Math 113/ Topics in Precalculus /31658/TR/8:15-10:00 / GRV 110 / Su '17

Instructor: Liz Coleman   **Office:** GRV 214   **Office hours**: TuTh 12:25 - 1:00 pm in GRV 110;
Phone: 541-383-7414   Wed: 1:ish - 3:ish in GRV 214
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Prerequisite: Math 112, Trigonometery, with a grade of B- or better.

Textbook: From the *COCC* bookstore: $112.25, *Algebra and Trigonometry* 4th ed., loose-leaf packaged with WebAssign* software, by James Stewart, ISBN: 9781305719781, published by Cengage Learning.   You should purchase a three-ring binder to keep your loose-leaf "book" intact. Alternatively, for $94.75, and no loose-leaf book you can get just the WebAssign access, ISBN: 9781285858333. In both cases, you will have access to a full copy of the book electronically through the WebAssign website.

Calculators: A graphing calculator is required, the TI83 or 84 is recommended.

Attendance: Attendance is mandatory the first week and necessary thereafter if you plan on succeeding in this course. ***You will be dropped if you miss a class the first week***

WebAssign (I do not use Black Board):

You must have a WebAssign account linked to this class to continue to be enrolled in this class.
To sign up for a WebAssign account for this class go to http://www.webassign.net/ and click on I Have a Class Key (far right side under LOG IN). The institution is: cocc.

For our section **31658** the class key is: **cocc 3177 7798**

If you already have an account from Math 111/112, or are retaking 113 and created an account prior to this term, please check "I already have a Web Assign account". *If you've never signed up for Web Assign click on*: "I need to create a Web Assign account".
Check out the WA Quick Start guide: http://www.webassign.net/manual/WA_Student_Quick_Start.pdf
        Be sure to use a username (COCC preferred) and password that you can remember!

Please *do not* use your cell phone or lap top during class.   Have the ringer turned off, and do not use it for text messaging -- it's too distracting.

IF YOU STOP COMING TO CLASS PLEASE REMEMBER TO OFFICIALLY DROP THE CLASS OTHERWISE, YOU WILL RECEIVE AN "F" FOR YOUR GRADE.

NOTE: You will only learn by doing; math is not a spectator subject. You should plan on **reading the text prior to class and take notes during class**. I encourage you to ask questions during lectures pertinent to the topic being discussed.   Get to know some of the other students in the class and get some "study buddies"!

Instructional Methods: Lecture, small group work, and discussion. *It is highly recommended that you read the assigned section(s) before class.* Homework is submitted through an on-line, web-based component called WebAssign (see: www.webassign.net).

NOTE: You will only learn by doing; math is not a spectator subject. You should plan on **reading the text prior to class, take notes during class, and having 10-12 hrs of study time outside of class**. I encourage you to ask questions during lectures pertinent to the topic being discussed.

Dropping a Class/Audits: The end of the 7th week of the term is the last day to change from a grade to an audit, or vice versa. This date is also the last day to drop a course without receiving a W on your transcript. After the 7th week and by the end of the Wednesday prior to finals week, you may drop a course and receive a W on your transcript only with permission from your instructor

ADA statement: "Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as soon as possible, no later than the first week of the term. Students may also wish to contact the COCC Disability Office in BEC, (541) 383-7583."

Classroom behavior: We are here to work and to learn. I expect you to be respectful of the classroom environment and your fellow students. I expect you to be on time for class, and to stay until the end, unless you have checked in with me beforehand. Specifically, I expect you to abide by the guidelines explained in the COCC Student Rights and Responsibilities Handbook. The most up-to-date version of this handbook can be found at:
Students Rights and Responsibilities available online (http://www.cocc.edu/Student-Life/Rights_and_Responsibilities/). Any violations of COCC's student rights and responsibilities policies will be reported to Office of Student Life.

COCC Non-Discrimination Policy: Central Oregon Community College is an affirmative action, equal opportunity institution. It is the policy of the Central Oregon Community College Board of Directors that there will be no discrimination or harassment on the basis of age, disability, gender, marital status, national origin, race, religion, sexual orientation, or veteran status in any educational programs, activities or employment. Persons having questions about equal opportunity and non-discrimination, please contact Human Resources for referral to the appropriate personnel, 541-383-7236.

Grading:	Weight	Approximate grading scale:
Homework (on WebAssign)	10%	A^-, A: 90%-100%
POD (Problems of the Day, warm ups)	5%	B^-,B^+: 80%-89.49%
Practice, Reviews, Labs	30%	C,C^+: 70%-79.49%
Midterm	25%	D: 60%-69.49%
Final	30%	F: <59.5%
Total	100%	

Exams: There will be 1 midterm test and one final given this summer quarter. *The midterm and final are closed book and no notes. The midterm and final are scheduled as follows:*
    Midterm: Week 6 – Covers material from chapters 10, 11 & 12, (Sections: 10.1, 10.2, 10.4, 11.1, 11.2, 12.1-12.4), any written work, and class notes;
MAKE-UP EXAMS FOR EXAMS MISSED ARE GIVEN WITH <u>PRIOR</u> ARRANGEMENT ONLY.
    Final exam: The last day of class, August 31, GRV 110 or GRV234
The final is comprehensive, start reviewing a couple weeks ahead of time.

