



Calculus I

MAT 151 PL1

Winter 2019

Number of Credits: 4

Days Class Meets: Tuesday/Thursday

Meeting Times: 16:30 – 19:30

Location: TBD

Instructor: Vincent Maltese

Office: n/a

Contact Phone: n/a

Contact Email: maltesevincentj@jccmi.edu

Office Hours: By appointment

Online: n/a

Course Description

First calculus course for business, mathematics, engineering and science students explores introductory plane analytic geometry, the derivative, the integral and their applications for algebraic, trigonometric, exponential and logarithmic functions. The mathematics department recommends that the prerequisite not be more than two years old. If the prerequisite is more than two years old, then the recommendation is that the course placement exam should be taken or the prerequisite be retaken to ensure the success of the student.

Prerequisite(s)

MAT 141

Course Goals

This course will prepare students for the further study of single and multi-variable calculus by providing a working knowledge of limits, derivatives, and integrals and their applications.

Course Objectives

1. Find limits using graphical, numerical and analytical methods
2. Find derivatives of algebraic, exponential, logarithmic and trigonometric functions
3. Solve problems involving applications of the derivative
4. Perform integration including techniques of substitution and numerical integration
5. Solve problems involving application of the integral to finding area

Textbook

- Briggs, Calculus, Early Transcendentals, 2nd edition.

Text Book Zero! This text is available in a digital format. Please see the links posted on our class Jet Net site. This text is available to rent or purchase in digital format through the JC Bookstore.

Grading Procedure and Grading Scale

Weighting of Graded Items:	Determination of Final Grades:	
		90 – 100%
Classwork: 20%	85 – 89%	3.5
Tests: 60%	80 – 84%	3.0
Final Exam: 20%	75 – 79%	2.5
	70 – 74%	2.0
	65 – 69%	1.5
	60 – 64%	1.0
	50 – 59%	0.5
	0 – 49%	0.0

Course Requirements

Homework: Practicing what you have learned by doing homework problems is the single best way to master the course material and prepare for exams. You will be given homework assignments out of the textbook. Homework should be done on a legal pad, with each assignment clearly labeled. All work for each problem must be shown; no credit will be given for an answer alone. Problems assigned are primarily odd-numbered problems, so the answers are given in the back of the book. Please check your answers and ask questions about those which you cannot figure out. Your homework for each unit will be collected on test days, and I will grade it based on completeness.

Classwork: During class I will use a punctuated lecture technique whereby I will present new information in small sections, and have you practice each section using classwork problems that I will provide. During classwork time, you are encouraged to ask me questions and to work in small groups with other students. This is primarily learning time, not an assessment, so by all means use this as a way to practice and get your questions answered. Classwork will be due at the next class meeting. No late classwork will be accepted.

Tests: There will be four tests and a final exam, as listed in the course calendar. All tests are closed-book, closed-notes. A list of formulas will be provided by the instructor for use on tests. Missed tests may be made up only under extreme, well-documented circumstances and will be discussed on a case-by-case basis.

Extra Credit

The mathematics department at JCC strongly recommends that extra credit not be offered in mathematics courses. In order to foster a collegiate environment, maintain the integrity of grades, and provide for proper student placement and advancement through sequenced courses, the department believes this to be in the best interests of both students and faculty.

Student Responsibilities

Jackson College is totally committed to student success. As an employee of Jackson College, I am an integral part of the College and am therefore totally committed to your success. As a student, you are also an integral part of the College and your total commitment to success is also required. It is expected that students will attend all classes, complete and submit all assignments by the due date, and seek help as

soon as it is needed. A strong student/faculty partnership is essential to the achievement of academic goals so it is very important for students to seek instructor help in a timely fashion.

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism is defined as the failure to give credit for the use of material from outside sources.

Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating is defined as obtaining answers/material from an outside source without authorization.

Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

Course Management

During class, make good use of our time by being prepared and asking good questions. I am here to help; all questions are welcome! Use your classmates as resources – and be willing to be a resource – particularly during classwork time. Finally, your textbook contains a wealth of information. Between classes, read your book, paying particular attention to the worked examples.

