Crook County High School: Precalculus

Course Length: Year Long

Instructor for 2017-2018: Christine Kasberger

Contact Phone: (541) 416-6900 x3138
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E-mail Address: christine.kasberger@crookcounty.k12.or.us

Course Description

Goals: By the end of the year, 100% of students will meet or exceed Precalculus standards (60% or higher).

Expectations:

- Please be to class on time.
- Once you enter the room, please sit down and complete the daily opener.
- No cell phone use (with some teacher-directed exceptions). Please leave cell phones out of sight.
- Be **Respectful**, **Reasonable**, **Responsible**, and **Safe** at all times.
- Keep an organized notebook.
- Perservere.

Notebook Requirements:

- You will need to keep an interactive notebook with all homework, classwork, notes, quizzes and distributed materials.
- Precalculus builds on all the math you've learned before, and each new concept builds on the previous concepts we've learned this year. You should maintain your notebook in whatever fashion will make it easiest for you to refer to previous work throughout the year.

Supplies:

- Pencils (PLENTY) and an Excellent Eraser - Mistakes are part of the process.
- Spiral Notebook.
- Lined Paper and Graph Paper.
- Ink Pen and Highlighter.
- ***Graphing Calculator Required*** (TI-83 or TI-84 Recommended) TI-89 and TI-Nspire calculators not allowed. Calculators are available for rental from the Media Center.

Assignment Requirements:

- **Homework** will be collected in the form of a homework quiz. You will complete your assignments in your interactive notebook, correct your answers in class the next day, correct any mistakes made in another color. Make sure you have answered all your questions!
- Title, date, problem numbers
- Write neatly and legibly.
- Copy the problem or write the critical information needed to solve the problem.
- Graphs and sketches always include scale numbers.

- Justify your answers. On written assignments and during class discussions, you will be expected to tell how you solved the problem, why you solved it that way, and why your answer makes sense. The objective is not to just do the math correctly and get the answer, but also to effectively communicate the problem-solving process.
- Write your solutions so that **anyone** reading your paper can follow the flow of your solution. Organization is as important as using the correct terminology and notation.
- Check that your answer has the correct units (inches, square meters, miles per hour, etc.) and is rounded to three decimal places, if appropriate.

Grading Policy:

Your grade for the class will be calculated from the following categories for both Mth 111 and Mth 112:

Mth 111

70% Standards Assessments

- Unit 1 Exam: Functions & Their Graphs
- Unit 2 Exam: Polynomial & Rational Functions
- Unit 3 Exam: Exponential & Logarithmic Functions
- Unit 7/8 Exam: Systems of Equations, Inequalities, & Matrices

10% Formative Assessments (homework, quizzes, notebook)

20% Comprehensive Final Exam

Mth 112

70% Standards Assessments

- Unit 4 Exam: Trigonometry
- Unit 5 Exam: Analytic Trigonometry
- Unit 6 Exam: Additional Topics in Trigonometry including 2-Dimensional Vectors

10% Formative Assessments (homework, quizzes, notebook)

20% Comprehensive Final Exam

Corresponding Letter Grade	Proficiency Scale	Percentage Scale
A	Exceptional Mastery	90 - 100
B	Mastery	80 - 89
C	Proficient	70 - 79
D	Minimal Proficiency	60 - 69
F	Does Not Meet	Below 60

There will be no extra credit offered. Make-up work will have a 1-day extra per-day-absent time limit.

Students in Mth 111/112 will not be allowed to retake tests or make test corrections as per OIT requirements. Students taking high school credit can retake chapter assessments provided they have met the prerequisite work for retakes. The work turned in is for retake purposes only and does not count for missed assignments.

Mastery Quizzes will be offered periodically, and may be retaken as many times as needed to demonstrate mastery of fundamental skills.

Textbooks: *Math 111: College Algebra, by Gregg Waterman (OIT Mathematics Professor) - Fall*
Precalculus, by Ron Larson-Fall and Spring
Notes from Dr. Randall Paul, OIT Mathematics Professor - Spring

Notification of the Right to Object to the Use of Materials:

Any resident of the district may raise objection to instructional materials used in the district's educational program despite the fact that the individuals selecting such materials were duly qualified to make the selection and followed the proper procedure and observed the criteria for selecting such material.

The first step in expressing objection is consultation with the classroom teacher or library staff and providing a brief written complaint. The staff member receiving a complaint regarding instructional materials shall try to resolve the issue informally through the discussion of the original assignment or the opportunity for an alternative assignment.

If not satisfied with the initial explanation or an alternative assignment, the person raising the questions will meet with a building administrator who, if unable to resolve the complaint, will provide a Request for Reconsideration form which will be given to the superintendent for action.

Standards

By the end of the fall semester:

- Students should be able to solve equations and inequalities in one unknown, including:
    - linear and absolute value equations and inequalities;
    - quadratic and other polynomial equations and inequalities;
    - equations involving rational and radical expressions; and
    - equations involving exponential and logarithmic expressions.
- Students should be able to solve systems of equations and inequalities using graphing, substitution, and matrix operations.
- Students should be able to graph solution sets of equations in two unknowns and describe the relationship between equations and their graphs.
- Students should be able to analyze and interpret operations with functions including:
    - addition, subtraction, multiplication and division of functions;
    - composition of functions;
    - finding the inverse of functions; and
    - transformations of functions.

By the end of the spring semester:

- Students should be able to demonstrate an understanding of the unit circle.
- Students should be able to graph and interpret periodic functions.
- Students should be able to solve trigonometric and inverse trigonometric equations.
- Students should be able to use right triangles to find exact values of special angles.
- Students should be able to use the Law of Sines and the Law of Cosines to set up and solve applied problems.
- Students should be able to use vector operations to solve problems.
- Students should be able to employ trigonometric identies when needed.