Central Washington University
Course title and number:
Math 153-002, Precalculus I
Course offered: Spring 2016
Credits: 5 credit hours

Instructor contact information: Dr. Frank Underdown Jr.; Cell# 509-989-5533 (please, no call after 9:00 pm); email:Contact me through Canvas
Course time & place: MoTuWeThFr

9:00-9:50am, Bouillon Hall 110

Note: I will upload course materials to Canvas (Homework problems, solutions, etc. You will also be able to communicate with me via Canvas.

Office: Black Hall **room 225-34**
Office hours: 10:00-11:00am Monday - Friday

Textbook: Precalculus (Pkg w/ Mymathlab); Author: Sullivan; Pub: Pearson, ed. 9

Note: We are required to cover section 1.4, Chapters 2, 3, 4 and 5. We will cover additional information as time allows.

Course Content: Polynomials, rational, logarithmic, and exponential functions with application to problems in mathematics and science.

Equipment: Scientific calculator and computer

CATALOG DESCRIPTION: A foundation course which stresses those algebraic and elementary function concepts together with the manipulative skills essential to the study of calculus.

PREREQUISITE: Prerequisites: either MATH 100C with a grade of C or higher; or a score of 18 or higher on the Intermediate Math Placement Test, or a score of 66 or higher on the Compass Algebra test.

Measurable learning objectives, At the end of the course students should be able to:

1) Graph linear, polynomial, exponential and logarithmic equations
2) Identify equations from graphs
3) Work with functions: Inverting, composing, multiplying and dividing functions
4) Represent and solve real world problems involving quadratic functions
5) Represent and solve real-world problems involving exponential growth and decay

This is the intended schedule for the class. Topics listed each day are the sections that are planned to be discussed in class on that day. It is not unusual to be two or three days ahead or behind this schedule, but we will cover the material in this order.

Week 1: Review Numbers and Arithmetic

Week 2: Equations and Inequalities and circles

Week 3: Working with Polynomials

Week 4: Factoring Polynomials

Week 5: Functions

Week 6: Non-linear Functions and Equations

Week 7: Logarithmic Functions

Week 8: Exponential Functions

Week 9: Final Exam

IMPORTANT DATES:
March 29, , Classes Begin
May 30, Memorial Day, no classes
June 3, Classes End, Last Day of Instruction
June 6-9, Final Exam week
June 14, Grades due

POINT OF CONTACT

Please make sure I have a way to contact you, via your email and phone number.

Also you may want to exchange phone numbers and email with your fellow students to form study groups.

FLIPPED CLASSROOM APPROACH TO EDUCATION.

I use a **modified flipped classroom** approach to teaching. This has proven to be a very successful approach to teaching and learning. The definition of the flipped class follows:

The **flipped classroom** is a pedagogical model in which the typical lecture and homework elements of

a course are reversed. Short video lectures are viewed by students at home before the class session, while in-class time is devoted to exercises, projects, or discussions.

For more information on this method of instruction, see the book: **Flip Your Classroom** by Jonathan Bergmann and Aaron Sams.

Logistic of the Course

1) In class I will try to limit my lectures to 20 min.

2) After the lecture, you will be given worksheet in class to apply what you have learned. This way, I can help you with in trouble you are having before you leave the classroom.

3) Preparation for each day consist of watching short videos or a reading assignment on the topic we will discuss the following day.

4) Worksheets that you do not finish in class will be considered homework to be completed at home.

Why a flipped classroom?

This has proven to be the most successful model of education. The majority of my students earn As and Bs in my course.

In generally, students who do not do well, have not applied themselves in course: Did not watch the videos, did not due the worksheets and/or homework, did not do the assigned/suggested reading etc. Some students walk out of class after the short lecture and never benefit from doing the worksheet in class. **All of this sets them up to receive a bad grade at the end of the term.**

HOW TO BE SUCCESSFUL IN THE COURSE
The following is a list of what you can do to be successful in the course:

1) Come to class every day ready to learners
2) Watch assigned videos
3) Do worksheets and or homework
4) Get help early in the course if you are having trouble:
    a) Ask questions in class
    b) Take advantage of my office hours
    c) Got to the math help center
    d) Work in study groups

ASSESSMENT METHODS AND GRADING SCALE

Your grade will be based on the following:
Homework 25%
Quizzes (Quest) 50%
Final exam /project 25%

Worksheet/Homework

Worksheet/Homework will be assigned but not collected. The worksheets/homework are posted to canvas in the appropriated module. The solutions are provided in canvas. You will be credited 25% of your grade for doing worksheets/homework

Note: I do not penalize you for making mistakes on worksheets/homework. Compare you answers to the solutions provided. If you solutions don't look like mine, it is your responsibility to come and see me and find out why we do not have the same solution.

Quizzes

You will have a quiz about every 2 weeks, 5 quizzes total. Each quiz is worth 10% of your final grade.

Final Exam/Project

You will either have a comprehensive final exam or a 10 week group project on mathematical modeling of an approved topic.

Research projects require the submission of a formal project proposal that must be approved before starting the project. The exam/ project is worth 25% of your grade.

We will discuss the research project during the first week of class.

If we end up doing research projects, you will be grades on:

1) Your formal proposal
2) The quality or your work
3) Your cooperation and participation with your group members
4) Design of your presentation materials (powerpoint, etc)
5) Final presentation of the project during exam week

The grading scale follows:

94-100/A/4.0	80-83/B-/2.7	67-69/D+/1.3

90-93/A-/3.7	77-79/C+/2.3	64-66/D/1.0
87-89/B+/3.3	74-76/C/2.0	60-63/D-/0.7
84-86/B/3.0	70-73/C-/1.7	below 60/F/0

ATTENDANCE POLICY

You can attend or not attend at your own discretion. However, If you don't attend, you will not be able to pass the exams

ACADEMIC HONESTY

As members of the Central Washington University learning community, students are not to engage in any form of academic dishonesty. Forms of academic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, grade tampering, and misuse of computers and other electronic technology. Students who engage in academic dishonesty may receive an academic penalty or a disciplinary penalty or both. The disciplinary consequences of engaging in any form of academic dishonesty include reprimand, probation, suspension, and dismissal. A student who knowingly helps or attempts to help another individual to violate the University's policy on academic honesty also may be subject to academic as well as disciplinary penalties.

SEXUAL HARASSMENT/EQUITY/DIVERSITY STATEMENT.

As your instructor, I am committed to creating and sustaining a safe and inclusive environment for learning. I expect you, as students, to share this commitment with me as we have a shared responsibility to treat each other with dignity and respect. Mutual respect and nondiscrimination includes freedom from sexual harassment. CWU policy defines sexual harassment as unwelcome, sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature under particular conditions. Title IX considers sexual harassment to be a form of discrimination. If you experience sexual harassment, or know someone who is being sexually harassed, you are encouraged to report concerns to me, another faculty member or employee, or to Gail Farmer, Equal Opportunity, at 509-963-2206, farmer@cwu.edu, Bouillon 205. Complete policies are available online at www.cwu.edu/hr.

DISABILITY STATEMENT:

Example: Students who have special needs or disabilities that may affect their ability to access information or material presented in this course are encouraged to contact me or the Center for Disability Services (cds@cwu.edu, 963-1202, Bouillon 140).

NECESSARY ADJUSTMENTS TO THE COURSE

I reserve the right to change the content or structure or the course as necessary to improve your learning experience. I will announce in class and in writing (announcements in Canvas) any changes tI make to the syllabus.