Homework, Practice, Review, Group Work, Labs, POD's:

Homework-10% of grade (WA-HW) will be assigned in class and due dates will be posted in class and on WebAssign, (WA). Bonus points (10% of your correct work points added back) will be awarded for HW submitted by midnight of the "due" dates. The absolute deadline for HW is the night prior to the day in which the test for the material will be held. No late HW will be accepted after the deadline. The homework is only available on WebAssign.

Practice, Review, Group Work, Labs-30% of grade these will be handed out on a daily basis and due dates will be posted in class and on WA. Written work needs to be turned in on time if you want it graded and back to you in a timely manner. **Late work will be accepted up to a week late only with a 25% penalty**.

POD's are warm-up problems from Math 111. They will be collected or checked off every class meeting.

Any work handed in MUST be presented:
  • neat and in <u>PENCIL ONLY (points will be deducted for pen)</u>.
  • your name -first and last, and class meeting time in the <u>*upper-most right-hand corner of the page.*</u>
  • **no frilly edges.**
  • Points will be deducted for incorrect notation, wrong answers, and infractions to presentation.
  • **Always show all necessary work for full credit. Leave a couple spaces empty between each problem.**
  • Staple more than one paper together; please do not fold the corners together or paper-clip papers together. Use both sides of the paper.

Course Description: Mth 113 is a course designed to examine in detail topics chosen from the applied, real-world, and theoretical mathematical implications of analytic geometry, nonrectangular coordinate systems, vectors, and matrices. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasis will be on solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Mth 113 has the competencies from Mth 112: Trigonometry as prerequisites; the course is college-transferable. Mth 113 is a 4 credit hour (quarter system) course.

Performance Based Outcomes in Mathematics:

Students who successfully complete any mathematics course at Central Oregon Community College will be able to:

1. *Work independently to explore mathematical applications and models, and to develop algebraic/symbolic, graphical, numerical, and narrative skills in solving mathematics problems.*

2. *Work as a member of a group/team on projects or activities that are designed to explore mathematical applications and models.*

3. *Use both written and oral skills to communicate about mathematical concepts, processes, complete mathematical solutions and their implications.*

4. *Use a variety of problem solving tools including symbolic/algebraic notation, graphs, tables, and narratives to identify, analyze, and solve mathematical problems.*

5. *Develop mathematical conjectures and use examples and counterexamples to examine the validity and reasonableness of those conjectures.*

6. *Create and analyze mathematical models of real world and theoretical situations, including the implications and limitations of those models.*

7. *Use appropriate technologies to analyze and solve mathematics problems, and verify the appropriateness and reasonableness of the solution(s).*

Specifically, students who complete Math 113: Analytic Geometry will be able to:

- model and solve problems involving vectors in two dimensions both algebraically and graphically and understand the relationship between the methods and solutions.

- model and solve applied, real-world, and theoretical mathematical problems involving conic sections, parametric and polar coordinate systems, and matrices[1, 2, 4, 5, 6]

- model and solve problems using symbolic, graphic and numeric strategies and translate among written descriptions, symbolic, graphic and numeric representations of conic sections and other functions in parametric and polar coordinate systems.

- apply matrix methods to solve systems of equations and their applications.

- model and solve problems involving vectors in two dimensions both algebraically and graphically and understand the relationship between the methods and solutions.

WEEK	*Tentative* weekly schedule for Math 113 Summer 2017
1- (Tues's) **June 27**	Introduce Systems of Linear and Nonlinear Equations in 2 variables, read 10.1&10.8, **WA-HW1** (*6-30: Last day to attend new class*)
2- **July 4**	No class, Tuesday, July 4th, Independence Day, Holiday, College closed Introduce Matrices and Systems of Linear Equations for 2 or more variables, read 10.2&11.1, **WA-HW2** (*7-7 Tuition due & end of refund period*)
3- **July 11**	Matrix Arithmetic, read section 11.2, **WA-HW3;** Introduce the Conic Sections, Ch 12 sections 12.1-12.4; Start with Parabolas, read 12.1, **WA-HW4**
4- **July 18**	Ellipses and Hyperbolas, **read sections 12.2 & 12.3, WA-HW5**
5- **July 25**	Shifted Conics, **read section 12.4, WA-HW6** **Introduction to Polar Coordinates, read 8.1, WA-HW7**
6- **Aug 1**	**The midterm is scheduled today; covers material from chapters 11 & 12.** Graphs of Polar Equations, **read 8.2, WA-HW8;** Polar Form of Complex Numbers, **read 8.3, WA-HW9**
7- **Aug 8**	Plane Curves and Parametric Equations, **read 8.4, WA-HW10** Introduction to Vectors in 2-dimensions, **read 9.1, WA-HW11** **Aug 11, 1pm, Last day to drop class with no grade on transcript**
8- **Aug 15**	The Dot Product (vector multiplication and its meaning), **read 9.2, WA-HW12** Introduction to 3-dimensional Coordinate Geometry, **read 9.3, WA-HW13**
9- **Aug 22** No classes on Monday	Vectors in 3-dimensions, **read 9.4, WA-HW14;** Cross Product for Vectors (another form of vector multiplication and its meaning), **read 9.5, WA-HW15** **Aug. 23, Last day to withdraw**, receive a "W" grade (need instructor's signature)
10- **Aug 29**	REVIEW for the final! **The final exam is the last day of class and is comprehensive.** GRV 234: **Thursday, August 31**

Disclaimer: The contents of this syllabus are subject to revision at the discretion of the instructor.