Eastern Oregon University
Course Syllabus

Number of Course: Math 112

Name of Course: Precalculus

Catalog Description:
In this course students experience a detailed treatment of exponential, logarithmic, trigonometric and inverse trigonometric functions designed to prepare them for calculus.

Credit Hours: 4

Required Texts or Suggested Materials:
Are available at: http://eou.bncollege.com/

Prerequisites: Math 111 or equivalent

Learning Outcomes:
1. Produce the standard unit circle.
    - Including standard degree/radian angle measures and Cartesian coordinates.
2. Convert from radians to degrees and vice versa.
3. Determine the value of a trig function, given the value of another trig function and the quadrant the angle lies in.
4. Determine the inverse of a given trigonometric function.
    - Including transformations of sine, cosine, and tangent.
    - Including evaluating composition of inverse trigonometric functions with trigonometric functions and vice versa.
5. Graph a given trigonometric function.
    - Including transformations of sine, cosine, tangent, cotangent, secant, cosecant.
    - Including inverse sine, cosine, and tangent.
6. Demonstrate an understanding of trigonometric identities and their proofs.
7. Solve trigonometric equations.
    - Including equations with solutions over a given interval or over all reals (radians).
    - Be able to write infinite solutions in the "$2\pi k$, k any integer" or "$2\pi k$, $k \in Z$" notation.
8. Use trigonometry, including Laws of Sine and Cosine, to find unknown information in a given triangle.
9. Set up and solve applied problems using trigonometry.
10. Graph in polar coordinates.
11. Convert Cartesian coordinates to polar and vice versa.
12. Find and graph the nth roots of a complex number in the complex plane.
13. Simplify expressions involving complex numbers.
    - Including expressions involving multiplication, division, addition, or subtraction of complex numbers.
14. Work with complex exponentials and understand their relationship to polar coordinates.
15. Understand vectors and their connection with triangles.
    - Including using Laws of Sine or Cosine to find unknowns.
    - Including graphing the vectors.

• Including finding the dot product, magnitude, and unit vector in the direction of a given vector.

Course Requirements: *Major assignments, attendance expectations*

Grading Policies:
Grades in this class will be based on homework assignments (each one worth 10 points), three in-class tests (50 points each), and a comprehensive final exam (75 points).
To calculate your grade I will simply divide your total points by the total points possible and convert that to a percentage. I will use the following scale:

93–100: A	73–76: C
90–92: A−	70–72: C−
87–89: B+	67–69: D+
83–86: B	63–66: D
80–82: B−	60–62: D−
77–79: C+	0–59: F

Means of Assessment:
Explain how assignments demonstrate learning outcomes of the program, connected explicitly to outcomes (for example, by number) Please indicate the Program Learning Outcome.

Brief Outline of Course:
Describe the nature of the course (lecture and lab, workshop format, etc.), any specific course content not detailed in the catalog description, and brief schedule.

Writing Center Statements:

For on-campus courses
The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU's undergraduate and graduate students who are writing for any course at any level, or who are writing resumes, job letters, graduate applications, and more. Go to **eou.mywconline.com** to schedule an appointment in the Writing Center (Loso Hall 234).

For online or on-site courses
The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU students writing for any undergraduate course. Go to **EOU's eTutoring page** to submit a paper to a writing tutor.

For graduate courses
The Writing Center provides a place — physical or virtual — where every EOU writer can find an interested, responsive reader. Writing tutorials are free of charge for EOU students writing for any

graduate course. Go to **EOU's eTutoring page** to submit a paper to a writing tutor. Click on **Graduate Students How To** for information about tagging your submission.

Classroom Decorum:

Academic Misconduct Policy:
Eastern Oregon University places a high value upon the integrity of its student scholars. Any student found responsible for an act of academic misconduct (including but not limited to cheating, unauthorized collaboration, fabrication, facilitation, plagiarism or tampering) may be subject to having his or her grade reduced in the course in question, being placed on probation or suspended from the University, or a combination of these. (Please see the Student Handbook online at http://www.eou.edu/sse/student-handbook/).

Accommodations/Students with Disabilities policy:
Any student who feels he or she may need an accommodation for any type of disability, must contact the Disability Services Office in Loso Hall, Room 234. Phone: 541-962-3081.

Disclaimer:
This standard syllabus provides only general information on the course. For those enrolled in the course a detailed syllabus will be provided by the Instructor at the beginning of the term. Please keep in mind that not all courses are offered every year. Consult Webster for scheduling information.

Date: 2018