

Applied Precalculus Level 2

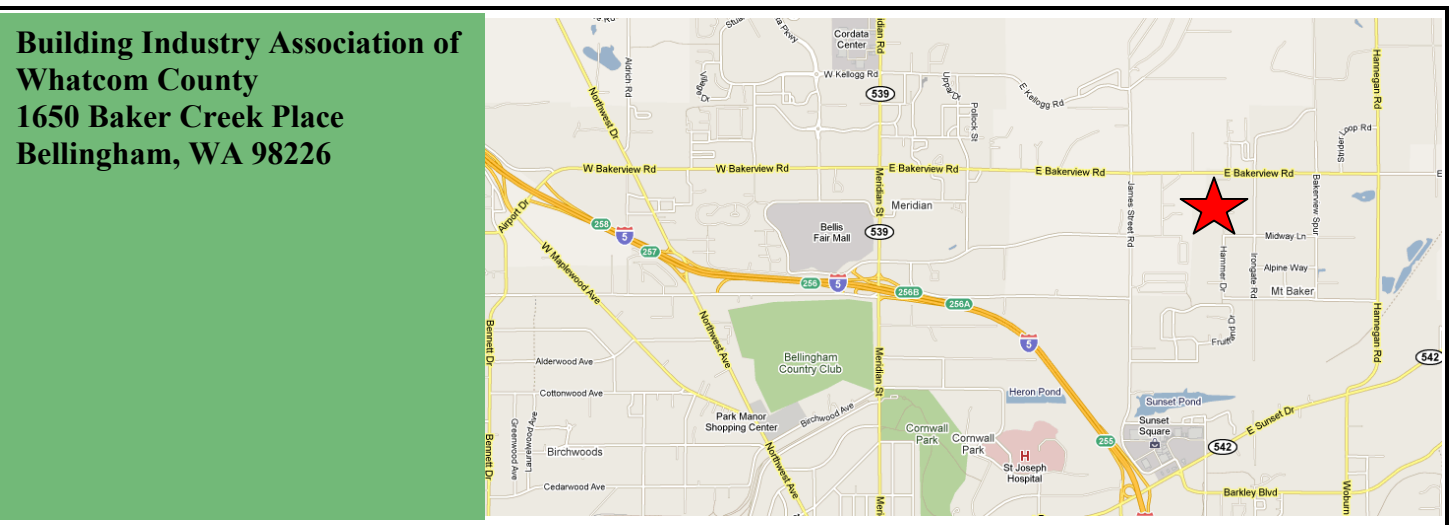
MATH 112 – 5 Credits/\$400 – November 2010



Class Description:

A continuation of Math 111, this class is a precalculus course with an emphasis on engineering applications. Topics to be covered include quadratic modeling, circular motion, trigonometric functions, graphing operations, inverse, exponential, and logarithmic functions. Students will gain an understanding of these mathematical tools in the context of practical problem solving. Course Prerequisite: Satisfactory completion of Math 111.

Location:



Dates and Times:

The class is scheduled to run on **Tuesday and Thursday evenings at 6:00-9:00 PM** from **November 2nd to December 16th**. This provides (14) evening classes to cover the course material. Please see the Class Calendar on the third page for course material.

Tuition and Registration:

Tuition for this class is \$400. Tuition must be paid before the class begins. Program enrolled students have seniority for this class and should register online three-weeks before the class begins. Continuing education students may begin registering online two-weeks before the class begins. Students may also send class registrations by mail to the following address:

**Washington Engineering Institute
Registration Office
PO Box 483
Custer WA 98240**

Class Materials Provided by the Instructor:

- Various handouts and lecture notes

Class Materials Provided by the Student:

- The text book is the same one used in Math 111. Students who took Math 111 need not purchase any new material. New students need to purchase Precalculus by David H. Collingwood and K. David Prince, University of Washington, College of Engineering.

Contact *Copies Now*, 810 N. State Street, 647-7565, to order a copy of the text book. When you call, mention Math 111, Washington Engineering Institute. Cost is \$18.26. Pages will be hole punched for a 3-ring binder.