Makeup Policy

If you must miss a test, notify the instructor in advance if possible. The scheduling of makeup tests is difficult and timely consultation with the instructor is required if a makeup becomes necessary.

Help

Office hours, by appointment, are there for you to come get help. Please come and see me if you need questions answered. Remember, though, that office hours are not a replacement for attending class. Get a regular study group. Work with your peers and call on each other when needed!

Calendar

The following is a tentative course calendar. Changes may occur due to class cancellations or other factors which may arise during the semester.

Date	Sections	Topics
1/15/19	2.1, 2.2	Idea of Limits, Definitions of Limits
1/17/19	2.3, 2.4	Techniques for Computing Limits, Infinite Limits
1/22/19	2.5, 2.6	Limits at Infinity, Continuity
1/24/19	2.7	Precise Definitions of Limits
1/29/19	Review	Chapter 2
1/31/19	Test	Chapter 2
2/5/19	3.1, 3.2	The Derivative, Working with the Derivative
2/7/19	3.3, 3.4	Rules of Differentiation, The Product and Quotient Rules
2/12/19	3.5, 3.6	Derivatives of Trigonometric Functions, Derivatives as Rates of Change
2/14/19	3.7, 3.8	The Chain Rule, Implicit Differentiation
2/19/19	3.9, 3.10	Derivatives of Logarithmic, Exponential, and Inverse Trigonometric Functions
2/21/19	3.11	Related Rates
2/26/19	Review	Chapter 3
2/28/19	Test	Chapter 3
3/5/19	4.1, 4.2	Maxima and Minima, What Derivatives Tell Us
3/19/19	4.3, 4.4	Graphing Functions, Optimization Problems
3/21/19	4.5, 4.6	Linear Approximations of Differentials, The Mean Value Theorem
3/26/19	4.7, 4.8	L'Hopital's Rule, Newtons Method
3/28/19	4.9	Antiderivatives
4/2/19	Review	Chapter 4
4/4/19	Test	Chapter 4
4/9/19	5.1, 5.2	Approximating Areas Under Curves, Definite Integrals
4/11/19	5.3	The Fundamental Theorem of Calculus
4/16/19	5.4	Working with Integrals
4/18/19	5.5	The Substitution Rule
4/23/19	Review	Chapter 5
4/25/19	Test	Chapter 5
4/30/19	Review for Final	Chapter 2 – 5
5/2/19	Final Exam	Chapter 2 – 5

Caveat

Efforts are made to plan for the smooth progress through the semester for course progress and completion. Occasionally, factors beyond the control of students and faculty make it necessary to revise the plan in this syllabus and minor changes must be made.

Important Dates: Winter 2019

DATE	EVENT
JAN. 14, 2019	DAY AND EVENING CLASSES BEGIN
JAN. 14 – MAY. 5, 2019	SEMESTER DATES
FEB. 1, 2019	ALL EMPLOYEE CONVOCATION. NO CLASSES
MARCH. 11 – 17, 2019	MID-SEMESTER BREAK. NO CLASSES
MAY 4, 2019	COMMENCEMENT
MAY 5, 2019	END OF WINTER SEMESTER
MAY 7, 2019	GRADES DUE

Attendance Policy

In compliance with Federal Title IV funding requirements, as well as college initiatives, reporting of student participation in classes will occur at three designated times each semester. Instructors will assign one of three non-transcribed letter symbols to each student during each reporting period (see below). Students identified as no longer participating will be dropped or administratively withdrawn from the class, and students identified as needing academic assistance will be contacted.

Participation/Progress Symbols

- H – The student is not doing acceptable work and needs **H**elp to be successful.
- Q – The student has not participated and the instructor believes they have unofficially withdrawn (**Q**uit). These students will be dropped/withdrawn from the class.
- V – The instructor **V**erifies that the student is participating and doing acceptable work.