

MATH 151.71 (SP14)

COURSE SYLLABUS

PROFESSOR: Steve Tuckey
EMAIL: tuckeysteven@jccmi.edu
PHONE: 781.523.9805 (Google Voice number; voice & text only)
CLASSROOM: JC @ LISD, room 131 (T/R, 3:00 to 5:25 PM)
OFFICE: 142 McDivitt Hall (*Central Campus*)
OFFICE HOURS: <http://bit.ly/sftschedule>
COURSE WIKI: <http://mat151.wikispaces.com>

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. Graphing calculator required. Pre-requisite: An earned grade of >2.0 in MAT 141, course placement, or instructor approval.

REQUIRED MATERIALS:

Textbook: Larson, R. & Edwards, B. H. *Calculus: Early Transcendental Functions (5th ed.)*. Houghton Mifflin Company. (ISBN: 978-0-538-73550-6)
Calculator: Texas Instruments TI-83 or TI-84 (*TI-89 and CAS Nspire models are not permitted*)
Other: Large 3-ring binder, *large eraser, pencils* (no work in ink will be graded)
Internet Access: Some assignments and course materials require consistent Internet access

CORE COURSE OBJECTIVES:

Students should be able to:

1. Demonstrate a basic understanding of:
 - a. Fundamental concepts of calculus; namely the limit, the derivative, and the integral.
 - b. Techniques of differentiation and integration, including manipulating algebraic, exponential, logarithmic, and trigonometric expressions as required by these techniques.
2. Critically analyze problems requiring application of the derivative and the integral, such as related rates and the area between curves.
3. Demonstrate facility with the appropriate technological tools, e.g., graphing calculator.
4. Demonstrate an awareness of the historical background specific to the course.

MATH 151 ASSOCIATE DEGREE OUTCOMES:

ADO 3: Demonstrate computational skills and mathematical reasoning

Apply arithmetic skills and mathematical reasoning by solving problems, documenting process, interpreting results and evaluating the reasonableness of outcomes.

ADO 7: Think Critically

Demonstrate critical thinking through questioning, interpreting, analyzing, evaluating, inferring from and synthesizing information to solve problems in a variety of settings.

COURSE POLICIES:

INCOMPLETE 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. Furthermore, a written plan for making up the missing work within one semester must be completed by the student. Final determination of whether an incomplete will be given is the instructor's decision. (JC Policy)

GRADING POLICY AND SCALE:

A 2.0 or "C" is a passing grade. Only courses with passing grades count toward graduation. Other institutions transfer in only courses with passing grades. Many financial aid sources, including most employers, require passing grades. Additionally, earning less than a 2.0 in a class results in being unable to participate in the next level of courses in a discipline that requires Math 151 as a pre-requisite. Registering for the next course sequence without passing the pre-requisite course may result in you being dropped from that class.

Grading Scale:

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
0 - 59%	0.0

Grade-Weight Calculation:

In-Class Work & Homework: 10%
Projects: 10%
Exam 1 (Ch. 1-2): 15%
Exam 2 (Ch. 3): 15%
Exam 3 (Ch. 4): 15%
Exam 4 (Ch. 5): 15%
Cumulative Final (Ch. 1-5): 20%

ABSENCE POLICY:

Students are expected to attend all class meetings, arriving on time, and staying until the end. **In-class and homework assignments may not be made up, therefore attendance is critical.** If absence is unavoidable the absent student is responsible for obtaining any missed materials from other students; that is to say, *office hours are not a replacement for class time*. Exams **may not be made up** except under unavoidable, well-documented circumstances (**contact the professor immediately**), which must be taken *before* graded exams are returned or receive a score of zero.

ACADEMIC HONESTY POLICY:

You are *encouraged* to talk to each other, but **all your submitted work must be your own**. In other words, "group-work" is a great way to learn material, but anything you submit for a grade must be yours -- reflecting your own thought processes. If I suspect you of academic dishonesty, I will follow [JC's Academic Honesty Policy](#) and take appropriate action up to and including assigning a **failing grade** for the assignment, exam, or the course itself (at my discretion).

