Instructor: Julianne Connell Sachs
Office Phone: 527-3662
Office Address: 15B, WWCC Main Building
Office Hours: 9:30-10:20 am, Monday-Friday
E-mail: julianne.sachs@wwcc.edu
Notes: I will be available and online at various times throughout the day. Please feel free to contact me by email, telephone, or in person.

Required Text

*Elementary Mathematical Modeling* by James Sandefur. Students are expected to read and study the sections of the book that we cover.

Suggested Text

The student solutions manual is also recommended and available at the bookstore.

Course Description

This course focuses on elementary mathematical modeling of real world situations through the use of discrete dynamical systems. The spreadsheet software Excel is used throughout the course to analyze, both numerically and graphically, the behavior of discrete dynamical systems.

Course Objectives

1. Mathematically model real world situations through the use of discrete dynamical systems.

2. Understand the purpose and behavior of discrete dynamical systems and demonstrate competency in creating and analyzing them.

3. When appropriate, understand and use parameters and equilibrium values in discrete dynamical systems.

4. Use the spreadsheet software Excel to evaluate dynamical systems, assess the stability of equilibrium values, and describe the systems' behaviors.

5. Apply linear and exponential functions to discrete dynamical systems and to real world situations.

6. Communicate mathematics in written form.

Course Requirements

**Calculator:** A scientific calculator is required for the course. The use of cell phones is prohibited during exams, thus should not be depended upon for calculations.

**Excel:** The spreadsheet software Excel is used extensively throughout the course. It is available in computer labs on campus. Microsoft Office, which includes Excel, is available at the bookstore for a very good price.
**Grading Policy**

At any point in the quarter, your grade can be determined by dividing the points you have earned by the points possible.

Homework will be assigned but will not be collected regularly. It is extremely unlikely that you will be successful in the course if you choose not to complete the homework. Quizzes will be directly based on homework problems and will be given frequently. There will be 18 quizzes, each worth 10 points. Your lowest three quiz scores will be dropped, thus 15 quizzes will comprise 150 points of your final score. These quizzes may be given online or they may be Excel assignments that you must submit. Quizzes will not be given late.

There will be two midterm exams, each worth 150 points. The final exam will also be worth 150 points.

Your grade will be calculated by dividing the points you have earned by the 600 points possible.

This percentage will fit into one of the categories below:

- **A:** greater than or equal to 93
- **A-:** greater than or equal to 90 and less than 93
- **B+:** greater than or equal to 87 and less than 90
- **B:** greater than or equal to 83 and less than 87
- **B-:** greater than or equal to 80 and less than 83
- **C+:** greater than or equal to 77 and less than 80
- **C:** greater than or equal to 73 and less than 77
- **C-:** greater than or equal to 70 and less than 73
- **D+:** greater than or equal to 67 and less than 70
- **D:** greater than or equal to 60 and less than 67
- **F:** less than 60

**Attendance Policy**

It will be essential that you take responsibility for your learning in this class. While you are not required to log in any certain number of days each week, you are expected to stay up to date with the lectures, assignments, quizzes, and exams. Occasionally, you may be asked to participate in the discussion board, as part of an assignment. Outside of this, discussion board participation is optional. Feel free to use the discussion board to ask questions. I strongly recommend you check the discussion board regularly to gain insight from other students' questions.
Exam Policy

The exams must be proctored and taken at an approved testing center. You must show photo ID when you take your exam. You will have one hour to complete the midterm exams and two hours to complete the final exam. The exams will be paper and pencil exams. You will have no access to the computer, notes, or text. You must provide your own writing utensil and scientific calculator. A cell phone is not a scientific calculator and cell phone use is prohibited during exams. Show all work on the exam. If you use scratch paper, you must turn it in with the exam. Some exams may include a take-home portion to be done with the use of Excel.

If there is an occasion for which you are unable to take a mid-term exam on the dates specified, contact me as soon as possible in order to make proper arrangements.

Walla Walla students can test at the WWCC Testing Lab. You will find the hours and other useful information at http://www.wwcc.edu/CMS/index.php?id=979.

Clarkston students will need to schedule exams during the specified dates with the librarian, Jackson Vance, who can be reached at 509.758.1714.

I will work with other proctoring centers as needed.

Academic Integrity

Academic dishonesty (cheating) is not tolerated and will result in an F grade.

Disability Policy

A student with a documented disability may request accommodations by contacting Claudia Angus, Coordinator of Disability Support Services, at 527-4262 or by email at claudia.angus@wwcc.edu.

Miscellaneous

Do not hesitate to ask questions. It is essential that you consistently put forth the effort necessary to succeed, beginning today.