MATH 98 DE (#3375):
Intermediate Algebra I
Syllabus – Winter 2015

INSTRUCTOR:

Greta Kocol
Department of Mathematics
Skagit Valley Community College
2405 College Way
Mount Vernon, WA 98273-5899

Phone/Voice Mail: (360) 416-7917
Office: L201T
Office Hours: 10:30AM MWF, 8:30 TTh
Email: greta.kocol@skagit.edu
Web: faculty.skagit.edu/gretakocol

COURSE TEXT/MATERIALS:

REQUIRED
1.) Access Code for MyMathLab (can be purchased online ($75+) or at the time of registering with MyMathLab (~$103). Also available in the bookstore (~$138).
Note: If you have already used this text with MyMathLab you do not need a NEW access code.
2.) A graphing calculator is required (**TI-83 or TI-84).**
Graphing calculators are available to rent for $20 per quarter. See Beth Oshiro in A-222, M-F 8:45AM-5:30PM if interested, or you may find a good deal at a pawn shop or online (TI-83+ buy it now on ebay $34).
3 A TI-Connectivity Kit (computer/calculator silver link cable that may have been included with your calculator) is required. You can use the TI-Connect and link cables in the Math Center (L221) if you would rather not purchase one.

OPTIONAL
1.) Paper copy of Math 97 text: *Elementary and Intermediate Algebra, Functions and Authentic Applications*, 2nd edition, Jay Lehmann. Since this book is available electronically online with your access code you do not need a physical text.

COURSE PREREQUISITE:
Beginning Algebra (Math 97) with a grade of "C" or better, or equivalent math placement score.

GRADING:

30% - Exams (4 - online)
20% - Final Exam (In person or proctored – 50% needed to pass the course)
15% - Projects
10% - Activities
25% - MyMathLab Online Homework

I will follow the scale below for points accumulated and will use + and - grades as well.

▪A: 90 - 100%, ▪B: 80 - 89%, ▪C: 70 - 79%, ▪D: 60 - 69%, ▪E: 0 - 59%

COURSE DESCRIPTION:
This is the first course in intermediate algebra, building on topics introduced in math 097. Topics include: integer and rational exponents, polynomials and operations with polynomials, factoring polynomials, solving quadratic equations by: factoring, the square root method, completing the square and the quadratic formula; graphing quadratic and exponential functions, modeling with polynomial and exponential functions. A non-CAS graphing calculator is required.

E-LEARNING REQUIREMENTS:
Taking a class via distance education puts a tremendous responsibility on the student. In addition to academic considerations, you should also consider your learning style, strengths, and preferences before enrolling in an online class. This course will be appropriate for you if you are self-motivated, goal-oriented and work well independently. Please seriously consider the following in regard to your success in this course:

- Do you have a compelling reason or goal to complete the course?
- Are you self-disciplined?
- Are you comfortable following written instructions?
- Do you have a good Internet connection from home?
- Are you comfortable using email and sending email attachments?
- Are you a strong computer user?

If you do not meet the above recommendations or are unsure about your willingness to devote at least THREE HOURS PER DAY then I suggest you wait until you can take the class in the traditional lecture format. This online format may save time commuting but requires at least as much time as attending class in reading and working text examples to help you understand the material. Additionally, if you have always struggled with mathematics or consider yourself a weak mathematics student, I would not recommend this online environment.

COURSE DETAILS:
Activities
Seven activities will be done this quarter. The information for these activities can be found in the Course Documents section of the MyMathLab site. Some activities will require you to use graph paper to plot data by hand and therefore you will need to scan and/or attach your resulting graphs. These activities are individual assignments and must be your own work. A few of these activities are called Adventures of the Week. Each adventure requires you to use the "Rule of Four". The Rule of Four is a name to describe the method of using four approaches to tackling a problem: Numerical, Graphical, Verbal, and Analytical. This is not a routine problem that can be solved in a matter of minutes. It is a problem that I expect students to work on throughout the week. The time is important to give your brain a chance to mull it over. These problems are important for developing your ability to work with relationships and use the "Rule of Four" to help describe the patterns that emerge. Each AOW must include the following: 1) Table of values, 2) Graph, 3) Formula, and, 4) Description in words of the relationship and pattern. Your adventure of the week assignment is an EXPRESSION OF YOUR OWN WORK and critical thinking ability. Due dates for these activities are on the Unit deadlines, but feel free to submit them as soon as you finish them.

