JOLIET JUNIOR COLLEGE 1901

Dept. of Mathematics

Math 150 Math Analysis for Business Spring 2018

Instructor's Name:

Office Location:

Office Hours:

Office Phone:

E-mail:

Course Description
A course designed to satisfy the requirement of those colleges or universities which require an understanding of calculus and calculus-based models and for those students who are interested in applying calculus to problems in economics, finance, production, marketing, and other business disciplines. Topics include differential and integral calculus of one variable, as well as an introduction to multivariable calculus.

Illinois Articulation Initiative (IAI) number: M1 900-B

Credit and Contact Hours:

Lecture	**4**
Lab	**0**
Credit Hours	**4**

Prerequisites: Satisfactory placement test score or "C" or better in MATH 131 or equivalent.

Books, Supplies, and Supplementary Materials

A. Textbooks

Required: Calculus and Its Applications (w/MML/MSL), 11th Ed., 2016, Bittinger, ISBN: 9780133795561, Addison-Wesley

or Calculus and Its Applications, 11th Ed., 2015 (w/o Access Code), Bittinger, ISBN: 9780321979391, Addison-Wesley

or *MyMathLab* Stand Alone Student Access Kit, Pearson Ed, ISBN: 9780321199911 (optional)

B. Other Required Materials

TI-83+ or TI-84+ graphing calculator

Methods of Instruction: Lecture
Online

Student Learning Outcomes: General Education Student Learning Outcomes:
Students will demonstrate the ability to accurately apply correct mathematical methods and techniques in various applications such as applied sciences, theoretical mathematics, physics, natural sciences and other applied sciences.

Objectives

Upon completion of this course, the student will be able to:

1. Calculate limits of functions.
2. Find average and instantaneous rates of change.
3. Use the definition of "derivative" to calculate derivatives of functions.
4. Use rules for differentiation of powers, products and quotients.
5. Find derivatives of composite functions using the chain rule and generalized power rule.

6. Determine whether a function is continuous at a specified numeric value.
7. Find relative and absolute extrema.
8. Determine concavity and points of inflection.
9. To graph functions using information from objectives 7 and 8.
10. Determine extreme values in applied problems.

11. Use the technique of implicit differentiation.
12. Solve related rate problems.
13. Graph exponential and logarithmic functions.
14. Calculate derivatives involving logarithmic and exponential functions.
15. Use the Fundamental Theorem of Calculus to calculate definite integrals.

16. Find indefinite and definite integrals using the substitution technique.
17. Calculate areas of regions using definite integrals.
18. Use the technique of integration by parts.
19. Solve basic differential equations.
20. Calculate values for functions of two variables.

21. Calculate partial derivatives.
22. Work maximum and minimum problems for functions of several variables.

TOPICAL OUTLINE

Days	Topic or Class Activity
6	Review of Functions
10	Limits, Differentiation Techniques including Product, Quotient, Chain, and Generalized Power Rules
15	Applications of the Derivative including First and Second Derivative Test, Implicit Differentiation and Derivatives of Logarithmic and Exponential Functions
10	Integration Techniques including Substitution, Integration by Parts and Tables
7	Applications of Integration including Area between Curves
4	Functions of Several Variables, Partial Derivatives, Local Extrema for Functions of Two Variables
7	Leeway and Testing
52	

Cursory Review of Chapter R
Cover all of Chapters 1 – 5
Cover Chapter 6, sections 1, 2, 3 (sections 4, 5, 6 optional)

Graded Assignments and Policies

Graded Assignments

In class Quizzes	0 – 20%
Participation	0 - 5 %
Projects	0 – 20%
Homework	0 – 30%
Tests	50 - 85%
Final	15 – 30%

Grading Policy
The individual instructor will determine which items he or she considers essential for the student to memorize without error and test accordingly.

Each instructor will set minimum standards for performance on tests.

Major Tests and Quizzes
The individual instructor will determine which items he or she considers essential for the student to memorize without error and test accordingly. Each instructor will set minimum standards for performance on tests. A comprehensive final examination will be given.

Classroom Policies and Procedures

General Information

Attendance Policy

Make-up Policy

Extra-credit Policy

Final Exam Information
A comprehensive final examination will be given.

Academic Honor Code
The objective of the academic honor code is to sustain a learning-centered environment in which all students are expected to demonstrate integrity, honor, and responsibility, and recognize the importance of being accountable for one's academic behavior.

College Statement about grades of "F" and Withdrawal from Class
Students may withdraw from a course by processing an add/drop form during regular office hours through the Registration and Records Office at Main Campus or Romeoville Campus, or by phone at 815-744-2200. Please note the withdrawal dates listed on your bill or student schedule. Every course has its own withdrawal date. Failure to withdraw properly may result in a failing grade of "F" in the course.

At any time prior to the deadline dates established, an instructor may withdraw a student from class because of poor attendance, poor academic performance or inappropriate academic behavior, such as, but not limited to, cheating or plagiarism.

Intellectual Property
Students own and hold the copyright to the original work they produce in class. It is a widely accepted practice to use student work as part of the college's internal self-evaluation, assessment procedures, or other efforts to improve teaching and learning and in promoting programs and recruiting new students. If you do not wish your work to be used in this manner, please inform the instructor.

Student Code of Conduct
Each student is responsible for reading and adhering to the Student Code of Conduct as stated in the college catalog.

Sexual Harassment Joliet Junior College seeks to foster a community environment in which all members respect and trust each other. In a community in which persons respect and trust each other, there is no place for sexual harassment. JJC has a strong policy prohibiting the sexual harassment of one member of the college community by another. See the Catalog or Student Handbook.

Student Support http://jjc.edu/services-for-students/pages/default.aspx

a. Disability Services: http://www.jjc.edu/disability-services/Pages/default.aspx. Student Accommodations and Resources (StAR): If you need disability-related accommodations, specialized tutoring, or assistive technology in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class. New students should request accommodations and support by scheduling an appointment with the Student Accommodations and Resources (StAR) Office, Campus Center 1125, (815) 280-2230.
b. Tutoring: http://jjc.edu/tlc/Pages/default.aspx
c. Counseling and Advising: http://www.jjc.edu/counselingadvising/Pages/default.aspx
d. Academic Resources: http://www.jjc.edu/academic-resources/Pages/default.aspx
e. Support Programs and Services: http://www.jjc.edu/support-programs-services/Pages/default.aspx
f. Technology Support: http://jjc.edu/services-for-students/Pages/technology-support.aspx
g. My Degree Progress: My Degree Progress is a computerized system to track a student's progress toward graduation. The report indicates every course and places these courses into their appropriate category as a General Education, Major Course, or Elective, according to the degree requirements. This tool is useful for preparing before an advising appointment, for planning, for registering, and for checking that the student is on track for graduation. https://eresources.jjc.edu

*** Instructor reserves the right to modify, add to or change the syllabus. Any changes to the syllabus or schedule will be announced in class.**

Prepared by:

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Reviewed by:

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Department Chair

Date

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