Basic Course Information

Semester	**Fall 2014**	Instructor's Name	**Jill Kitzmiller**
Course Title & #	**Math 112 Geometry in Elementary Mathematics**	Instructor's Email	**jill.kitzmiller@imperial.edu**
CRN #	**10422**	Webpage (optional)	
Room	**2722**	Office	**2768**
Class Dates	**8/18/14 – 12/11/14**	Office Hours	**8-8:30 am M – TH** **10 – 11:30 am M W**
Class Days	**MW**	Office Phone #	**760 – 355 - 6296**
Class Times Units	**11:50 am – 1:15 pm** **3 units**	Who students should contact if emergency	**Ofelia Duarte – Staff Sec II** **760 – 355 - 6155**

Contacting Instructor

I will be available during office hours for personal discussion. I endeavor to listen to voice-mail and look at email each day when I am on campus. I DO NOT look at email on the weekends (Friday-Sunday) or on holidays. I do not respond to email regarding absences, unless it is long term. I do not discuss grades over email; this must be done in person.

Course Description

Recommended for students who are working towards a teaching credential in elementary education. Topics discussed are decimals and percents, geometry, geometric constructions, rotations, translations, measurements and problem solving. **Prerequisite:** MATH 091 or MATH 090 with a grade of "C" or better.

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. Geometric construction by hand and use of technology (ILO3, ILO4)
2. Written mathematical communication skills (ILO1, ILO4)
3. Transformation and tessellation projects (ILO3, ILO4)

Course Objectives

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

1. Recognize two and three dimensional geometry, and solve a number of applications.
2. Demonstrate the basic idea of congruence and similarity and actively develop a number of geometric constructions.
3. Identify and apply different kinds of transformations, and various types of symmetrics.
4. Recognize a variety of geometric figures, and be able to use and apply formulae in both geometric and non-geometric context.
5. Graph using the Cartesian system of coordinates and will recognize the relationship that exists between algebra and geometry.
6. Solve word problems using the basic concepts of geometry and will identify various geometric patterns.
7. Demonstrate a knowledge of statistics and probability.

Textbooks & Other Resources or Links

Reconceptualizing Mathematics (2nd edition); Sowder. Freeman ISBN-13: 978-1-4641-0898-3
Also needed: Compass, protractor, calculator, straightedge, scissors

Course Requirements and Instructional Methods

Course Prerequisite: MATH 091 or MATH 090 with a grade of "C" or better.
Classroom instruction will consist of a combination of lecture and exploratory activities designed for student led learning. You will be required to participate in class discussions, group work and presenting work to the class. Failure to participate in class activities/discussions can result in lowering of your grade. Problems done for homework and during class are designed to help you understand concepts and learn to communicate mathematically. Group work and assignments during class are mandatory and are not to be considered social time, texting/cell check or break time.

Homework and projects account for almost half of your grade in this course, so be conscientious about turning theses in. They should be clearly legible, labeled with appropriate information, and college quality. There will be homework assigned for each of the 10 chapters (16 – 26). Homework will have fixed due dates. No late work will be accepted, you will receive a grade based on work received by the due date. Homework points will be awarded on the basis of completeness and quality of work, minimal quality will receive minimal points. Homework will be a maximum of 20 points regardless of length of assignment. (200 points)

There will be projects related to several chapters which will supplement or replace homework problems. There will be 3 construction projects: transformation project, tessellation project and compass construction project each 30 points, and one group statistics project worth 100 points. The group project will cover material from chapters 29-30 and serve as homework for those chapters. Projects details later in syllabus. (190 points)

There will be 6 quizzes that are open note. Some will be in class, some may be take-home due the next class meeting. Some may also be done in groups. There are no make-up quizzes. Any missing quiz grade will be recorded as a 0. Your lowest quiz grade will be dropped. Quizzes will be 10 points each. (50 points)

There will be 3 in class exams and one final exam that are closed book and closed note. Students must work independently. Plan now to be in class on the date of the exams. No make-up exams will be given unless arranged in advance with supporting documentation. Any missing exam grade will be recorded a 0. Exams will be 100 points each. (400 points)

It is critical that you read ahead and ask questions. Stay organized, take good notes and read your notes after class. If you are having difficulty with the material, get help. Work with others outside of class, form a study group if possible. You are responsible for all material in assigned chapters and all material covered in lecture, even if you are absent, so find someone in class to make you copies of the notes if you cannot be in class.

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. WASC has adopted a similar requirement. In other words, expect to spend 3 hours per week in the classroom AND at least 6 hours per week on homework for a 3 unit class.

Course Grading Based on Course Objectives

Points earned in the course will be based on the following items. Points are approximate and may be modified according to extra or deleted assignments.

Homework:	200 points
Projects:	190 points
Quizzes	50 points
3 Exams	300 points
Final exam	100 points
Total points	840 points

Your grade will be based on the following points and percentages:
756 or more points (90 – 100%) = A
672 – 755 points (80 – 89%) = B
588 – 671 points (70 – 79%) = C
504 – 587 points (60 – 69%) = D
Below 504 points = F
Class participation, attendance and a subjective instructor's interpretation of work may be used in assigning a final grade to borderline cases.

