Math 142 (12:15 pm Pre-Calculus II) Item 6439, Winter 2020

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Note: email will not be responded to over weekend.

Office Hours:

$\begin{cases} Monday & 9:00-9:30 \; am \; \& 11:00-11:50 \, am \\ Tuesday & 1:30-2:10 \; pm \\ Wednesday & 11:00-11:50 \; am \\ Thursday & 11:00-11:50 \, am \\ Friday & 9:00-9:30 \; \& \; 11:00-11:50 \; am \\ Or \; by \; appointment \end{cases}$

Textbook: *PreCalculus: Mathematics for Calculus,* 7th edition, by James Stewart, Lothar Redlin, & Saleem Watson published by Cengage Learning. This class **will not use** enhanced web assign (ewa). All lectures and homework problems will be from the 7th edition.

Prerequisite: Math 141 with a 2.0 or above **or** MMT Algebra STEM 70+ and an excellent grasp on functions as well as superior algebraic skills. If you need a brush up on that material feel free to visit the Math Resource Center in building 25 on the 6th floor and review using the appropriate Schaums Outline.

Course Description: This **course is designed to prepare students for our calculus series** (and will be taught this way) **and thus is a more challenging, demanding, and conceptual**. Material covered includes, trigonometric functions (for real numbers and angles), trigonometric equations, trigonometric identities, law of sines and cosines, vectors, polar coordinates, and conics. We will also discuss applications of trigonometry and basic ideas from calculus such as tangent lines, normal lines, and secant lines and their relationship to trigonometric functions.

Factors for Success:

Success in this course and college is dependent upon the student owning, understanding, and following the four attributes listed below (attributes are from the *Transition Mathematics Project-College Readiness standards*):

1. Student needs to demonstrate intellectual engagement

2. Student takes responsibility for own learning

3. Student perseveres when faced with time-consuming tasks

4. Student pays attention to detail

This course requires a lot of practice because it is based heavily on patterns and formulas. With that said, former students have told me that making note cards and studying on a daily basis was crucial for success.

Student Learning Outcomes (SLO): After completing this course you should be able to:

1. Recognize and describe trigonometric functions for the unit circle and points in the rectangular coordinate system.

2. Apply appropriate trigonometric functions and their inverses to find angles or lengths involving right triangles.

3. Recognize, describe, and analyze key features of trigonometric and inverse trigonometric functions.

4. Apply the law of sines and law of cosines to solve real-life situations involving non-right triangles.

5. Apply trigonometric identities and algebraic techniques to simplify trigonometric expressions.

6. Solve trigonometric equations.

7. Use basic concepts of algebraic and geometric vectors to solve elementary vector problems involving trigonometry.

8. Identify and graph polar functions and convert between polar and rectangular form.

9. Analyze and graph equations of conic sections.

10. Effectively use the graphing calculator to graph trigonometric and polar functions and solve trigonometric and vector equations.

Grading:
Exams are 100 points each for a *total of 300 points*.
Homework Sets are 10 points each for a *total of 100 points*.
Comprehensive Final Exam is *worth 200 points*.
Extra Credit maximum of 10 points

      Total Points: 600

Grades will be assigned on a decimal grading scale. The scale is based upon your earned percentage of the total possible points.

96-100%	4.0	81%	2.8	67%	1.4
94-95	3.9	80	2.7	66	1.3
92-93	3.8	79	2.6	65	1.2
90-91	3.7	78	2.5	63-64	1.1
89	3.6	77	2.4	58-62	1.0
88	3.5	76	2.3	55-57	0.9
87	3.4	75	2.2	52-54	0.8
86	3.3	74	2.1	Below 52	0.0
85	3.2	71-73	2.0		
84	3.1	70	1.8		
83	3.0	69	1.7		
82	2.9	68	1.6		

Attendance:

I do not take attendance (except for week 1). If you miss 3 class meetings (No Exceptions) during the first week you will be dropped from the course. Please attend class on time; your fellow classmates would appreciate it. It is your responsibility to make sure you are officially enrolled in the course. If you wish to drop the course the deadline to do that **without** receiving a 'W' is Monday January 27th. The last day to withdraw from the course is Friday February 28th. Attending class is imperative to your success in this course. If you do miss class _**you are responsible for the missed material**_. I encourage you to find a study partner so you have a contact if you do miss class.

Homework:

Homework will be assigned weekly and collected once a week. Homework will be due every Tuesday beginning with your first homework set that will be due Tuesday January 14th. All assignments must be turned in **at the beginning** of class (if not, it is considered late and will not be graded). Each assignment will be worth 10 points and random problems will be graded from each assignment. If you can't make it to class the day the homework is due please email a PDF copy of it by 12:15 pm.

Your weekly homework set can be found on my website http://people.highline.edu/jramirez/. I will only grade problems from the required list the others are only suggested. **No Late Homework Will Be Accepted.** Homework questions will not be addressed in class; you can get your questions answered in office hours. I encourage you to come to the office if you have homework questions as well as visiting the math resource center which is located in building 25 on the 6th floor which offers free math tutoring for all highline students. It is also encouraged that you setup regular study groups. Homework solutions will be posted weekly on my webpage. Homework must be neat, and follow the requirements below:

1. All work must be done in **pencil.**
2. Write only on the **front side** of the paper. (Do not write on the back)
3. Homework must be **STAPLED (prior to coming to class)**
4. Show ALL your work in a concise and logical format, you are now mathematically mature enough to do so.

