

**University of West Georgia      FALL 2018**

**Course:** MATH 1413 Survey of Calculus, Section 03      3 credits  
Prerequisite: Math 1111 (college algebra) or Placement by SAT/ACT score.

**Course Description:** This course will provide a survey of the differential and integral calculus of polynomial, rational, exponential, and logarithmic functions with an emphasis on applications to problems from business, economics and life sciences.

**Learning Outcomes:** Students should be able to demonstrate:

1. The student will be able to compute limits.
2. The student will be able to differentiate polynomial, rational, exponential, and logarithmic functions.
3. The student will be able to apply differential calculus to real world problems.
4. The student will understand the basic techniques of integration.
5. The student will be able to integrate functions and to apply the Fundamental Theorem of Calculus.
6. The student will be able to apply integral calculus to real world problems.

**Instructor:** Mr. Jim Bellon (best way to contact me is through CourseDen) or [jbellon@westga.edu](mailto:jbellon@westga.edu)

**Office & Hours:** Boyd 104C Mon 10:50–11:50 am, 4:45–5:15 pm  
Wed 9:20–9:50 am, 10:50–11:50 am, 4:45–5:15 pm  
Fri 9:20–9:50 am  
Boyd 205 tutoring center: Fridays 11am–12pm

**Class Meets:** Mon/Wed/Fri 9:55 – 10:45am in TLC 1303  
In UWG's CourseDen for class information and communication  
on Pearson publisher's MyMathLab website for online assignments, quizzes.

**Course Materials:** #1 A graphing calculator is REQUIRED (preferably one of the TI-83 or 84 models).  
#2 You are required to get access to **MyMathLab.com** site and **e-book**.  
See CourseDen MyMathLab content module for more MyMathLab information.

The actual textbook is optional. The online access included the e-book.  
"Calculus and its Applications" 11<sup>th</sup> ed by Bittinger/Ellenbogen, Pearson publishers.

**Grading:** Online Homework (avg counts 30%, lowest dropped), Group Project (15%)  
4 written tests (avg counts 35%, lowest dropped), Final exam (cumulative, counts 20%).  
Final grades determined as shown below. DO NOT ask for extra points. The rounding and dropping of lowest grades will bump you up to next grade if you were close before that. If after the rounding and dropping, your grade ends up close to next letter, realize you are actually not close and will not get the bump up.

<b>89.3 % and higher</b>	=	<b>A</b>
<b>79.3 % to 89.2 %</b>	=	<b>B</b>
<b>69.5 % to 79.2 %</b>	=	<b>C</b>
<b>60 % to 69.4 %</b>	=	<b>D</b>
<b>Below 60 %</b>	=	<b>F</b>

**Project:** The project will be a way for you to understand how calculus can be used in a business setting by you creating your own business idea for selling an item. You will be given an equation that relates the demand (x units) of your product to the price that must be charged in order to sell that demand, as well as an equation to represent your overall costs (both fixed and variable) based on the demand x. You will use business concepts and calculus to derive several other function equations for your business forecast and then submit a report with some calculations and explanations of the dollar values for your business. It will be a powerpoint for the summary of results, with appendix containing the calculations that can be in any readable form to show the calculations. Throughout the semester, we will use some class time each week to go through parts of the project.

**Make-up policy:** There are no make-ups for online assignments. You are expected to keep up with learning the material each week, completing assignments by the due dates, and getting help when needed. Make-ups for tests may be granted with a valid documented excuse, and only if you notify me before or on the day of the test.

**Extra-credit policy:** There will be NO extra credit given, period! Points can be earned only as stated above.

**Last Date to Withdraw:** *Mon October 8<sup>th</sup>* Any student who withdraws after this date will receive a grade of "F".

**Attendance Policy:** Students are expected to pay attention to CourseDen calendar and check for assignments online. Failure to do so will result in missing assignments and maybe being dropped. Grades will not be directly altered for attendance. HOWEVER, students are expected to attend class and complete all work when assigned. Students are responsible for the topics covered and assignments due whether present or not. "**I was not here**" is **NOT** a valid excuse

**University Policies:** Please carefully review the following Common Language for all university courses at the link:

[https://www.westga.edu/administration/vpaa/assets/docs/facultyresources/common\\_language\\_for\\_course\\_syllabi\\_v2.pdf](https://www.westga.edu/administration/vpaa/assets/docs/facultyresources/common_language_for_course_syllabi_v2.pdf)

It contains important material pertaining to university policies and responsibilities. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester. You should also be familiar with the information in the student handbook: [www.westga.edu/handbook/](http://www.westga.edu/handbook/)

**Class Rules:** You are to turn off your cellular phone during the class. You are not allowed to use your phone as a calculator. Please respect your instructor and other students in the class. No talking or any distracting behavior. If you fall asleep in class, you will be asked to leave. It is expected that students be familiar with the Student Conduct Code, Disciplinary Procedures and Disciplinary Sanctions in the Student Handbook. Cheating and/or any conduct that disturbs the classroom, the instructor, or the students WILL NOT be tolerated!! Any serious violations will be reported; appropriate actions will be taken; and consequences will result.

