MATH 151.02: CALCULUS 1
COURSE SYLLABUS (FALL 2017)

PROFESSOR: Allison Price

EMAIL: priceallisonr@jccmi.edu

OFFICE PHONE: 517.796.8471

CLASS SESSIONS: Monday - Thursday, 7:50-8:50, in 128 Grass Lake High

OFFICE: 249 James McDivitt Hall

OFFICE HOURS: See Allison's Office Hours (link also available on MML)

ONLINE: MyMathLab Course Code = **See Handout**

REQUIRED MATERIALS: MyMathLab Student Access, LARGE 3-ring binder, Coursepack, LARGE eraser, pencils, highlighters, TI-84 Calculator. **Please note**: **Access to a computer with Internet is required for this section of Math 151.** We will be doing homework, projects, and possibly some quizzes online, outside of class. School computers can be used to satisfy these requirements.

OPTIONAL TEXTBOOK: *Calculus: Early Transcendental Functions*, 2nd Edition (Briggs, Cochran, Gillet); ISBN: 0-321-94734-7 – **Textbook Zero Note:** This textbook is available online within MyMathLab.

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.

PREREQUISITE:

An earned grade of $\geq$ 2.0 in JC's MAT 141, course placement, or instructor approval.

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 GENERAL EDUCATION OUTCOMES: GEO 3 – Demonstrate Computational Skills and Mathematical Reasoning

COURSE REQUIREMENTS

IN-CLASS WORK, QUIZZES, & ACTIVITIES:

The single best way to ***learn*** math is to ***do*** math. This is where in-class work, quizzes, & activities fit into the process, as it is the regular practice that fosters learning of skills and concepts. Typically, there will be an item from every class session submitted for credit. These may be individual or group, and with or without notes. In addition, there may be activities that will reinforce our work in class and include technological applications. Since coursework is all about practice and learning, ***"make explicit all work and reasoning" is the default setting*** in this course. You will receive no credit for solutions that appear to be copied from a solutions manual or online solution generator (e.g., Wolfram Alpha or Symbolab).

NOTE: **Late work *will not be accepted***, so you must make arrangements for submitting your work by class time if absence is unavoidable. Links to assignments can be found on MyMathLab. Students are expected to print and complete any/all missing assignments by the next class period.

HOMEWORK:

- These assignments must be done outside of class time on a computer with internet access at MyMathLab (reachable through http://www.mymathlab.com). There are videos available on http://www.youtube.com/priceallisonr to help you navigate the MML system for completing homework assignments, using the help features, and more.
- Homework will be due every week, on the first class-day of the week. You can check MyMathLab for particular due dates.
- **You have an unlimited number of tries to do the homework before you submit it** (up until the due date). Thus, all of your homework should receive full credit, if you keep trying until you get a perfect score.

PROJECTS:

An important part of learning mathematics is learning how to communicate and collaborate on mathematical tasks. As a result, group projects will involve students working collaboratively on tasks that require time and effort outside of the class to complete, and may include in-class presentation of work and results. Project grades will be included in the in-class work category.

EXAMS:

Examinations are performances of student understanding; as such, they allow students to demonstrate mastery of the skills and concepts from the homework and lectures. Special requirements (e.g., technology use) and allowances (e.g., student-prepared notes sheets) will depend upon the particular topics and will be announced and discussed in class. The final exam is cumulative for the entire course.

COURSE POLICIES

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 done by you - reflecting your own thought processes, not those of someone else. 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 paper, project, report, exam, or the course itself (as deemed appropriate).

ABSENCE POLICY:

Students are expected to attend all class meetings, arriving on time, and staying until the end. **In-class assignments may not be made up**, **therefore attendance is vital**. The student is responsible for obtaining any missed materials from other students; that is to say, *office hours are not a replacement for class time*. Moreover, **assignments and exams may *not* be made up**.

INCOMPLETE GRADE POLICY:

A student may request an incomplete from the instructor, who will follow the JC Incomplete Policy. An incomplete may 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. **Note**: An "Incomplete" grade is not a way to avoid a *failing* one.