Exams

Four online exams using MyMathLab will need to be taken by the appropriate deadlines. For these exams you will be allowed to use your calculator, notes, and textbook, BUT the expectation is that you should not need to use anything except your calculator. There will be a 90 minute time limit for each exam so plan accordingly. Exams should be taken AFTER the homework has been completed and AFTER completing a practice test. You can use the Sample Tests and Quizzes in the Tests section of MyMathLab. If you are unhappy with the score you receive on your first exam you may take the exam a second time and the average of the two attempts will be the exam grade. No make-up exams are allowed so be sure to complete the exams well BEFORE the due date on the class calendar to allow for unforeseen glitches and computer issues.

Daily Homework

Daily homework is EXTREMELY important in mathematics. The number of problems will vary between individuals. Some of you will find that you need to do many more problems than what is assigned on MyMathLab in order to give you enough practice to master the skills and concepts. You should be doing anywhere from 30-50 problems for each section. Your homework assignments will be done online using the MyMathLab online software. Homework problems can be repeated until done successfully. Be sure to complete each unit of homework by the appropriate deadline. HOMEWORK MUST BE DONE REGULARLY TO BE SUCCESSFUL IN THIS COURSE! WARNING: the number of problems assigned through MyMathLab is not always enough to become proficient with the concepts. Be sure to work other problems from the text or other sources.

Projects

Three projects will be done this quarter. The information for the projects can be found in the "Course Documents" section of the MyMathLab site. Each project will require you to use your graphing calculator to input and plot data. These projects will be word processed with appropriate mathematical graphics inserted. These graphics can be downloaded from your calculator using the TI Connect software. Most of the projects will also require graphing by hand and therefore you will need to scan and attach your resulting graphs. You may choose to come to campus to collect data for each of the projects. A data collection station can be set up in the Math Center in L221 if you plan to be on campus. If not, you can have the data emailed to you. These projects are individual assignments and must be your own work.

- Match It: Using linear equations to model movement.
- Bouncing Ball Project: Collecting and modeling bouncing ball data using quadratic functions.
- Population Growth: Fitting and analyzing population data with linear and exponential models.

Final Exam

The final exam for this class will be held at the Mt. Vernon campus of Skagit Valley College. You can choose from any of the following dates and times:
Monday March 16: 5:30-7:30 PM
Monday March 16: 11:30AM- 1:30 PM
Tuesday, March 17: 9:30AM – 11:30AM.
You must earn at least 50% on the final exam to receive a grade of C or higher for the course. You will

have 2 hours to finish the exam. You will NOT be allowed any notes for the final. Therefore, it is extremely important for you to master the subject matter in this course to a high level of proficiency. You should be careful to learn the concepts and not rely on your book to help do problems that are designed for you to complete without one.

If you cannot take the exam at the scheduled time then you will have to set up an appropriate proctor and have all the contact information for the proctor to me by February 15th. If the information is not submitted to me by the deadline you will have to take the final on campus as scheduled.

Study Groups and Extra Help

During my office hours I am available to help you with your mathematics. Appointments can be made to see me as well. If my office door is open feel free to drop in, if it's closed I need some uninterrupted time to work. Extra math help is also available in the Math Center in L221 and the tutoring center in L-203. Please make use of the help available and consider forming study groups. Your fellow classmates are a valuable resource. I will set up a discussion board for online posting of homework and assignment questions. I will only be available to respond to student questions via email during the M-F work week from 8:30-4:00PM so using the discussion board to get help from other students may be an alternate resource over the weekends and in the evenings.

Pencasts

During the quarter I will be posting various pencasts to the course site. These short presentations can be viewed using Adobe Acrobat Reader v 10 or later. When students have questions regarding various topics I will create pencasts to help explain problems and model examples. These worked examples show the process and also include audio commentary. Check the library of pencasts when you encounter a topic you need some help with or email me a request for a pencast on a topic with which you need some help. Use of this media has worked well for students in the past and hopefully you will find it useful this quarter too. I look forward to your feedback. Don't be bashful about making a request.

EXPECTATIONS:

- Check your electronic mail and MyMathLab announcements page regularly! You are responsible for all the information I communicate to you via these two methods. If you change your email address it is your responsibility to update that information through the MyLab/Mastering program.

- Activities and projects can be turned in via email attachments, via mail, via campus mail if you are located at WIC campus, via fax, or by dropping by my office and leaving them under the door if I'm not present.

