Course Information
MAT 151: Calculus I
Fall, 2014

Instructor:
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Office hours: Contact me via email

Course Materials:

Textbook: Briggs, Cochran, Gillett, *Calculus* Second Edition, ISBN: 978-0-321-94734-5
Calculator: Graphing calculator required; TI-84 recommended

Course Outcomes: Students who are successful in MTH 151 will be able to:
- Find limits using graphical, numerical and analytical methods
- Find derivatives of algebraic, exponential, logarithmic and trigonometric functions
- Solve problems involving applications of the derivative
- Perform integration including techniques of substitution and numerical integration
- Solve problems involving application of the integral to finding area

The Board of Trustees has determined that all JCC graduates should develop or enhance certain essential skills while enrolled in the college. MTH 151 contributes to the following Associate Degree Outcomes:
- Computational skills and understanding appropriate to the program of study.
- Critical thinking and problem solving.

Course Requirements

Your final grade for the course will be determined by your performance in three categories. They are:

- ♦ **Homework:**
  - o There will be two types of homework assigned: practice problems and graded homework.
  - o Practice problems will consist of odd-numbered problems from the textbook; you can check your answers in the back of the book. I will spend the first part of each class period taking questions from the practice problems to work on the board, so if you do have trouble with some problems be sure to make note of them and ask about them in class.
  - o Graded homework will consist of even problems from the textbook that I will select and/or problems that will be distributed "handouts" in class or via Jetnet. These problems must be worked out clearly on separate paper, showing all steps of the process you used to solve the problem. The process is actually more important to me than the answer, so show your work! Graded homework will be due on Tuesdays. Late homework is not accepted and will be marked as a 0 in the grade book.

- ♦ **Classwork and Projects:**
  - o Classwork consists of practice problems worked during class; there will be some form of classwork nearly every day.
    - ✓ Classwork is due at the end of the class, and cannot be made up if you miss class. I will drop your 2 lowest classwork grades at the end of the semester.
    - ✓ During classwork time, you are encouraged to work with other students, and to ask questions of your instructor. This is primarily a learning time, not an assessment.
  - o Projects are applications of the material we are learning, and will often be started during class but may have to be finished outside of class. The number of projects we do will depend partly on the amount of time we have to devote to them.

- ♦ **Exams: These are closed-book tests taken in class.**
  - o No books or notes may be used other than those provided by the instructor.
  - o There are three tests as noted on the syllabus and a final exam.
  - o If you must miss class on a test day, you are required to notify me in advance by phone or e-mail. Only if advance notice is given will arrangements be made for you to make up the exam. Once an exam is returned, no make-ups will be given.

Grading Information

- **Homework Grades: 20% of final grade.**
    - Your scores on hand-in homework assignments will contribute 20%. Your lowest homework score will be dropped.
    - Homeworks will be due on Tuesday.
    - Late homework will not be accepted and will be marked as a 0 in the gradebook.

- **Classwork and Projects: 15% of final grade**
    - Your grades on in-class assignments will contribute 10%. Your lowest two classwork scores will be dropped. Missed classwork cannot be made up.
    - Your grades on projects will contribute 5%.

- **Course Exams: 65% of final grade.**
    - The average of your three test scores will count as 45% of your final grade. Don't forget that missed tests can only be made up if arrangements are made before the exam is given in class. Once a test is returned, no make-ups will be given.
    - Your final exam will count as 20% of your final grade.

Your final grade for the course will be determined by the following the Math Department grading scale:

Percent	Transcript Grade
90 – 100	4.0
85 – 89	3.5
80 – 84	3.0
75 – 79	2.5
70 – 74	2.0
65 – 69	1.5
60 – 64	1.0
50 – 59	0.5
00 – 49	0.0

General Policy Information

- **<u>Intermediate Grading</u>**:
To comply with college policy and federal regulations I am to assign a grade to you after approximately two weeks, five weeks, and eight weeks. The grades assigned are letters with the following meanings:
  - V: Verifies that you are participating and your work so far has been acceptable.
  - H: Means that you are participating, but your work shows that you may require Help in order to complete the class successfully. If you receive an H grade, you will be contacted by the center for student success and offered tutoring services.
  - Q: means that you have quit participating in the course. If you receive a Q grade, you will be automatically withdrawn from the course. You will be assigned a Q grade if you do not show up to four consecutive sessions, do not turn in homework due during that period, and do not contact me about your absence.

- **<u>Special Grading Situations</u>**:
  - Audits must be registered by you during the first week of class. You will not receive a grade or credit for the class.
  - Because courses vary in length, it is **critical** that you check the last day to drop or withdraw by going to www.jccmi.edu , under 'Quick Links' choose "Drop Classes".
  - Although your instructor may withdraw you for non-participation before midterm, only the student can initiate a withdrawal after midterm.
  - Incomplete grades will be given only in accordance with JCC policy: A student may request an incomplete from the instructor. The incomplete will be granted only if the student can provide documentation that his or her work up to that point is sufficient in quality, but lacking in quantity, due to circumstances beyond the student's control. Final determination of whether an incomplete will be given is the instructor's decision.

