

# Precalculus Algebra

**MATH 111 – 5 Credits – October 2011**

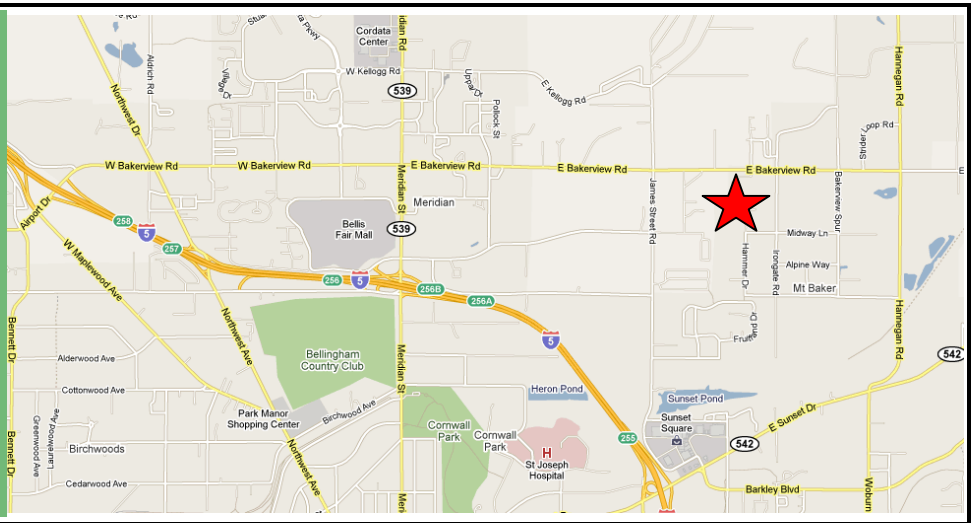


## Class Description:

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 **Monday and Thursday evenings at 6:00-9:00 PM from October 3<sup>rd</sup> to November 24<sup>th</sup>**. This provides (16) evening classes to cover the course material. Please see the Class Calendar on the third page for course material.

## Tuition and Registration:

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  
1301 Fraser Street Suite A3  
Bellingham, WA 98229**

## **Class Materials Provided by the Instructor:**

- **Text Book on Loan: Precalculus – Mathematics for Calculus 4<sup>th</sup> Edition** by James Stewart, Published by Brooks/Cole. ISBN: 0534385419. The textbook is owned by WEI and loaned to students. The textbooks must be returned at the end of class to gain a transcript grade. A fee of \$30 shall be paid for damaged, lost, or destroyed books.

## **Class Materials Provided by the Student:**

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

## **Instructor**

### **Katherine Bren, EIT, MSE**

**Experience:** 8 years of experience in public and private civil engineering industry. Ms. Bren is currently the Registrar for the Washington Engineering Institute. In addition, Ms. Bren teaches math classes at the Institute.

**Education:** Master of Science in Engineering, University of Washington  
Bachelor of Science in Industrial Engineering, University of Washington

## **Format:**

**Class Structure:** Evenings will typically run in three 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 and Grades:**

Students will be graded by attendance (10%), homework (45%), and 2 chapter exams (45%). The Instructor holds the sole authority to issue grades and issues grades based on a 4.0 schedule as follows.

### **Grading legend**

4.0	A+
3.7	A
3.5	A-
3.3	B+
3.0	B
2.7	B-

2.4	C+
2.0	C
1.7	C-
1.4	D+
1.0	D
0.7	D-

AU	Class audited with no grade earned
EXP	Experiential credit granted per policy
EDU	Prior education credit granted per policy
I	Incomplete – Instructor Allows Extra Time to Complete
W	Withdrawn from class

# October / November 2011 – Precalculus Algebra –MATH 111

Monday		Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
3	6:00-9:00 PM	4	5	6	6:00-9:00 PM	7	8
Section 2.1 • What is a function				Section 2.2 • Graphs of functions			9
10	6:00-9:00 PM	11	12	13	6:00-9:00 PM	14	15
Section 2.3 • Applied functions: Variation				Section 2.4 • Rate of Change: increasing and decreasing functions.			16
17	6:00-9:00 PM	18	19	20	6:00-9:00 PM	21	22
Section 2.5 • Transformations of functions				Section 2.6 • Extreme Values of Functions			23
24	6:00-9:00 PM	25	26	27	6:00-9:00 PM	28	29
Section 2.7 • Modeling with functions				Section 2.8 • Combining functions			Chapter 2 Exam
31	6:00-9:00 PM	1	2	3	6:00-9:00 PM	4	5
Section 2.9 • One-to-One functions and their inverses				Section 3.1 • Polynomial functions and their graphs			6
7	6:00-9:00 PM	8	9	10	6:00-9:00 PM	11	12
Section 3.2 • Dividing polynomials				Section 3.3 • Real zeros of polynomials			13
14	6:00-9:00 PM	15	16	17	6:00-9:00 PM	18	19
Section 3.4 • Complex numbers				Section 3.5 • Fundamental Theorem of Algebra			20
21	6:00-9:00 PM	22	23	24	6:00-9:00 PM	25	26
Section 3.6 • Rational Functions				Section 4.1 • Exponential Functions			Chapter 3 Exam



PO Box 483  
 Custer WA 98240  
[admin@weiedu.org](mailto: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.**

<b>Name</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Email</b>	

<b>Class Requested</b>	<b>MATH 111 – Precalculus Algebra</b>
<b>Class Month / Date</b>	<b>October / November 2011</b>

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

<b>Student ID #</b>		
<b>SSN #</b>		
<b>Date of Birth</b>		
<b>Gender</b>		
<b>Disability</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Race</b>	<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	
<b>Prior Education</b>	<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 _____
<b>Name of Last School Attended</b>		

\_\_\_\_\_  
**Student Signature**

\_\_\_\_\_  
**Date**