Incomplete Grade

To receive a final grade of incomplete, you must be passing the class and be unable to take the final exam.

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 and put away during class unless approved for appropriate math purposes. Cell phones or other electronic transmitting devises may not be used on any exam, even if you forget a calculator. You must have a non-transmitting calculator for exams when allowed. **Do not text or use your phone on line during class. Texting is disruptive to your learning and those around you and may be grounds for dismissal from class.**
- Food and Drink are prohibited in all classrooms. Water bottles or containers with lids/caps are the only exception.
- Disruptive Students: Any student who disrupts or interferes with another student's ability to learn or with instruction may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Examples include, but are not limited to, talking with other students during lecture, making disparaging remarks about another student's work or disrupting a contribution to discussions, answering phones or texting during class, reading non-math related materials such as magazines, watching or playing videos or games on an electronic devise. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.
- Please be courteous of others: Try to be on time to class, listen to others without interrupting, encourage other students to participate and share their work

Projects

Transformation Project: Turn in worksheet with the different transformations

Tessellation Project:

1. Choose a polygon and transform it in two ways using rotation and/or a translation. Include a written description of your steps. (10 points)
2. Make an original tessellation using your transformed polygon of at least 3 rows and 4 figures per row. Figures lines should be clean and neat. (10 points)
3. Include the actual polygon used to create the tessellation, tape or staple to your project. (5 points)
4. Color or decorate as an animal or figure appropriate for use in an elementary school. (5 points)

Compass Construction Project: Turn in the Construction Worksheet

1. Use only compass and straightedge as your tools to create the geometric shapes. Show all construction marks. Do not erase. (10 points)
2. All lines, segments, curves, and angles that display symmetry must be congruent. (10 points)
3. Project should be college quality work. Papers should be clean. Lines should be consistent and clean, use sharp pencils. Intersection points and lines should be as exact as possible. (10 points)

Group Statistics Project: Survey of IVC Students

1. Choose a group of 3 – 5 students per group (individual projects will be reduced by 10 points)
2. Choose a topic for your survey. What do you want to know? State your reason for choosing this topic. State your hypothesis for the results of this survey (what you think people will say). (10 points)
3. Formulate a questionnaire or other method of asking the question. Determine how to take a sample of IVC students so it gives good information. Describe your sampling method. How did you minimize bias? (20 points)
4. Collect at least 100 usable responses. Report any reasons you may have thrown out any results. Describe the conclusion(s) can you make from your data. Did the data support your hypothesis? (20 points)
5. Make 2 visual models (graphs or charts) that show your findings. Label your graphs with information and explain graphs so your audience will understand and know how to read them. (20 points)
6. Present your findings to the class. Fully describe all your thinking and all work you did in the steps above. Explain difficulties you had or anything you might do differently if you conduct another survey. Discuss what follow up information you might like to know. (20 points)
7. You do not need to turn in a written report but you will assess other members of your team for purposes of participation.

Academic Honesty

- Plagiarism 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.
- Cheating 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

- Blackboard support center: http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543
- Learning Labs: 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 Math Lab, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: 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. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

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 http://www.imperial.edu/students/student-health-center/. 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 http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

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

Anticipated Class Schedule / Calendar

TENTATIVE SCHEDULE – FALL 2014 – Math 112 – Geometry

Monday	Tuesday	Wednesday	Thursday
8/18 Introduction 16.1	8/19	8/20 16.1, 16.2	8/21
8/25 16.3, Quiz 1	8/26	8/27 polygons 17.1, 17.6	8/28
9/1 HOLIDAY	9/2	9/3 17.2, 17.3	9/4
9/8 17.4, 17.5, Quiz 2	9/9	9/10 Catch up /Review	9/11
9/15 Exam 1	9/16	9/17 18.1, 18.2	9/18
9/22 scissors, ruler 19.1, 19.2	9/23	9/24 21.1, ruler , compass	9/25
9/29 21.2, 22.1, Quiz 3	9/30	10/1 22.2, 22.3, 22.4	10/2
10/6 20.1, 20.2	10/7	10/8 20.3, 20.4, Quiz 4	10/9
10/13 Catch up /Review	10/14	10/15 Exam 2	10/16
10/20 23.1, 23.2	10/21	10/22 24.1	10/23
10/27 24.2, Quiz 5	10/28	10/29 25.1	10/30
11/3 25.1	11/4	11/5 25.2	11/6
11/10 26.1, 26.2, Quiz 6	11/11 HOLIDAY	11/12 Chapter 29 Group project	11/13
11/17 Catch up /Review	11/18	11/19 Exam 3	11/20
11/24 HOLIDAY	11/25 HOLIDAY	11/26 HOLIDAY	11/27 HOLIDAY
12/1 Chapter 30	12/2	12/3 Present Group projects	12/4
12/8 Review for final	12/9	12/10 FINAL	12/11