- **<u>Academic Honesty</u>**: (Excerpt from JCC policy): Academic honesty is expected of all students. It is the ethical behavior that includes producing their own work and not representing others' work as their own, either by plagiarism, by cheating, or by helping others to do so. Faculty members who suspect a student of dishonesty may penalize the student by assigning a failing grade for the paper, project, report, exam or the course itself. The academic dean will be notified of the situation.

- **<u>Extra Credit Policy</u>**: The mathematics department at JCC prohibits extra credit 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.

♦ **Classroom Behavior Policy**: Please be respectful of other students, the instructor, and yourself. Cell phones should be silenced during class; avoid phone calls and texting during class time (in an emergency please leave the room to handle your call or message and return as quickly and quietly as possible). Interruptions and side conversations while someone is speaking, instructor or student, are disrespectful and will not be tolerated. Practice good communication at all times, avoiding profanity, critical, or unkind remarks.

Getting Help: Success is the Goal!

Education is a self-initiated, goal-directed process. You as the student are expected to be accountable for your own learning. The instructor is a facilitator and resource person who will assist in this process.

If you recognize that you need additional help in order to be successful, you have a number of options. The most important thing about getting help is to do so as soon as you feel like you are getting lost or behind. The quicker you seek help, the more likely it is that you will be able to be successful.

♦ **Your instructor:** Please make use of your instructor! I am here to help. I am available during classwork times, and also outside of class during my posted office hours. You are also welcome to make a special appointment to see me.

♦ **Each other:** Your classmates can be an excellent resource, and you can be a resource for others in the class as well. Form a study group, exchange contact information with others in the class, and work problems together!

♦ **Math Lab:** There is a math lab in JM 245 that is open a few hours a week specifically for upper level math students. I will let you know the hours once they are determined for this semester.

♦ **Center for Student Success:** Located in Walker Hall, the center provides tutoring and other services. Please call or visit for more information.

♦ **Grass Lake Students:** You can ask your guidance councilor for additional resources available on your campus.

Remember, your attitude, self-management skills, and personal responsibility play a vital role in your success. A positive approach combined with a good work ethic will bring the greatest success. Be the creator of your own success! I look forward to working with you this semester.

Tentative Course Calendar: MAT 151 Fall 2014

Date	Section(s)	Topics
T 09-02	1.1-1.2 + Appendix A	Algebra Review
R 09-04	1.3-1.4	Trigonometry Review
T 09-09	2.1 2.2	The Idea of Limits Definitions of Limits
R 09-11	2.3 2.4	Techniques for Computing Limits Infinite Limits
T 09-16	2.5 2.6 2.7	Limits at Infinity Continuity Precise Definitions of Limits
R 09-18	Wrap Up & Review	Chapters 1 - 2
T 09-23	Test 1	Chapters 1 – 2
R 09-25	3.1 - 3.3	Introducing the Derivative & Rules of Differentiation
T 09-30	3.4 3.5	The Product and Quotient Rules Derivatives of Trigonometric Functions
R 10-02	3.6	Derivatives as Rates of Change
T 10-07	3.7	The Chain rule
R 10-09	3.8	Implicit Differentiation
T 10-14	3.9 3.10	Derivatives of Logarithmic and Exponential Functions Derivative of Inverse Trig Functions
R 10-16	3.11	Related Rates
T 10-21	Wrap Up & Review	Chapter 3
R 10-22	Test 2	Chapter 3
T 10-28	4.1 + 4.2	Maxima and Minima + What Derivatives Tell Us
R 10-30	4.3 4.4	Graphing Functions Optimization Problems
T 11-04	4.5 4.6	Linear Approximation Mean Value Theorem
R 11-06	4.7	L'Hôpital's Rule
T 11-11	4.8	Newton's Method
R 11-13	4.9 Review	Antiderivatives Chapter 4
T 11-18	Test 3	Chapter 4
R 11-20	5.1 5.2	Area Under a Curve Definite Integrals
T 11-25	5.3	Fundamental Theorem of Calculus (FTC)
T 12-02	5.4 5.5	Working with Integrals Substitution Rule
R 12-04	6.1 6.2-6.6 6.7	Velocity and Net Change Applications of Integration Basic Classical Mechanics
T 12-09	6.8 7.3-7.4	Logarithmic and Exponential Functions Trigonometric Functions
R 12-11	7.7 Review	Integration by Numerical Methods Chapters 1- 7
T 12-16	Final Exam	Chapters 1 – 7

This calendar will probably need to be adjusted as the semester progresses so it is important to come to every session. Please read the material before the session and at least one section from the next session. If there is time remaining at the end of the session I will begin material form the next session.