College of Western Idaho

Fall and Spring 2017-2018

Mathematics
PreCalculus
147

Robert McDougall
Office: room 108 7:45-3:25 M-Th
robertmcdougall@visioncsd.org

Students and Instructors are accountable for all information on the Course Syllabus, as well as the Institutional Syllabus Addendum, which is located on the Blackboard Site for this course. For further information regarding Library resources, accommodations, and more, please refer to the addendum on Bb.

Instructor Availability

- Office hours Monday –Thursday 7:45-3:25
- Emails will be returned during the day they are received or the next school day depending upon receipt.
- Appointments are available upon request.

Course Description

This is a single-course equivalent to College Algebra (MATH 143) plus Trigonometry (MATH 144). Credit hours are not granted in both MATH 143 and MATH 147 nor in both MATH 144 and MATH 147. PREREQ: Units 1-12 of MATH 095, prior completion of MATH 108 with a minimum grade of C, or equivalent placement score. (This CWI course meets Idaho State Board GEM competency requirements in GEM 3 - Mathematical Ways of Knowing.)

General Education Competency Area (This section is required for General Education Courses)

This course fulfills the Idaho State General Education competency area of:
Pre-Calculus

AND/OR
This course meets a CWI Institutionally Designated Core competency area of (CWID or Global Perspectives)

Academic Affairs Objectives:

This section is required for all classes. Please check appropriate boxes for your course, as outlined by your department:

✓ **Learn to Learn**. Students learn that as important as content knowledge is, shaping one's future requires the development of skill in discerning, applying, analyzing, synthesizing and evaluating knowledge in diverse contexts. The educational experience at CWI prepares students for a world in which they are likely to change occupations and face unpredictable life events. We strive to develop courses and learning experiences that give students the tools to confidently thrive in a complex, information-saturated, diverse, and dynamic world.

✓ **Make Connections**. Students learn success in today's interconnected world requires deliberate engagement and comfort with multiple perspectives, cultures, and contexts. In navigating

difference and diversity in the natural and social worlds, students connect ideas, forms of knowledge, and practices to create a richer understanding of themselves as personally and socially responsible citizens.

✓ **Solve Problems**. Students identify problems, analyze and implement solutions, and interpret and reflect on outcomes to develop skills to individually and collaboratively face challenges and create opportunities.

✓ **Reason Ethically**. Students learn that ethical ideas and moral conduct may be understood from many perspectives: as products of historical, cultural, and religious forces, as reflections of human nature, and as personally held attitudes and beliefs. Students learn to articulate ethical self-awareness, ethical issue recognition, and varieties of ethical perspectives to evaluate, create, and live consciously according to their own personal moral values.

Course Schedule

- Tuesday, Thursday and alternating Fridays from 9:53-11:27 am
- Vision Charter School room 108
- Year Long

Course Objectives and Outcomes

1. Solve Equations. The student will be able to solve various types of equations, including linear, quadratic, polynomial, rational, radical, absolute value, exponential and logarithmic equations; and solve systems of equations.
2. Solved Inequalities. The student will be able to solve various types of inequalities, including linear, compound, absolute value, quadratic, and rational inequalities; and solve systems of inequalities.
3. Graphing. The student will be able to graph various types of equations & functions, including linear, quadratic, polynomial, rational, exponential and logarithmic functions; and graph conic sections.
4. Functions. The student will be able to understand and work with functions; concepts will include defining the domain and range, evaluating a function, working with composite functions, finding inverse functions, finding the zeros of a function, and finding the difference quotient.
5. Apply Content. The student will be able to model data and solve application problems relating to real world problems.
6. Trigonometric Functions: The student will understand and be able to use the trigonometric functions and the circular functions; concepts will include defining the functions, evaluating the functions, solving triangles, solving trigonometric equations, and graphing the functions and their inverses.
7. Trigonometric Identities: The student will be able to understand and use trigonometric identities, concepts will include: simplifying, proving, evaluating, and using identities to simplify and/or solve equations.
8. Apply Content: Students will be able to apply trigonometric functions to real world applications; concepts will include solving application problems, working with complex numbers in trigonometric form; working with polar equations, and working with parametric equations.

