

Syllabus

Instructor: Ron Raty

Office: BUS 211

Email: rraty@olympic.edu

Phone: (360) 475-7389

[Email works best]

Office hours:

Monday thru Thursday

11-12:30

Course Description:

This is an advanced problem solving class using an alternative method for finding solutions: graphing. Similar to using drawings to find the solutions to geometry problems, graphing can be used to find the solutions to complex problems, even if there are two or more possible answers. With the availability of highly accurate computing power and the internet, this process can be a very powerful tool. You still have to know some algebra and trigonometry to define the problem, the solution is created by the computer in a graphic format.

Course Outcomes:

Upon successful completion of this course, the student will be able to:

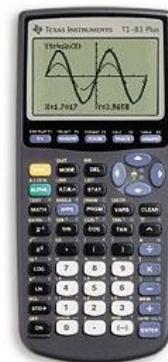
- Use coordinates to locate specific points in 2 and 3 dimensional rectangular reference frames.
- Use coordinates to locate specific points in 2 and 3 dimensional polar reference frames.
- Solve applied problems using a repetitive calculation processes.
- Solve applied problems that have multiple correct answers.
- Find and use on-line graphing applications.
- Use a spreadsheet graphing application.
- Use a graphing calculator.

Prerequisite:

Tec-D 145, or instructor permission

Required Text and Materials:

- There is no required text.
- You will need access to a computer with Microsoft Excel.
- You will need a computing device with access to the internet.
- You will need a graphing calculator, either a TI-83+ or a TI-84+. I recommend the TI-84+, the one used for examples in this class. If you can't afford one, they can be rented for \$10.
<https://www.olympic.edu/mathematics/calculator-rentals>



If the rental fee is a problem, you could also contact the “Students in Need Group”. They can often help with books and equipment.

<https://www.olympic.edu/services/students-need-group-sing>

Course Requirements:

Class Format: This class is entirely online. The readings and the exercises are administered through Canvas.

Class Organization: This class is organized into modules. Within each module is a collection of readings, shortcuts to videos, and exercises to give you practice with your new tools. At the end of each module is a short quiz to make sure you have an understanding of the material.

The modules include:

- The basics of graphing
- Graphing using an online resource
- Graphing using a graphing calculator
- Graphing using a spreadsheet application, such as Microsoft Excel.

Attendance

Physical attendance is not required for this class. All the assignments are on-line. The scheduled class time is for those needing assistance.

Final Grade

Your final course grade will be based on:

Attendance	0%
Module Quizzes	50%
Module exercises	50%

The final grade recorded with the registrar is based on the percentage of available points you manage to earn during the course.

90-100%	4.0
80-90%	3.0+
70-80%	2.0+
60-70%	1.0+
57-60%	0.7+

Any percentage less than 57% is inadequate to receive class credit, and a grade of 0.0 will be recorded.

Getting Additional Help

If you need additional help, there are several resources available.

- Ask your classmates. This helps them too, since having to explain something forces them to a higher level of understanding. You can post questions in Canvas for this purpose, or form study teams and meet in person.
- You can visit the math/physics study center. There are free tutors available on a first come/first served basis. <https://www.olympic.edu/services/tutoring-services/guidelines-mathphysics-study-center>. They are pretty good with graphing calculators, and graphing of equations in general. Deriving the equation from a real-world scenario is sometimes a different issue.
- You can send me a query through Canvas, or by email. I also have office hours if you prefer a face-to-face meeting. This is sometimes useful for particularly sticky problems.

Withdrawal:

If you decide that you must withdraw from this class, you must do in conformance with Olympic College policy. A discontinuance of attendance without an Official Withdrawal Form is an automatic 0.0 (F) for the class. This is school policy and governs all classes conducted at Olympic College. On the other hand, if you need to be inactive for while for any reason, talk to your instructor or a counselor, some accommodation can always be made. Don't just quit without talking to someone.

Cheating

If you use other people to do your homework or quizzes without understanding the material, this would be considered cheating. You are encouraged to take responsibility for your education, don't cheat. This is not only a good model for your college education, it is a good model for a successful life. Long term goals will never be achieved if you cheat on the short term goals.

About the Instructor

Ron Raty is a licensed architect with over 25 years of experience in architectural design and project management. He holds a professional Masters of Architecture degree from Montana State University. Many of the problems presented in this course, particularly in the quizzes, are directly from real life situations. Ron was raised in Montana, and has since lived and worked in Alaska, Washington, California, Fiji, and Singapore. He has specialized in the design of office buildings, schools, and health care facilities, and is licensed to practice architecture in Alaska and Washington.

American Disabilities Act Statement

Any student who feels he/she may need an accommodation based on the impact of a disability should contact the office of Access Services. Access Services will inform the instructor of any special accommodations required. This has to be done every quarter, because resources get re-allocated.

Humanities and Student Services Building, Room 204
Phone: 360-475-7540 or 1-800-259-6718 ext. 7540

Fax: 360-475-7436

E-mail: AccessServices@olympic.edu