MA 138 – Calculus 2 with Life Science Applications
Brief Course Introduction

Alberto Corso
⟨alberto.corso@uky.edu⟩

Department of Mathematics
University of Kentucky

Instructor

- Instructor (001-004): **Alberto Corso**
- Lecture: MWF 10:00-10:50am
- Office: POT(≡Patterson Office Tower) 701
- Office Hours: MWF 11:00 – 11:50 am, and by appointment
- Email: alberto.corso@uky.edu
- Course Website: http://www.ms.uky.edu/~ma138

Teaching Assistants (TAs)

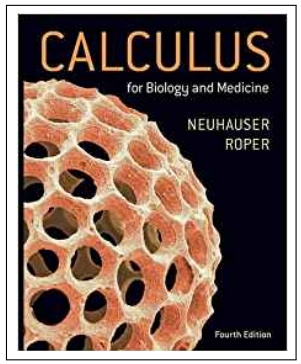
Nicholas Arsenault
POT 706 – nick.arsenault@uky.edu

001	TR 08:00-08:50 am – CB 214
002	TR 09:30-10:20 am – CB 214

Katherine (Kat) Henneberger
POT 722 – k.henneberger@uky.edu

003	TR 12:30-01:20 pm – CB 214
004	TR 02:00-02:50 pm – CB 214

Textbook



Title: Calculus for Biology and Medicine

Authors: Claudia Neuhauser & Marcus Roper

Publisher: Pearson

Edition: Fourth

ISBN: ISBN 10: 0134070046
ISBN 13: 978-0134070049

An online PDF version of the textbook is available at a University discounted rate, $31, via our Canvas shell through the FirstDay Program.

If you wish to acquire the textbook via a different source, the opt out date is January 25, 2022.

Course Outline for MA 138

Ch. 6: Applications of integration

Ch. 7: Integration techniques and computational methods

Ch. 8: Differential equations

Ch. 9: Linear algebra and analytic geometry

Ch. 10: Multivariable calculus

Ch. 11: Systems of differential equations

Grading

You will be able to obtain a **maximum of 500 points** in this class, divided as follows:

- Three 2-hour exams, 100 points each;
- Final exam, 100 points;
- Homework, 50 points;
- Weekly quizzes, 50 points.

Your final grade for the course will be based on the total points you have earned as follows:

A: 450-500	B: 400-449	C: 350-399	D: 300-349	E: 0-299
$\geq 90\%$	$\geq 80\%$	$\geq 70\%$	$\geq 60\%$	$< 60\%$

Exams (Regular and Alternate)

Regular Exams will be given on

- Tuesday, February 8 — 5:00-7:00 pm
- Tuesday, March 8 — 5:00-7:00 pm
- Tuesday, April 12 — 5:00-7:00 pm
- Wednesday, May 4 — 6:00-8:00 pm

Alternate Exams for Exams 1-3 are given on the same day as the regular exams from 7:30 to 10:00 pm (February 8, March 8, April 12). The two and a half hour exam window is meant to allow for late arrivals due to late labs. The exam is two hours long.

Review Sessions for Exams 1-3 will be held on Monday February 7, March 7 and April 11 from 4:00 to 6:00 pm on Zoom.

Homework

- The homework has **two components**: **online** and **handwritten**. Each will count as half of the final homework grade. The online problems cover the more routine aspects of the class. The written homework problems are usually more conceptual and are often motivated by problems from the Life Sciences.
- The online homework (WeBWorK) can be accessed through
  https://webwork.as.uky.edu/webwork2/MA138S22/
- Your username is your **Link Blue user ID** (use capital letters!) and your password is **your 8 digit student ID number** (that is the last eight digits without the initial "9").
- You can try online problems as many times as you like. The system will tell you if your answer is correct or not. You can email the TA a question from each of the problem. TAs will always do their best to respond within 24 hours. **Don't wait until the last minute!**

Additional instructions and expectations - Spring 21

- All lecture notes are posted in Canvas under "Files." They are grouped according to exams (1st Exam, 2nd Exam, etc.). A complete set of pre-recorded videos for these lectures is also available through Canvas.
- Homework due dates are listed on the appropriate Canvas page and in WeBWorK.
- In accordance with University guidelines, masks will be required inside of all University of Kentucky indoor spaces regardless of an individual's vaccination status. If face coverings are not worn over the nose and mouth, students will be asked to leave the classroom. The instructor may choose to remove a mask when pedagogically necessary at the front of the classroom and behind a clear plexiglass barrier.

- Quizzes will be held on Thursdays during recitation time.
- The written homework sets will need to be uploaded to Canvas as a PDF file.
- Any method of creating/uploading a PDF file with your solutions to the questions on the written homework sets is acceptable. For example, several students may annotate PDF files using OneNote as if they were real paper, then save as a PDF.

- Here is another way to scan your handwritten solutions to a PDF using your iPhone or iPad. This method uses the **Notes** app installed on all first year iPads. If you are unclear how to scan pages to a PDF, please be sure to practice well before a due date.
  1. Open a note or create a new note.
  2. Tap the Camera icon on the lower right corner of the application, then tap Scan Documents.
  3. Place your document in view of the camera on your device.
  4. If your device is in Auto mode, your document will be automatically scanned. If you need to manually capture a scan, tap the Shutter button or one of the Volume buttons.
  5. Drag the corners to adjust the scan to fit the page, then tap Keep Scan.
  6. You can add additional scans to the document or tap Save when you're done.

¿Minoring in Mathematics?

To obtain a **minor in Mathematics**, a student who has completed MA 137/138 Calculus I and II must complete the following:

1. MA 213 – Calculus III (4 credits)
2. MA 322 – Matrix Algebra and Its Applications (3 credits)
3. Six additional credit hours of Mathematics courses (=two courses) numbered greater than 213. Possible courses include: MA 214, MA 261, MA 320, MA 321, **MA 327 (Introduction to game theory)**, MA 330, MA 341, MA 351, MA 361, or any 400 level math course
4. We also just established a new cross-listed course at the upper level in Mathematics:
   MA 337/BIO 337: Mathematical Modeling in the Life Sciences

Thus you need 13 additional credit hours in Mathematics classes.