.

### 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
4 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 student by the deadline
WN	Administrative Withdrawal for Non-Attendance

**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 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/](http://www.broward.edu/catalog/)).

**Course Schedule:**

Day	Date	Sections and Topics
Day 1	8/20	Introduction to the course 1.1 Functions
Day 2	8/22	1.2 Elementary Functions: Graphs and Transformations
Day 3	8/27	1.4 Polynomial and Rational Functions
Day 4	8/29	1.5 Exponential Functions 1.6 Logarithmic Functions
Day 5	9/03	<b>Test 1</b>
Day 6	9/05	2.1 Introduction to Limits 2.2 Infinite Limits and Limits and Infinity
Day 7	9/10	2.3 Continuity
Day 8	9/12	2.4 The Derivative
Day 9	9/17	2.5 Basic Differentiation Properties
Day 10	9/19	2.7 Marginal Analysis in Business and Economics

Day 11	9/24	<b>Test 2</b>
Day 12	9/26	3.1 The Constant e and Continuous Compound Interest
Day 13	10/1	3.2 Derivatives of Exponential and Logarithmic Functions
Day 14	10/3	3.3 Derivatives of Products and Quotients
Day 15	10/8	3.4 The Chain Rule
Day 16	10/10	3.7 Elasticity of Demand
Day 17	10/15	<b>Test 3</b>
Day 18	10/17	4.1 First Derivative and Graphs
Day 19	10/22	4.2 Second Derivative and Graphs
Day 20	10/24	4.4 Curve Sketching
Day 21	10/29	4.5 Absolute Maxima and Minima
Day 22	10/31	4.6 Optimization
Day 23	11/05	<b>Test 4</b>
Day 24	11/07	5.1 Antiderivatives and Indefinite Integrals
Day 25	11/12	5.2 Integration by Substitution
Day 26	11/14	5.3 Differential Equations: Growth & Decay
Day 27	11/19	5.4 The Definite Integral
Day 28	11/21	5.5 The Fundamental Theorem of Calculus
Day 29	11/26	6.1 Areas between Curves
Day 30	12/3	6.2 Applications in Business and Economics
Day 31	12/5	Final Exam Review
Day 32	12/10	<b>Final Exam</b> (Cumulative)

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