- Student work must be presented in a professional manner. Assignments should be handwritten (or typed) clearly on single sided sheet(s) of paper. There should be no rough spiral edges leftover from ripping out of a spiral notebook. All work must include your first and last name and be stapled together or page numbered with your name on each page. Please Do NOT fold edges of papers or use paper clips to combine. Problems should be presented in the order assigned with all appropriate work in one place. Any work submitted for grading that does not

meet these standards will receive an automatic reduction of at least one point for poor presentation.

- Please include your full name on all communications to me and the assignment name. Please make sure all attachments are named using your full name and assignment. Example: gretakocolmatchitproject.

- In order to create a positive learning atmosphere, students are expected to make themselves familiar with the Skagit Valley College Code of Student Conduct which is available online at http://www.skagit.edu/conduct. Students who fail to conduct themselves appropriately may be expelled from class.

- Please be respectful of other student's learning.

- Cheating and plagiarism will not be tolerated and will result in the failure of the assignment or exam. Cheating includes (among other things) copying another individual's work or allowing someone to copy your work, using unauthorized references on a test or exam, or allowing another individual to take a test or assignment for you.
  All students of Skagit Valley College are responsible for knowing and adhering to the Academic Honor Code of this institution found at http://www.skagit.edu/honorcode. Violations of this code include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct are reported to the student conduct officer. Students found to be in violation of the Academic Honor Code are subject to academic consequences up to and including failure of the course. Students may also be subject to college disciplinary sanctions up to and including expulsion from the College.

- Last day to drop the class and receive a "W" without restriction is March 13.

- No late work will be accepted!! You must complete the homework, exams, and activities by the deadlines posted. Please make PRIOR arrangement with the instructor if an emergency occurs.

- It is SVC policy that "discrimination and harassment of any form will not be tolerated".

- If you are a student with a disability and require academic adjustments or accommodation, please contact the Counseling office (X-7654) to arrange an appointment with the Disability Access Services office.

MYMATHLAB ONLINE SYSTEM:

For this class we will be using the online system called MyMathLab. MyMathLab is a series of text-specific online courses that accompany Pearson textbooks in Mathematics and Statistics. Over one million students have improved their mathematics skills with MyMathLab's dependable and easy-to-use online homework, guided solutions, multimedia, tests, and e-books. MyMathLab offers the following features:

- Complete online textbook
- Online homework assignments

- Online exams
- Complete online course content and customization tools
- Guided mathematical instruction
- Multimedia learning aids
- Student study plan
- Free tutoring from the Math Tutor Center

STARTUP INFO FOR MYMATHLAB:

Check for system requirements:
http://www.pearsonmylabandmastering.com/northamerica/mymathlab/students/support/system-requirements/index.html

Product support: http://247pearsoned.custhelp.com/

In order to use MyMathLab you will need a good Internet connection, preferably high-speed, and an up-to-date browser. To access the MyMathLab site for this course you will need to login at pearsonmylabandmastering. You will need your Student Access Code, this individual, 6-word code is needed for registration as a MyMathLab student. You can purchase this code online with a credit card during the MyMathLab registration process or your Student Access Code can be purchased at the bookstore. The kit includes a card with a pullback strip that reveals the code. This code can be redeemed only once - at the moment of registration. If you purchase a code online, make sure that it has not been used, otherwise it is worthless.
A valid email address is necessary to register. This will be the email with which I communicate to you for the course so use one that you will check regularly.
The course ID number is kocol27116 (NOTE: the ID number is my last name followed by 5 digits... the first digit is 2).
School zip code: 98273 – Mount Vernon. Institution name: Skagit Valley College.
After logging into the site use the Browser Check to configure your machine and download the necessary plugins required for MyMathLab.

COURSE OBJECTIVES:

After completing this course, the student will be able to:

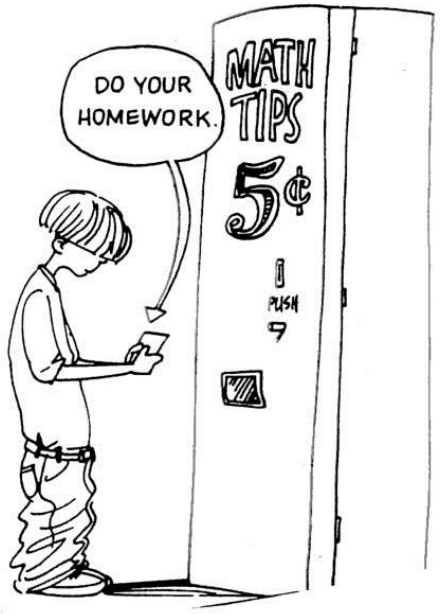
1. Perform basic operations with polynomials, including
    - Addition and subtraction of polynomials.
    - Multiplication of polynomials.
    - Division of polynomials (long and synthetic division)
2. Factor polynomials.
3. Solve polynomial equations by factoring.
4. Work with quadratic functions by
    - graphing with the vertex form
    - graphing with the standard form