Outcomes Assessment

Daily assessments will be given to the students to determine understanding of the lesson. Exams will be given after each unit with and final exam.

1. Final Exam Part One – Questions #1-4 (To achieve the standard, the student must answer 3 out of 4 questions correctly.)
2. Final Exam Part One – Questions #5-8 (To achieve the standard, the student must answer 3 out of 4 questions correctly.)
3. Final Exam Part One – Questions #9-12 (To achieve the standard, the student must answer 3 out of 4 questions correctly.)

4. Final Exam Part One – Questions #13 -16 (To achieve the standard, the student must answer 3 out of 4 questions correctly.)
5. Final Exam Part One – Questions #17-20 (To achieve the standard, the student must answer 3 out of 4 questions correctly.)
6. Final Exam Part Two – Questions #1-5 (To achieve the standard, the student must answer 4 out of 5 questions correctly.)
7. Final Exam Part Two – Questions #6-10 (To achieve the standard, the student must answer 4 out of 5 questions correctly.)
8. Final Exam Part Two – Questions #11-15 (To achieve the standard, the student must answer 4 out of 5 questions correctly.)

Grading Policy

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Percentage	Letter Grade
100-90	**A**
89-80	**B**
79-70	**C**
69-60	**D**
59-0	**F**

- Point Distribution:
  - Homework/Quizzes 15%
  - Tests 60%
  - Semester Exam 25%

- Methods used to evaluate student performance (required assignments, quizzes, group work, participation, presentations, exams, etc.)

Textbooks and Required Materials

Bittinger, Algebra & Trigonometry: Graphs and Models, 6nd edition, Pearson Education, 2017, 978-0-13-417904-9.

The required materials for each class are pencils, pens, scientific calculator, textbook and core binder or another method for note taking.

Course Calendar

September 7 test 1
September 26 test 2
October 6 test 3
October 26 test 4
November 16 test 5
December 19 Semester 1 final
January 18 test 6
February 2 test 7
February 22 test 8
March 15 test 9
April 12 test 10
April 26 test 11
May 17 Course final

Calendar is subject to change.

Course Expectations

- Each student is expected to spend time outside of the class to prepare themselves for the rigors of a college course.
- Students are expected to complete homework on time. Late homework assignments will not be accepted for credit. Students with excused absences will be given two extra days for each consecutive class missed. It is the student's responsibility to acquire all absent homework. Students with unexcused absences or absences due to field trips or other extracurricular activities must turn in all assigned work before leaving and will be responsible for that day's assignments.
- Complete end of course evaluations

Computer Proficiency Expectations:

Students in this course are expected to be proficient in the following areas: General computer use.
The following resources are available as needed: Laptops are available in class.

Behavioral Expectations:

Every student has the right to a respectful learning environment. In order to provide this right to all students, students must take individual responsibility to conduct themselves in a mature and appropriate manner and will be held accountable for their behavior. Students who disrupt the class or behave inappropriately or disrespectfully, as determined by the instructor, may be asked to leave the classroom.

If conduct continues to be an issue, students may be referred to Student Conduct for judicial action. It is the student's responsibility to check their email to receive notification of any scheduled appointments or other urgent communications.

Any student who has witnessed or experienced a violation of the student code may contact Student Conduct at 562-2305, or email: conduct@cwidaho.cc

Academic Honesty:

All work submitted by a student must represent his or her own ideas, concepts, and current understanding.
All material found during research must be correctly documented to avoid plagiarism. Cheating or plagiarism in any form is unacceptable and violations may result in disciplinary action ranging from failure of the assignment to failure of the course. Repeated acts of academic dishonesty may have more severe institutional ramifications. The consequences for cheating in this class are listed below:

- The student will receive a failing grade for the assignment. [You may include your own consequences here]

Emergency Procedures

Emergency procedures are posted next to the door leading outside or will be broadcasted over the public announcement