

Precalculus Level 1

MATH 111 – 5 Credits/\$400 – July 2010

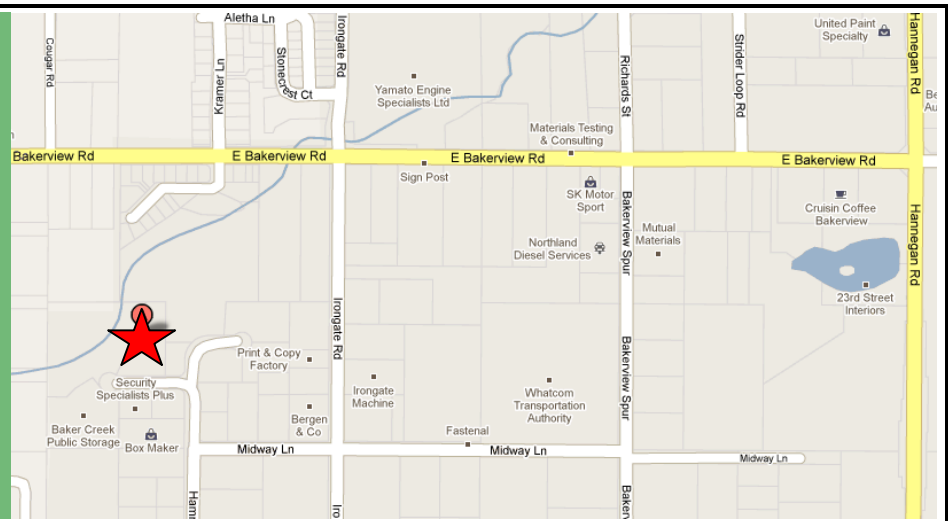


Class Description:

This class is an applied precalculus course. Topics to be covered include coordinate systems, graphing, functions, parametric equations, linear and quadratic modeling, trigonometric ratios, and elementary statics. Students will gain an understanding of these mathematical tools in the context of practical problem solving, particularly for engineering applications. It is assumed that students have been exposed to these topics (except statics) to some extent in previous algebra and geometry classes. Each class period will offer a formal lecture and time for student to work on problems.

Location:

**Building Industry Association of
Whatcom County
1650 Baker Creek Place
Bellingham, WA 98226**



Dates and Times:

The class is scheduled to run on **Tuesday and Thursday evenings at 6:00-9:00 PM from July 6th to July 29th**. This provides eight (8) evening classes to cover the material. It is anticipated that extra sessions for tutoring and studying will be necessary; these will be scheduled on Saturdays at times to be determined by the instructor and students.

Cost, Capacity, and Registration:

The class is limited to (12) students and costs \$400. Please send your completed registration form and check payable to Washington Engineering Institute to the registration office:

**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:

- **Text Book: Precalculus** by David H. Collingwood and K. David Prince, University of Washington, College of Engineering.

The text book is open source material so we can offer it to students for simply the cost of reproduction. Please order your textbook from Copies Now, 810 N. State Street, 647-7565. Call first so they can print your copy for pickup. Make sure to mention MATH 111 and Washington Engineering Institute. **The textbook cost should only be \$18.26.** Pages will be hole punched for a 3-ring binder. The textbook will be used for both Math 111 and 112.

- **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

Format:

Class Structure: Evenings will typically run in one-hour blocks as follows:

6:00 PM – Class setup and first hour
6:50 PM – Break
7:00 PM – Class
7:50 PM – Break
8:00 PM – Class last hour

Final Exam, Grades, and Course Certificate:

Grades will be determined by attendance character (20%), 2 tests (40%), and a final exam (40%). Homework is required but not graded.

July 2010 – Precalculus –MATH 111

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
			1		2	3	4
5	6 6:00-9:00 PM Chapter 1 <ul style="list-style-type: none"> • Rates of change, unit analysis • The modeling process • Handout: rainfall problem • Problems 1.1-1.17 	7	8 6:00-9:00 PM Chapter 2 <ul style="list-style-type: none"> • Cartesian coordinate systems • What is analytic geometry • Distance formula • Problems 2.1-2.17 	9	10 Math Lab Tutoring and study session to be scheduled	11	
12	13 6:00-9:00 PM Test I (40 minutes) Chapter 3 <ul style="list-style-type: none"> • Lines, circles, intersecting curves • Simultaneous equations • Parametric equations • Problems 3.1-3.10 	14	15 6:00-9:00 PM Chapter 4 <ul style="list-style-type: none"> • Linear modeling • Slope of a line, derivative • Quadratic formula • Problems 4.1-4.20 	16	17 Math Lab Tutoring and study session to be scheduled	18	
19	20 6:00-9:00 PM Test II (40 minutes) Chapter 5 <ul style="list-style-type: none"> • Functions: relating data, equations, and graphs • Handout: graphs from WWHM • Modeling program • Problems 5.1-5.13 	21	22 6:00-9:00 PM Chapter 7 <ul style="list-style-type: none"> • Quadratic modeling • Graphing construction tools • Online: MIT open courseware • Graphing tools • Problems 7.1-7.14 	23	24 Math Lab Tutoring and study session to be scheduled	25	
26	27 6:00-9:00 PM <ul style="list-style-type: none"> • Trigonometric ratios • Vector analysis of forces • Introduction to statics • Handout: statics problems review 	28	29 6:00-9:00 PM Final Exam (90 minutes)	30	31		



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 111 – Applied Precalculus Level 1
Class Month / Date	July 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