EXTRA CREDIT:

There will be no opportunities for extra credit. Your grade calculation is based solely on your performance on course assignments listed above.

GRADING POLICY AND SCALE:

A 2.0 or "C" is a passing grade. Only courses with passing grades count toward graduation. Other colleges 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 prerequisite.

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
55 - 59%	0.5
0 - 54%	0.0

Grade Calculation:

In-Class Work: *20%*

Online MyMathLab Homework: *15%*

Chapter Exams: *40%*

Cumulative Final Examination: *25%*

ADDITIONAL 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.
This course will require consistent attendance and effort on your part. Mathematics is a subject that requires regular effort to understand and master.

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

We are patient and persistent, even in the face of frustration (with others or ourselves).
It is completely understandable *and expected* for students to be 'stumped' by problems at first. What separates successful students from unsuccessful students is *almost entirely* their willingness to be *patient* and *persistent* with the mathematics.

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:

At this level of mathematical sophistication, your fellow students and I are your best, most immediate resources for learning. Even so, there are *many* other sources to consider and investigate. Be creative, be resourceful, and *share what you find* -- we're all in this together!

I strongly suggest you start up a regular study group as soon as you are able with some of your classmates. At the very least, write down names and contact information for your

peers and call on each other when needed. For more information on starting and maintaining a study group, check out the following link: **http://bit.ly/math-study-group**

Other sources of help:

- *Office Hours:* Meet with Allison during office hours.
- *Jackson College's Center for Student Success (CSS):* Free tutoring in 138 Bert Walker Hall is available most weekdays (http://www.jccmi.edu/Success/Tutor/). Remember, finding tutoring for upper-level mathematics often takes time and patience.
- *Online Help & Computation Sites:* There are several online sources for help, *some* of which are high-quality and easy to use, including: www.Calculus-Help.com, www.wolframalpha.com, www.mathway.com, & www.symbolab.com. I recommend these for *checking* your homework.

TENTATIVE TOPIC LIST: A brief (and *tentative*) list of the content covered in the course.

- **Appendix A** (Algebra Review) - (Reviewed as needed via MyMathLabb)
- **Chapter 1** (Functions): §1.1 - 1.4 - (Reviewed as needed via MyMathLab)
- **Chapter 2** (Limits): §2.1 - 2.7
- **Chapter 3** (Derivatives): §3.1 - 3.11
- **Chapter 4** (Applications of the Derivative): §4.1 - 4.9
- **Chapter 5** (Integration): §5.1 - 5.5

Class Calendar

Date	Section
5-Sep	2.1
6-Sep	
7-Sep	2.2
11-Sep	
12-Sep	2.3
13-Sep	
14-Sep	2.4
18-Sep	
19-Sep	No Class
20-Sep	2.5
21-Sep	
25-Sep	2.6
26-Sep	
27-Sep	Review
28-Sep	Exam 1
2-Oct	3.1
3-Oct	
4-Oct	3.2
5-Oct	3.3
9-Oct	3.4
10-Oct	3.5

Date	Section
11-Oct	3.6
12-Oct	
16-Oct	3.7
17-Oct	
18-Oct	3.8
19-Oct	
23-Oct	3.9
24-Oct	3.10
25-Oct	Review
26-Oct	Exam 2
30-Oct	3.11
31-Oct	
1-Nov	4.1
2-Nov	
6-Nov	4.2
7-Nov	
8-Nov	4.3
9-Nov	
13-Nov	4.4
14-Nov	
15-Nov	4.5

Date	Section
16-Nov	4.6
20-Nov	Review
21-Nov	Exam 3
22-Nov	No Class
23-Nov	No Class
27-Nov	4.9
28-Nov	5.1
29-Nov	5.2
30-Nov	
4-Dec	5.3
5-Dec	
6-Dec	5.5
7-Dec	
11-Dec	5.4
12-Dec	
13-Dec	Review
14-Dec	Exam 4
18-Dec	Review
19-Dec	
20-Dec	Final
21-Dec	