

Welcome to Math 407 – Math Meets the Real World!

Fall 2018: W 3:00 - 3:50 in SAMU 116/138

Instructor: Dr. Jean Marie Linhart

Office: SAMU 221B

Phone: (509) 963-2123 (I prefer email)

E-mail: JeanMarie.Linhart@cwu.edu

Webpages: (course) <http://canvas.cwu.edu>

Office Hours: MTTh 3:05-3:50 pm; F 1-1:50 pm
and by appointment

The best ways to contact me are email, Canvas message, and office hours. If there's something I need to remember for later PLEASE put it in email or Canvas message! If I don't reply within 24 hours over a business day, please contact me again. While I strive to be responsive and prompt, sometimes things get put off for later and unintentionally forgotten.

I am an applied mathematician, and so I am always interested in how do we actually get our devices to calculate things, and also on the other side, how math is actually applicable to the real world. The simple truth is that we humans invented mathematics because we needed it, and it is our most powerful tool for understanding and manipulating the world around us.

This course will answer questions like, “How do we actually calculate that?” and, “How does math inform us or help us with that?”

Potential topics:

1. Calculating square roots.
2. Calculating functions like $\sin \theta$ and e^x .
3. How computers understand numbers
4. Mathematical models
5. The RSA encryption algorithm
6. Personal finance

If there are other topics you are interested in, please let me know.

Grades: Your final grade is based on

Attendance	40%	This includes the final exam period
Reflections	20%	Four 200 word reflections
Homework	20%	as assigned
Paper	20%	3-4 page paper on a topic related to the class

	87 – 89.9 : <i>B+</i>	77 – 79.9 : <i>C+</i>	67 – 69.9 : <i>D+</i>	below 60 : <i>F</i>
93 – 100 : <i>A</i>	83 – 86.9 : <i>B</i>	73 – 76.9 : <i>C</i>	63 – 66.9 : <i>D</i>	
90 – 92.9 : <i>A–</i>	80 – 82.9 : <i>B–</i>	70 – 72.9 : <i>C–</i>	60 – 62.9 : <i>D–</i>	

Text: None, come to class.

Laptop: You can use the computers in the SAMU 138 lab, but you may also want to have the use of a your own laptop for the duration of this course. On your laptop install:

Anaconda for Python 3.6; see <http://www.anaconda.com/download>.

Mathematica: see <http://www.cwu.edu/~labs/>.

Make sure your course files (for this and other courses!) are backed up in case your laptop or USB drive gets broken or goes missing. You can upload files to Canvas as a backup. I use Dropbox and MacOS's Time Machine, but there are other options like Google Drive. With my files in a Dropbox folder, they are saved on the cloud at the same time I save them to my own computer.

Students with Disabilities: I am happy to work with students with disabilities. To set up academic adjustments in this class, you should give me or email me a copy of your *Confirmation of Eligibility for Academic Adjustments* from the Disability Support Services Office. **You must also come see me in office hours or make an appointment to come see me as soon as possible so we can discuss how the approved adjustments will be implemented in this class.** Students without this form should contact the Disability Support Services Office, Bouillon 140 or dssrecept@cwu.edu or (509) 963-2171. **Testing requests with testing services must be submitted at least 48 hours before an exam is given, or you will have to take the exam with the rest of the class.**

This syllabus is subject to modification as dictated by developments during the quarter. Students will be notified of changes in class and on Canvas.

Important Dates

September 19 – classes begin

September 25 – change of schedule period ends

November 2 – uncontested withdrawal period deadline

November 12 – Veteran's Day, no class

November 21-23 – Thanksgiving Holiday, no class

December 6 – Thursday, 12-2 pm, Culminating Experience