- **3-Ring Binder**
- **Scientific Calculator**
- **Engineering Paper**

Instructor

Marjorie Bills

Experience: 10 years of experience in the private civil engineering industry performing stormwater analysis, design, permitting, and technical report writing. Ms. Bills currently has a consulting business with a focus on stormwater analysis and design services.

Education: Bachelor of Science in Mathematics, Western Washington University
Associates of Science in Civil Engineering Technology, Bellingham Technical College
Associates of Science in Pre-Engineering, Shoreline Community College

Class Format:

Each class period will offer a formal lecture and then time for students to work on problems. For each hour of class time, there will be a 10-minute break. It is anticipated that extra sessions for studying and/or tutoring may be needed. The instructor will discuss tutoring and study session options on the first class night.

Final Exam and Grades:

Grades will be determined by attendance (15%), Homework (20%), 4 quizzes (40%), and a Final Exam (25%).

November / December 2010 – MATH 112 Precalculus

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2 6:00-9:00 PM	3	4 6:00-9:00 PM	5	6	7
	Ch. 7 Review Quadratic functions in vertex form Graphing operations		Ch. 7 Continued Quadratic functions: modeling parabolic motion, finding maxima and minima			
8	9 6:00-9:00 PM	10	11 6:00-9:00 PM	12	13	14
	Ch. 8 -9 Graphing construction tools Composition and step functions Domain – range restrictions		QUIZ 1 Ch. 11 Inverse operations, Inverse functions: conceptual, graphical, and algebraic definitions			
15	16 6:00-9:00 PM	17	18 6:00-9:00 PM	19	20	21
	Ch. 12 Rational functions Graphing asymptotes		Ch. 13-14 Radian measurement, circular motion, angular speed			
22	23 6:00-9:00 PM	24	25	26	27	28
	QUIZ 2 Ch. 15 Trig ratios, unit circle, relating circular functions and right triangles		Thanksgiving – No Class			
29	30 6:00-9:00 PM	1	2 6:00-9:00 PM	3	4	5
	Ch. 16-17 Graphing trig functions: period, amplitude, phase shifts. Sinusoidal functions		QUIZ 3 Ch. 18 Solving trig equations Ch. 19 Exponential functions, rules of exponents			
6	7 6:00-9:00 PM	8	9 6:00-9:00 PM	10	11	12
	Ch. 20 Exponential modeling: Euler's constant “e”, compound interest, exponential growth and decay, capacitors		QUIZ 4 Ch. 21 Logarithmic functions – the inverse of exponential functions			
13	14 6:00-9:00 PM	15	16 6:00-9:00 PM	17	18	19
	Ch. 21 Continued Logarithmic functions continued Review		FINAL EXAM			



PO Box 483
 Custer WA 98240
admin@weiedu.org
 (360) 739-1428

Class Registration Form 2010 v2.0

Returning students with a Student ID do not need to fill out the gray portions of this form.

Name	
Address	
Phone	
Email	

Class Requested	MATH 112 – Applied Precalculus Level 2
Class Month / Date	November / December 2010

WAC 490-105-160 – State Licensed School Reporting Requirements:

Student ID #		
SSN #		
Date of Birth		
Gender		
Disability	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Race	<input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/African American <input type="checkbox"/> Hawaiian Native or Pacific Islander <input type="checkbox"/> Hispanic <input type="checkbox"/> White/Caucasian <input type="checkbox"/> Multi-racial <input type="checkbox"/> Other	
Prior Education	<input type="checkbox"/> Less than high school graduation <input type="checkbox"/> GED <input type="checkbox"/> High School Graduate <input type="checkbox"/> Post H.S., no degree or certificate <input type="checkbox"/> Associate Degree <input type="checkbox"/> Bachelor Degree <input type="checkbox"/> Master or Doctorate Degree	GED Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____ Graduation Year _____
Name of Last School Attended		

Student Signature

Date