#### **Basic Course Information**

| Semester         | Spring 2015            | Instructor Name                          | Jill Nelipovich  |
|------------------|------------------------|--|--|
| Course Title & # | Math 140               | Email                                    | jill.nelipovich@imperial.edu   |
| CRN#             | 20387                  | Webpage (optional)                       | Blackboard site  |
| Room             | 2725                   | Office                                   | Room 2768  |
| Class Dates      | Feb 17 – June 12, 2015 | Office Hours                             | Monday: 2:15 – 3:00 p.m.<br>5:15 – 6:30 p.m.<br>Tuesday: 7:30 – 8:30 a.m.<br>Wednesday: 8:00 – 8:30 a.m.<br>Thursday: 8:00 - 8:30 a.m.<br>*** AND BY APPOINTMENT |
| Class Days       | Monday                 | Office Phone #                           | 760-355-6297   |
| Class Times      | 6:30 – 9:40 p.m.       | Office contact if student will be out or | 760-355-6155   |
| Units            | 3 units                | emergency                                |  |

# **Course Description**

Topics covered include right angle trigonometry and applications, unit circle trigonometry, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, solving triangles using the Laws of Sines and Cosines, and polar coordinates. Prerequisite: Math 91 with a grade of C or better or placement test.

## **Student Learning Outcomes**

Upon successful completion of the course the student will be able to:

- 1. Verify trigonometric identities (ILO2)
- 2. Solve a triangle given two sides and the angle in between. (ILO2)
- 3. Show understanding in solving trigonometric equations. (ILO2)

#### **Course Objectives**

Upon satisfactory completion of the course, students will be able to:

- 1. Define the six trigonometric functions using right triangle and unit circle definitions.
- 2. Express angles in degrees and radians.
- 3. Graph trigonometric functions, including those involving vertical and horizontal translations.
- 4. Solve triangles using the Law of Sines and Law of Cosines, including ambiguous cases.
- 5. Verify trigonometric identities, including sum and difference formulas, half-angle and power-reducing formulas.
- 6. Define and graph inverse trigonometric functions.
- 7. Solve trigonometric equations.
- 8. Graph polar and equations.
- 9. Solve application problems.

#### **Textbooks & Other Resources or Links**

#### **Required Course Materials:**

- Trigonometry, 10E, Lial, 2012; ISBN 978-0321671776
- A scientific calculator (not graphing) is needed. Graphing calculators will not be allowed on some exams.
- Link to good online graphing calculator: https://www.desmos.com/calculator

## **Course Requirements**

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester.

This course is designed to prepare you for Calculus (after pre-calculus, of course). There will be new concepts learned, you will solve problems that may seem "foreign" to you, and there is a part of the course that you can either memorize or learn and understand conceptually. If you work towards the latter, then this course will go much more smoothly and you will have a stronger foundation for future mathematics courses.

Trigonometry is not an easy course – and being that we meet only once per week (with two holidays (February 16 and May 25), it is expected that you will open your trig book at least 4 times throughout the week (on different days). It is your responsibility to engage in the material and this class will require discipline.

## **Course Grading Based on Course Objectives**

- Homework Due on the day of the exam
- Projects Due Weekly (This will normally be no more than 4 problems)
- Weekly quizzes. These will come <u>directly</u> from your homework <u>and</u> you may use your homework on the quiz.
   Make sure your homework is neatly organized -- I will simply direct you to the problem
   (i.e. Chapter 1.2 Problem #421) and you may not use your textbook. See sample on blackboard.
- 3 Exams
- Final Exam

#### **GRADING** (point totals subject to change)

| Homework (20 points/chapter) | 5%  |
|------------------------------|-----|
| Weekly Quizzes               | 5%  |
| Projects                     | 5%  |
| Exams                        | 60% |
| Final Exam                   | 25% |

#### Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

# **Classroom Etiquette**

- Electronic Devices: Cell phones and electronic devices must be turned off during class.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception.
- <u>Disruptive Students:</u> Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- <u>Children in the classroom:</u> Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

### **Academic Honesty**

- <u>Plagiarism</u> is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- <u>Cheating</u> is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment, (e) use of a commercial term paper service

## Additional Help - Discretionary Section and Language

- <u>Blackboard</u> support center: <u>http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543</u>
- <u>Learning Labs</u>: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the <u>Math Lab (ROOM 2500)</u>, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- <u>Library Services</u>: There is more to our library than just books. You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.