- determining the vertex and intercepts

5. Solve a system of linear equations in three variables.
6. Simplify radical expressions.
7. Solve quadratic equations using the
   - Square root method
   - Completing the square method
   - Quadratic formula
8. Work with exponential functions by
   - Graphing exponential functions
   - Finding the equation of exponential models.
9. Demonstrate an understanding of mathematical modeling by
   - Determining a quadratic model.
   - Determining an exponential model.
10. Solve applications relevant to course content.

Math Tip

The standard of expectation on exams will be for you to correctly and completely solve the problems given. Knowing what to do or knowing about the topic is not sufficient for success. You will be held accountable to be proficient in solving the problems given. The only way to accomplish this is through practice.



Learning mathematics does not come as naturally as learning to speak, but our brains do have the necessary equipment. So, learning math is somewhat like learning to read: we can do it, <u>but it takes time and effort</u>, and requires mastering increasingly complex skills and content.

~Daniel T. Willingham (professor of cognitive psychology)

GENERAL EDUCATION LEARNING OUTCOMES:

Students will be able to . . .
2.1 Identify and express concepts, terms, and facts related to a specific discipline.
8.1 Analyze problems to determine what mathematical principles apply.
8.2 Correctly apply logical reasoning and mathematical principles to solve problems.
8.3 Interpret information and reasoning expressed mathematically (for example in spreadsheets, diagrams, charts, formulas, etc.).
8.4 Communicate mathematical information effectively.
10.3 Use technology appropriate to the context and task to effectively retrieve and manage information, solve problems, and facilitate communication.

COURSE CALENDAR:

Unit of Study	Assignments	Due Date
Unit #1: Polynomials - Chapter 7	Chapter 7 Homework (due weekly) Who Am I? Discussion Activities: Algebra Party Polynomial Jeopardy Match It Project Exam 1 – Chapter 7	Sunday, January 25 11:55PM (NO exceptions!)
Unit #2: Factoring Polynomials and Solving Polynomial Equations – Chapter 8	Chapter 8 Homework (due weekly) Activities: Geometry Party Square Mirrors Factoring Jeopardy Exam 2 – Chapter 8	Sunday, February 8 11:55PM (NO exceptions!)
Unit #3: Quadratic Functions – Chapter 9	Chapter 9 Homework (due weekly) Activities: Graphing Quadratics Solving Sytems (Matrices) Bouncing Ball Project Exam 3 – Chapter 9	Sunday, March 1 11:55PM (NO exceptions!)
Unit #4: Exponential Functions – Chapter 10	Chapter 10 Homework (due weekly) Activities: Extra Painting Optios Population Growth Project Exam 4 – Chapter 10	Friday, March 13 11:55PM (NO exceptions!)

PLEASE USE THESE DUE DATES AS A LAST RESORT ONLY!
STAY ON PACE USING THE SUGGESTED TIMELINE.

Math 98 - Winter 2015
Tentative Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
5-Jan	READ the Syllabus	Who Am I? AOW (1)	7.1	7.2	Green Globs (optional)
12-Jan	Match It	7.3	7.4	7.5	Polynomial Jeopardy
19-Jan	No School	Review	Exam Chapter 7	8.1	8.2
26-Jan	8.3	8.4	AOW (2)	8.5	Factoring Jeopardy
2-Feb	8.6	AOW (3)	Review	Exam Chapter 8	9.1
9-Feb	Graphing Quadratics	9.2	9.3	9.4	Bouncing Ball
16-Feb	No School	9.5	9.6	9.7	Matrices 3 x 3
23-Feb	9.8	9.9	Bouncing Ball cont.	Review	Exam Chapter 9
2-Mar	10.1	10.2	10.3	Population Project	10.4
9-Mar	10.5	Review	Exam Chapter 10	Review AOW (4)	
16-Mar	Final Exam 11:30, 5:30	Final Exam 9:30			