COURSE REQUIREMENTS:

IN-CLASS WORK:

There may be a quiz or activity in a class session (submitted for credit). These may be individual or group, and with or without notes.

GRADED HOMEWORK:

Specific problems from the textbook will be assigned for each section of material covered, which are to be completed outside of class time. Of these assigned problems, some or all will be selected for evaluation. Textbook-based homework must be completed on loose-leaf notebook paper (no spiral-binding tabs) with problems clearly labeled and all relevant work showing.

PROJECTS:

There will be mandatory projects in the course, which are to be completed entirely outside of class and may require the use of a computer, the Internet, YouTube, and word processing and spreadsheet software. You can use school computers to complete the projects, if necessary.

EXAMINATIONS:

Each exam will cover specific chapters from the text, but each may also have a small number of cumulative review questions on it. Exams may occur in parts -- some of which are to be completed outside of class (e.g., via the , and some may permit the use of notes. The final exam is cumulative for the entire course.

COURSE WIKI:

I believe that learning does not stop outside of class (or outside of a semester). So, I have created and update a course wiki for MAT 151. A wiki is just a collaboratively editable website. I encourage you to make use of the wiki, to become members (and contributors), and to let me know what types of things you'd like to see there. Primarily, we will make use of this space for posting materials and course information (included posted grades by code name). Access to the site is required to obtain course content and information, but please be advised that this wiki is neither owned nor operated by Jackson College. Visit it at:

<http://mat151.wikispaces.com>

OTHER COURSE INFORMATION:

CLASSROOM EXPECTATIONS:

The following are expectations that we can all share.

We are each responsible for our work, our learning, and our behavior in class. The regular in-class collaborations, examinations, homework, and projects will require consistent effort on your part. Mathematics requires regular effort to understand and master.

We are each respectful of everyone in the class (including ourselves). Please silence cell phones and pagers, refrain from using any tobacco products, and come prepared (and on time) to ask/answer questions and work together.

We will communicate with each other promptly regarding problems or concerns. Regular, direct communication solves more problems than it causes. Please do not hesitate to contact me for any reason, and I will do the same.

WHERE TO GET HELP:

Here are a few ideas on where to find some assistance for this course.

- *Office Hours*: Meet with Steve before or after class, or by appointment (perhaps online).
- *Calculus-Help.com*: A terrific website with loads of helpful resources. There are other such websites out there, to be sure, but this one is consistently strong.
- *Wolfram Alpha* (<http://www.wolframalpha.com>) & *Mathway* (<http://www.mathway.com>): Very useful tools for finding solutions (and walkthroughs) for all kinds of problems. I recommend this for *checking* your homework. **Warning**: Do not become overly dependent upon the assistance that such tools provide, since this course requires skill mastery.
- *Classmates*: Your fellow classmates are terrific resources! [Start up a regular study group](#) as soon as you are able. At the very least, get names and contact information for your peers.

TENTATIVE OUTLINE:

A brief (and *tentative*) list of the sections covered in the course.

- Chapter 1: Sections 1.1 – 1.6
- Chapter 2: Sections 2.1 – 2.5
- Chapter 3: Sections 3.1 – 3.8
- Chapter 4: Sections 4.1 – 4.8
- Chapter 5: Sections 5.1 – 5.9

Please Note: This outline is **tentative** and subject to change due to a variety of in-class factors. To know exactly what day material was covered, you must attend class or contact others.

This class will move **VERY fast**, especially before the first exam (during which you will cover some of the Chapter 1 review materials on your own). Expect **SUBSTANTIAL** amounts of homework and plan for no less than 3 hours of outside-class work time *for every class session*. In addition, projects will require more time over longer periods.

The single most frequent piece of advice given by successful former students to all future students in this class is: **“Don’t fall behind -- do homework every day.”**