#### **Disabled Student Programs and Services (DSPS)**

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313 if you feel you need to be evaluated for educational accommodations.

# **Student Counseling and Health Services**

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <a href="http://www.imperial.edu/students/student-health-center/">http://www.imperial.edu/students/student-health-center/</a>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

#### **Student Rights and Responsibilities**

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at <a href="http://www.imperial.edu/index.php?option=com/docman&task=doc/download&gid=4516&Itemid=762">http://www.imperial.edu/index.php?option=com/docman&task=doc/download&gid=4516&Itemid=762</a>

## **Information Literacy**

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <a href="http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/">http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/</a>

# Math 140 – Tentative Schedule

| WEEK | DATES                           | ASSIGNMENTS  |  |
|------|---------------------------------|--|--|
| 1    | Feb 16 – 21                     | Complete Algebra Review – Available on blackboard 2/16/2015 at the latest. Watch videos posted in Blackboard (see due dates)   |  |
| 2    | Feb 23 – Feb 27                 | Algebra Review Due<br>Sections 1.1 – 1.4   |  |
| 3    | Mar 2 – Mar 6                   | Sections 2.1 – 2.4 <b>Quiz #1</b> Chapter 1 (15 minutes – this will come directly from your homework)  |  |
| 4    | Mar 9 – 13                      | Sections 2.5<br>Sections 3.1, 3.2, 3.3<br><b>Quiz #2</b> Chapter 2.1 – 2.3 (15 minutes)  |  |
| 5    | Mar 16 – 20                     | Review Exam 1 – Chapters 1 and 2   |  |
| 6    | Mar 23 – 27                     | Sections 3.4, 4.1, 4.2, 4.3<br><b>Quiz #3</b> Chapter 3.1 – 3.3 (15 minutes)   |  |
| 7    | Mar 30 – Apr3                   | Sections 4.4 – 4.5<br>Section 5.1<br>Quiz #4 Chapters 3.4, 4.1 - 4.3 (15 minutes)  |  |
|      | Apr 6 – 10<br>(Spring Break)    |  |  |
| 8    | Apr 13 - 17                     | Section 5.2, 5.3, 5.4<br>Quiz #5 Chapter 4.4 – 4.5, 5.1 (15 minutes)   |  |
| 9    | Apr 20 - 24                     | Review Exam 2 – Chapters 3 and 4   |  |
| 10   | Apr 27 – May 1                  | Sections 5.5, 5.6, 6.1, 6.2<br><b>Quiz #6</b> – Chapter 5.2, 5.3, 5.4  |  |
| 11   | May 4 – 8                       | Sections 6.3, 6.4, 7.1   |  |
| 12   | May 11 – 15                     | Sections 7.2 – 7.4<br><b>Quiz #7</b> – Chapters 5.5, 5.6, 6.1, 6.2 (15 minutes)  |  |
| 13   | May 18 – 22                     | Review Exam 3: Chapters 5, 6 and 7.1 – 7.4   |  |
| 14   | May 25 – 29<br>(holiday May 25) | No Class<br>Video Assignment posted on blackboard  |  |
| 15   | June 1 - 5                      | Sections 7.5, 8.1, 8.2, 8.3, 8.4 (we will pick and choose important topics) from these sections) I will hold an additional <i>optional</i> class this week sometime between Tuesday and Saturday. We will decide as a class. |  |
| 16   | June 8 – 12                     | Review<br>Final Exam Monday June 8   |  |