MATH 120 (Washington) **Spring 2021** **Sections 0411-0442**

Lecturer: Larry Washington e-mail: lcw@umd.edu

Lectures: The lectures will be online on Tuesday and Thursday, 11:00am - 12:15pm. The Zoom link is listed on Elms.

The Tuesday-Thursday lectures will be recorded and posted on the course page and in the Panopto Recordings section of Elms. If you have privacy concerns about being recorded, please contact me and we can work out alternative ways to ask questions.

Office hours (for L. Washington): Monday 4:00pm - 5:00pm, Thursday 9:30am - 11:00am
A Zoom link for office hours is on Elms. Login if you have questions. For situations that require non-public conversations, send an email with a suggestion of when is good to meet, and a one-on-one Zoom meeting can be set up.

Teaching Assistants:
Charles Daly (cdaly69@umd.edu): 0411, 0421, 0431, 0441
Office hours: Wednesday 3:00 - 5:00 (Zoom link on Elms)
Ryan Cinoman (rcinoman@umd.edu): 0412, 0422, 0432, 0442
Office hours: Monday 10:00am - 11:00am, Tuesday 10:00am - 11:00am (Zoom link on Elms)
Discussion sections take place on Wednesdays. They will essentially be extended office office hours, but there will often also be worksheets that must be submitted by Wednesday evening.

Text: *Elementary Calculus* by Lawrence C. Washington. This text is free. It is in the Files section of Elms and is also linked with the HW assignments.

Homework: The online homework uses a program from Ming Press. This needs to be purchased. You can buy an access code from the bookstore. However, it is slightly cheaper to do this directly at their website: mingpress.com . You should follow the instructions there. It will cost you approximately $30 and you'll need a credit card. You should use your UMD email account when registering.

Description of the course: An introduction to calculus for students in the social and management sciences, business, architecture, and various other fields. Applications of calculus form an important part of the course.

Topics: (in *Elementary Calculus*)

Chapter 1:	Lines	1 lecture
Chapter 2:	Derivatives	3 lectures
Chapter 3:	More derivatives	3 lectures
Chapter 4:	Some applications	2 lectures
Chapter 5:	The product rule	1 lecture
Chapter 6:	Exponential functions	1 lecture
Chapter 7:	Logarithms	1 lecture
Chapter 8:	Exponential models	3 lectures
Chapter 9:	Integrals	2 lectures
Chapter 10:	Areas and probabilities	3 lectures
Chapter 11:	Functions of two variables	3 lectures

Exams: February 18, March 11, April 13, May 6
Final Exam: Thursday, May 13, 1:30pm - 3:30pm
The exams will be online and must be taken during the class time on the scheduled day.

Honor Code: On homework, clickers, and worksheets, working with others is fine. Worksheets need to be submitted in your own handwriting and should represent your version of the solution. Exams are to be taken by the student alone, using only approved resources. The University of Maryland Honor Code (*I pledge on my honor that I have not given or received any unauthorized assistance on this examination.*) applies to every examination. Every student will be required to turn on their laptop camera and be visible on Zoom during exams. If this will be a hardship, please contact me.

For more on University policies for absences and many other issues, see
http://www.ugst.umd.edu/documents/CourseRelatedPolicies.pdf

Lecture Questions: During many lectures, there will be "clicker" questions (using the Turning Point software). Scores on these will be based more on participation than on correctness. Students should have the appropriate electronic device (smart phone, laptop, tablet, etc.) at each lecture. At the end of the term, the total score for these activities will be converted to a 50-point basis. You do not need a clicker device. Your smart phone works. Instructions on registering the device will be given in class.

Worksheets: During many discussion sections, there will be worksheets that have problems that are often somewhat longer than homework problems. The TAs will help with them during the scheduled discussion times, and they need to be handed in later that day. They will be submitted online as pdf's through Canvas. You will need to download an app that allows you to scan to a pdf document. I use the free version of Genius Scan, but there are many other options. Late worksheets will be accepted up to 4 days after the due date with a deduction of 2 points out of 10.

Grading

Midterms: 100 points each (for a total of 400 points)
Lecture questions: 50 points total
Worksheets: 50 points total
Homework: 100 points total
Final exam: 150 points

The lowest one of the following will be subtracted from the total: 1/2 of the lowest midterm score, 1/2 the homework, the lecture questions, the worksheets, 1/3 of the final exam score. (Don't worry about this too much. It simply lowers the impact of a bad day.)
The total possible score for the course is 700 points.
Grades will be assigned approximately as follows: A: 90% - 100%, B: 80% - 89%, C: 70% - 79%, D: 60% - 69%, F: $\leq$ 59%. Plus and Minus grades will be used (for example, $90-92 = A-$ and $98-100 = A+$).

NOTES

There are 4 exams and a final, for a total of 5 exams.

If you skip all of the homework, skip all the worksheets, and skip all of the clicker questions, and get perfect scores on all exams, you will have an overall average of 78.6%= $C+$. Therefore, you should do the homework, the worksheets, and the clickers, since they are designed to raise your score.

Elms gives you an average for the course throughout the semester. This number is not accurate, so you should take it only as a rough estimate of how you are doing.

Here is an example of how grades are calculated, using the above description: Suppose your midterms are 80, 52, 90, and 70. Your Final is 130/150. Your Clicker score is 38/50, your Worksheet score is 40/50, and your HW score is 90/100. Then your lowest score is the 52/100 on the second midterm, so it gets changed to 26/50 (it counts half). Your point total is

$$\text{exam}+(1/2)\text{exam}+\text{exam}+\text{exam}+\text{final}+\text{clickers}+\text{worksheets}+\text{HW}$$

$$= 80 + 26 + 90 + 70 + 130 + 38 + 40 + 90 = 564.$$

This is out of 700 possible points, so the overall average is $564/700 = 80.6$, which is a $B-$. If the second midterm had been recorded as 52/100 instead of 26/50, the overall average would have been 78.7, which is a $C+$.

Final Note: It is quite possible that there will occasionally be problems with technology. If so, adjustments might have to be made to the syllabus. Also, because of the pandemic, for example, there will be various situations where problems need to be resolved. It is much better to discuss these in advance, if possible.

(1/22/2021)