### **Basic Course Information**

| Semester:      | Spring 15             | Instructor Name: | Mardjan Shokoufi              |
|----------------|-----------------------|------------------|-------------------------------|
| Course Title & |                       |                  |                               |
| #:             | Trigonometry MATH 140 | Email:           | mardjan.shokoufi@imperial.edu |
|                |                       | Webpage          |                               |
| CRN #:         | 20386                 | (optional):      | -                             |
| Classroom:     | 2728                  | Office #:        | 2762                          |
| Class Dates:   | Feb 17-June 12        | Office Hours:    | MW 12:50-1:50, TR 9:10-10:10  |
| Class Days:    | TR                    | Office Phone #:  | (760) 355-6401                |
|                |                       | Emergency        | Department Secretary          |
| Class Times:   | 10:15-11:40           | Contact:         | (760)355-6155                 |
| Units:         | 3                     |                  |                               |

### **Course Description**

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 C or better or Math placement test.

#### **Student Learning Outcomes**

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being 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**

Lial, Hornsby, Schneider (2012). *Trigonometry* (10th/e). Boston: MA Pearson/ PH. ISBN: 978-0321671776

#### **Course Requirements and Instructional Methods**

**Material needed:** Textbook: *Trigonometry* 10<sup>th</sup> edition, by Lial, Hornsby, Schneider (2012), paper, pen, pencil, highlighter,graphing calculator\* and access to a stapler. \*Graphing calculator can be rented from Math Lab for \$10 a term.

**Course setting:** This course is designed to have you learn facts while gaining an appreciation of the power of mathematics and getting ready for your future courses in this field. My responsibility is to do my best to be an effective guide, while you are responsible to make a commitment to learning and keeping up with the daily work. Remember mathematics is learned through active participation. We will have daily lecture and set of problems that need to be worked on during the class. These sets will be collected as your homework assignments (see schedule for due dates).

<u>Out of Class Assignments</u>: 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 <u>and</u> two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

#### **Class Rules:**

- 1. Late assignment is **not** accepted
- 2. No make-up test will be given
- 3. Bring your book, binder, pen, pencil, and highlighter to the class every day.
- 4. It is the student's responsibility to drop or officially withdraw from the class.
- (See IVC summer class schedule for dates).
- 5. It is your responsibility to take notes and make copies of the notes from the days you have been absent.

6. Regular attendance in all classes is expected of all students, being tardy or leaving the class early will count as half absence. The instructor can drop you from the class if the number of absences exceeds the number allowed.

| Course Grading Based on Course Objectives   |   |  |  |  |
|---|---|--|--|--|
| 11 Classwork/Homework sets* @ 10 points each<br>3 Tests @100 points each<br>Final                     | <ul> <li>100 (See the attached calendar for dates)</li> <li>300 (See the attached calendar for dates)</li> <li>200</li> </ul> |  |  |  |
| TOTAL   | 600   |  |  |  |
| *Each set would consist of 75 to 150 exercises, depending on the material, one count as extra credit. |   |  |  |  |

\*Each set would consist of 75 to 150 exercises, depending on the material, one count as extra credit. **Grading Scale:** The standard grading scale will be used: 90%=A, 80%= B, 70%-C, 60%=D, less than 60% will result in the grade of F.

540-600 points = A 480-539 points = B 420-479 points = C 360-419 points = D Less than 360 = F

#### Attendance

Please note: Regular attendance in all classes is expected of all students, being tardy or leaving the class early will count as half absence. The instructor can drop you from the class if the number of absences exceeds the number allowed.

- 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 <u>General Catalog</u> 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**

- <u>Electronic Devices</u>: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- <u>Food and Drink</u> are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- <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 <u>General Catalog</u>.
- <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.

## **Online Netiquette**

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### **Academic Honesty**

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- <u>Plagiarism</u> is taking and presenting 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 "cite a source" correctly, 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 that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing 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 <u>General Catalog</u> 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) using a commercial term paper service.

### **Additional Student Services**

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- <u>Blackboard Support Site</u>. The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- <u>Learning Services</u>. There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your <u>Campus Map</u> for the <u>Math Lab</u>; <u>Reading</u>, <u>Writing & Language Labs</u>; and the <u>Study Skills Center</u>.
- <u>Library Services</u>. There is more to our library than just books. You have access to tutors in the <u>Study Skills Center</u>, 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 <u>Disabled Student Programs and Services</u> (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them 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.

- <u>Student Health Center</u>. A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District and El Centro Regional Center provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC <u>Student Health Center</u> at 760-355-6310 in Room 2109 for more information.
- <u>Mental Health Counseling Services</u>. Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC <u>Mental Health Counseling Services</u> at 760-355-6196 in Room 2109 for more information.

### Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC <u>General Catalog</u>.

### **Information Literacy**

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC <u>Library Department</u> provides numerous <u>Information Literacy Tutorials</u> to assist students in this endeavor.

# Anticipated Class Schedule/Calendar

| WEEK#/ Week of    | SCHEDULE                   |
|-------------------|----------------------------|
| <b>1-</b> Feb 16  | Intro, review, 1.1-1.3     |
| <b>2-</b> Feb 23  | <b>HW 1,</b> 1.4, 2.1-2.2  |
| <b>3-</b> Mar 2   | 2.3, 2.4                   |
| <b>4-</b> Mar 9   | <b>HW 2,</b> 2.5, 3.1      |
| <b>5-</b> Mar 16  | Test 1, HW 3, 3.2, 3.3     |
| 6- Mar 23         | 3.4, 4.1, 4.2, 4.3         |
| <b>7-</b> Mar 30  | <b>HW 4,</b> 4.4, 4.5      |
| 8- Apr 13         | <b>HW 5,</b> 5.1 - 5.3     |
| <b>9-</b> Apr 20  | Test 2, HW 6, 5.4, 5.5     |
| <b>10-</b> Apr 27 | <b>HW 7,</b> 5.6, 6.1, 6.2 |
| <b>11-</b> May 4  | <b>HW 8,</b> 6.3, 6.4, 7.1 |
| <b>12-</b> May 11 | <b>HW 9,</b> 7.2, 7.3, 7.4 |
| <b>13-</b> May 18 | 7.5, 8.1, 8.2              |
|                   | Test 3, HW 10,             |
| <b>14-</b> May 25 | 8.3, 8.4                   |
| <b>15-</b> Jun 1  | 8.5, review                |
| <b>16-</b> Jun 8  | FINAL, HW 11               |

## \*\*\*Tentative, subject to change without prior notice\*\*\*