

MA 120 – Calculus and its Applications

Fall 2017; Sections 701/702/703/720

Instructor. Dr. Armin Straub

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Course website. <http://math120.straub.link>

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Office phone. (251) 460-7262 (please use e-mail whenever possible)

Office hours. posted on course website; or by appointment

Class schedule.

Section 701/720: F, 9:05-9:55am, in MSPB 140 (old ILB)

Section 702: F, 2:30-3:20pm, in MSPB 140 (old ILB)

Section 703: R, 2:25-3:15pm, in Humanities 160

Overview. This course is an introduction to calculus with an emphasis on problem solving and applications. Key concepts are presented graphically, numerically, and algebraically, although the stress is on a clear understanding of graphs and tabular data. The course covers: algebraic, exponential and logarithmic functions, their properties and their use in modeling; the concepts of derivative and definite integral and their applications.

Note. Credit for both MA 120 and MA 125 is not allowed. MA 120 is not a prerequisite for subsequent calculus courses. In particular, MA 120 does not exempt you from any of the prerequisites for MA 125. If you want or need MA 125, do not take MA 120.

Learning objectives. Upon the successful completion of the course a student will:

- Have an understanding of the idea of the derivative as a rate of change and as a slope;
- Be able to compute simple derivatives using the rules of differentiation;
- Be able to use the derivative as a tool for applied problems;
- Be able to compute simple antiderivatives;
- Have an understanding of the concept of a definite integral.

Textbook. *Calculus & Its Applications* (Brief Version), 14th edition, by Goldstein, Lay, Schneider, Asmar (Pearson, 2017)

(Note that an ebook version of the text comes with the MyLabsPlus access code.)

Course format. Web-blended

Pre-requisite. C or better in MA 112 (PreCalc Algebra), or sufficient mathematics placement test score

Online homework, quizzes, exams, and grades

MyLabsPlus access. You are required to obtain access to MyLabsPlus, which we will use for homework, quizzes and the exams. If you purchased an access code from the official USA bookstore, then it will include an electronic version of the book. If you did not purchase the access code by the time classes start, you have the option to get free access to MyLabsPlus for a short period of time. (You can then either enter your access code or purchase one online at any time before the end of the free access.)

Homework. There will be homework for each section in the book. The problems and due dates are available on MyLabsPlus.

Quizzes. Additionally, there will be quizzes each couple of sections. These quizzes are also taken on MyLabsPlus. If you are not satisfied with your quiz score, you are allowed a second attempt. (There is a 45 minute time limit for each quiz.)

Exams. There will be one in-class midterm exam and an in-class (comprehensive) final exam, as well as three online tests (which, like quizzes, are taken on MyLabsPlus). No calculators, notes or other material will be allowed for the in-class exams. Our exam schedule is:

- In-class midterm exam: September 28/29 during the usual class time

- In-class final exam:
Section 701/720: Wednesday, Dec 6 — 8:00-10:00am
Section 702: Monday, Dec 4 — 3:30-5:30pm
Section 703: Tuesday, Dec 5 — 1:00-3:00pm

Due dates. The due dates listed on MyLabsPlus are not the days you should actually do the work. Assignments are posted on our course website for each class. Please complete them before the next class, so that I can help with any possible issues. If you choose to wait until the final due date and if anything goes wrong (this includes computer or network problems, health problems, family problems), you will not get an extension.

Grades. Your grade will be based on the total sum of your scores on the homework, quizzes and the exams.

- Homework: 30% in total
- Quizzes: 30% in total
- Tests and final exam: 40% in total (each exam carries the same weight)

The resulting numerical score is then translated to your semester grade as follows:

[90, 100]: A, [80, 90): B, [70, 80): C, [60, 70): D, [0, 60): F.

Dropping. The final drop date is Friday, October 20. Please speak with me (and/or your advisor) before making a final decision to drop. Ideally, talk to me as soon as you are getting behind, so I can help you complete the course successfully.

Course organization

Online material. This syllabus as well as relevant information and material for this course can be found at our course website.

MyLabsPlus. <http://usouthal.mylabsplus.com>

Asking questions. We will be using Piazza for online discussions and questions. Rather than emailing your question to me, you are strongly encouraged to post it on Piazza so that the whole class can join and benefit from the discussion (you have the option to post your question anonymously). You can find our class at:

<https://piazza.com/southalabama/fall2017/ma120>

Attendance. Attendance of all lectures is mandatory and roll will be taken. You are responsible for finding out what you missed on days when you were unable to attend. Let X be the number of unexcused absences.

- If $X < 2$, then your lowest $2 - X$ quiz scores will be dropped.
- If $X > 2$, then your overall semester grade will be decreased by a full letter grade.

Academic misconduct. Any form of academic misconduct will be reported. The penalty for cheating on an exam will typically be an automatic “F” for the entire course.

Tutoring. JagPALs offer free tutoring for this course. Check out the JagSuccess website for details: <http://www.southalabama.edu/departments/academicuccess/jagpals.html>

Changes. Not all classes progress at the same rate. Thus course requirements and policies might have to be modified as circumstances dictate. You will be given notice if the course policies need to be changed.

Additional Academic Course Policies. Information on Student Disability Services, Academic Disruption Policy and Class Demeanor, Student Academic Conduct Policy, Operational Disruptions, and other university policies are posted on USAonline.

Welcome to Calculus & its Applications!

...and please ask anytime if you have questions.