Exams:

There will be **4 exams** including the final all of which will be closed book, closed notes and comprehensive. Exams are based on homework, self-assessments, and lecture material. Your exams will have two parts; one part will be no calculator. There are **no make-up exams**, unless something occurs that is out of your control and it will be addressed on an individual basis provided you have documentation. **The final exam is on Tuesday March 17, 2020 from 12:15-2:05 pm.** Please take this into account when making plans for spring break because the final will not be administered prior to this date. You were aware of this when you registered for the course.

Self-Assessments:

**These are not to be turned in**. These will be posted each Friday on my webpage. The purpose of a self-assessment is to make sure you have mastered the weekly outcomes. The self-assessments cover both concept and skill and typically range from 5 to 8 problems. You are encouraged to do these only after you have completed the homework and in a timed testing environment.

Emergency Preparation Plan:

An evacuation plan is posted in each classroom. Please take a few moments to review the material and be familiar with campus emergency plans.

Access Services:

If you have any special needs or concerns about this class, please talk to me personally in my office. If you need course adaptations or accommodations because of a disability; if you have emergency medical information to share with me; or if you need special arrangements in case the building must be evacuated, please provide me with the Letter of Accommodation you have received from the Office of Access Services. **Access Services is located in Building 99.**

Course Etiquette:

In this course every second is valuable. Therefore students need to be on time, prepared, attentive, and attend the entire class. Furthermore, distractions need to be limited so turn off (or switch to vibrate) all electronic devices and please do not listen to music in class; remember you are not required to come to class. *DO NOT answer a phone call or text in the classroom. If this becomes a problem, the offending individuals' grades will be lowered.*

Study Habits:

Believe me when I tell you that **study groups are important** for this class. This course is traditionally a stumbling block for most and is a crucial component for future calculus courses and differential equations. You must read the text, and it is strongly suggested that you work in groups. You can also study in the **Math Resource Center in Building 25, 6th floor**.

Calculator and the process of renting one:

A graphing calculator is required the preferred model is the TI-84/84 plus. All the calculator exercises done in class will be done on a TI-84/84 plus. If you have a different calculator you are responsible for learning how to use it. *Calculators that have a CAS feature will not be allowed on exams.* All graphing calculators will be reset the day of an exam. If you have not worked with a graphing calculator and are looking for some more explanation you can come by the office or visit the Math Resource Center (building 25) and view videos that will assist you with your calculator. Other venues for calculator instruction are youtube or teachertube. Smartphone and cell phone calculators are not permitted on exams. You can rent a calculator from the department see procedure below:

Questions: Answers:
A.) How much does a rental graphing calculator cost?
   a. **About $26 per quarter**
B.) What is the procedure for renting a calculator?
   a. **Pay the rental fee at the cashier's office (Building 6).**
   b. **Bring the receipt to circulation at the library (25-2)**
   c. **Make sure to bring the physical school ID card for checkout.**

Cheating:

Cheating of any kind will result in failure of the class and possible disciplinary action from the institution. It is both your right and responsibility to be familiar with the document entitled: Highline Community College Student Rights and Responsibilities code (WAC 1321-1210) adopted by the Board of Trustees of Community College District 9 on January 21, 2008. This is available in the counseling center in building 6.

Weather Issues:

Highline's official channel of communication with students is your Highline Student Email account. For more information, see the Highline Student Email web page at http://helpdesk.highline.edu/studentemail.php. On that web page, there are also instructions for how to forward your student email to a non-Highline email address. I mention this because if the campus closes due to snow, wind, flooding, etc., I will email all of you with updates on the course, homework, exams, etc. The email addresses I will be using are the ones that appear on my class roster.

Monitor Your Grades

Homework	What you earned	What it's worth.
Set 1		10
Set 2		10
Set 3		10
Set 4		10
Set 5		10
Set 6		10
Set 7		10
Set 8		10
Set 9		10
Set 10		10

Extra Credit	What you earned.	What it's worth
		10

Exams	What you earned.	What it's worth.
Exam 1		100
Exam 2		100
Exam 3		100
Final Exam		200

How do I calculate my grade?

To calculate your current grade in the course add up all of the points you've earned in the class so far and divide that number by the number of points that were available. Multiply by 100 to get your percentage. Look up your percentage under the grading section of the syllabus on page two to get the equivalent grade point.

Course Outline-Math 142, Winter 2020

Use the following schedule as a guideline for pre-class preparation. Instructor can sway from schedule without prior notice. *Sections for Exams can change.* **This is a ROUGH Outline**

Week	Sections	Comments
1	6.1, 6.2, 6.4	Briefly discuss syllabus
2	6.3, 5.1, 5.2, 5.3	*Homework 1 Due*
3	5.3, 5.4	*Homework 2 Due* *No Class Monday January 20th*
4	5.5, 6.4, 6.5	*Homework 3 Due* *Exam 1*
5	6.6, 7.1	*Homework 4 Due*
6	7.2, 7.3	*Homework 5 Due* *Exam 2*
7	7.3, 7.4, 7.5	*Homework 6 Due* *No Class Monday February 17th*
8	8.1, 8.2, 9.1	*Homework 7 Due*
9	9.1, 9.2	*Homework 8 Due* *Exam 3*
10	9.2, 11.2, 11.3, 11.4	*Homework 9 Due*
11	Final Exams	*Homework 10 Due (day of final exam)*

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