**Meeting with Instructor** can be beneficial and is encouraged. Meeting should occur during the instructor's office hours, whenever possible. If these hours conflict with a student's schedule, then appointments should be made. The meeting time is not to be used for duplication of lectures that were missed; it is the student's responsibility to obtain and review lecture notes before consulting with the instructor. As your instructor, I am very concerned about the student's achievement and well-being and encourages anyone having difficulties with the course to contact me for extra help.

**Course Accessibility:** If you are a student who is disabled as defined under the Americans with Disabilities Act and require assistance or support services, please notify me and provide me with a copy of your packet from Student Services. The university will provide you with resources for any audio/visual needs that you may have with the learning management system or course content. Please contact instructor or UWG Accessibility Services for more information.

**Math Tutoring:** On Campus:  
\*\*Offered by the math Department in Boyd 205, you can just walk in and get help.  
Hours are Mon/Tues/Wed/Thurs 9am-7pm, Fri 9am-3pm  
There are 2-3 tutors on duty who will rotate between students.  
There are also textbooks and computers to use while you are in the tutoring center.

\*\* Offered by the Center for Academic Success in UCC building. You will be assigned a 1-1 personal tutor, or attend available drop in sessions.

**This is a tentative schedule of assignments and topics to be covered in class sessions. Changes will be made as needed. Once we finish a section, we will immediately move along to the next section. It is recommended that you read over text sections BEFORE we cover them in class. After we cover topics, you should complete assignments and do any extra practice or get help as needed. Don't wait until its too late (like after doing bad on a test).**

8/15 – 8/17	Introduction, Algebra Review, Sec 1.1 Limits	<b>HW1 due 8/20</b>
8/20 – 8/24	Sec 1.1 Limits: Numerical and Graphical, 1.2 Algebraic Limits and Continuity	<b>HW2 due 8/26</b>
8/27 – 8/31	Sec 1.3 Average Rates of Change, 1.4 Differentiation Using Limits	<b>HW3 due 9/4</b>
9/3 – 9/7	<b>Monday 9/3 LABOR DAY - No Class</b> Sec 1.5 The Power and Sum-Difference Rules, 1.6 The Product and Quotient Rules	<b>HW4 due 9/9</b>
9/10 – 9/14	Sec 1.7 The Chain Rule Review for test #1	<b>HW5 due 9/12</b>
	<b>Test #1 on Friday September 14<sup>th</sup> (Sec 1.1 – 1.7)</b>	
9/17 – 8/21	Sec 1.8 Higher-Order Derivatives, 2.1 First Derivative and Graphs	<b>HW6 due 9/23</b>
9/24 – 9/28	Sec 2.2 Second Derivative and Graphs, 2.4 Absolute Max/Min Values	<b>HW7 due 9/27</b>
10/1 – 10/5	Sec 2.5 Maximum-Minimum Problems, 2.6 Marginals and Differentials <b>Friday 10/5 FALL BREAK - No Class</b>	<b>HW8 due 10/4</b> <b>HW9 due 10/9</b>
10/8 – 10/12	Review for test # 2	<b>Test #2 on Friday October 12<sup>th</sup> (Sec 1.8 &amp; 2.1 – 2.6)</b>
10/15 – 10/19	Sec 2.7 Elasticity of Demand, 2.8 Implicit Differentiation and Related Rates	<b>HW10 due 10/21</b>
10/22 – 10/26	Sec 3.1 Exp Functions, 3.2 Log Functions, Sec 3.5 Annuities	<b>HW11 due 10/28</b>
10/29 – 11/2	Sec 3.6 Amortization Review for test # 3	<b>HW12 due 10/31</b>
	<b>Test #3 on Friday November 2<sup>nd</sup> (Sec 2.7-2.8 &amp; 3.1-3.2)</b>	
11/5 – 11/9	Sec 4.1 Anti-differentiation, 4.2 Area, Antiderivatives and Integrals	<b>HW13 due 11/11</b>
11/12 – 11/16	Sec 4.3 Area and Definite Integrals, 4.4 Properties of Definite Integrals	
11/19 – 11/23	<b>THANKSGIVING BREAK</b>	<b>HW14 due 11/25</b>
11/26 – 11/30	Sec 4.5 Integration Techniques: Substitution, 5.1 Consumer/Producer Surplus Review for test # 4	<b>Project Draft Due: Friday November 30<sup>th</sup></b> <b>HW15 due 11/29</b>
12/3 – 12/7	<b>Test #4 on Monday December 3<sup>rd</sup> (chapter 4 and sec 5.1)</b> <b>Project Due: Wednesday December 5<sup>th</sup></b> FINAL REVIEW	

**Wednesday Dec 12<sup>th</sup> FINAL EXAM (all chapters) 8 – 10am in our classroom.**  
**Final will be about 20-25 written questions where you show all work.**