

MATH 61 – SPRING 2006

PLANE GEOMETRY

Instructor: Alina Birca
Email/Phone: **abirca@mtsac.edu** ; 909-594-5611 ext 5364
Website: <http://elearn.mtsac.edu/abirca/> or **www.timetodare.com**
Office: Building 40 – Room 145 Office hours: MW 9:00 – 9:30 am;
TTh 3:00 – 3:30 pm & 6:00 – 7:00 pm
Text: *Elementary Geometry for College Students (3/e)* by Alexander and Koberlein
Software: *Geometer's Sketchpad* – **Recommended** It is available at Mt. Sac's bookstore.
Section #086053 TTH 7:00 – 8:30 pm 40 – 129

Course Objectives

This is a course in Euclidian Geometry and we will learn about points, lines, polygons, and circles and their relationship to each other on a plane surface. We will study congruent and similar relationships. We will also study inductive, deductive, and indirect reasoning, and the formal proof will be used and practiced throughout the course. Upon completion of this course, the students will be able to:

- acquire the principles of objective thinking and relate it to problems of life as well as geometry;
- develop the habit of defining terms, thinking accurately, establishing conclusions, both geometric and non-geometric;
- develop intellectual maturity rather than mere acquisition of the details of geometry;
- communicate effectively using proper terminology as well as written notation;
- independently analyze and set up application problems, thus applying problem solving techniques to new situations, anticipate and check their proposed solutions.
- Apply learned principles and skills to new situations in addition to situations that mimic those on the homework and those shown in class

Methods of Instruction

This course will combine lecture, teamwork, and class discussion. Students will be required to do homework, group problems, quizzes and examinations.

Attendance and Participation

Understanding math requires more than just reading a textbook. Listening and participating in the class activities are as important as solving problems. College policy requires that you attend every class meeting. Any absence will adversely affect your class participation grade plus you will miss the material from that day and that day's quiz.

Do not be late to class. Excessive tardiness will also affect your participation grade. You may also miss the quiz if you are late. NOTE: You the student are responsible for dropping the course should you decide not to continue in it. If you stop attending and doing the work and you fail to drop, you will receive a failing grade in this course.

You may be dropped from this class if you miss class during the first 2 weeks of instruction. Your seat will be given to a student who has been attending each day.

Pre requisites

There is an official prerequisite for this course (Math 51 or 51 B – Beginning Algebra), and I expect that you demonstrate beginning algebra skills (properties of real numbers, polynomials, exponents, absolute value, evaluating algebraic expressions, solving linear and quadratic equations, the rectangular coordinate system, equations of lines).

Study time & Extra help

You are expected to study two hours outside class for every hour in class. If you have trouble completing assignments or understanding the mathematics, get help as soon as you need it. My office hours are listed above. Free tutorial services are available in MARC (40 - 113).

Late Work

Be prepared with all assignments on the day they are due. As a rule, I do not accept late written work nor are there any make up tests or quizzes.

Academic Honesty

Plagiarism or cheating will not be tolerated. There will be a zero on the assignment and risk failing the course.

Calculators

A graphing calculator is NOT REQUIRED for this class! All of the problems I will assign this semester will be done using paper, pencil, ruler, compass, and protractor. You may also use Geometer's Sketchpad when suitable.

If you have a phone or pager, please turn it to vibrate and sit close to the door in case you need to use it in an emergency. Thank you.

Organization, Grading and Requirements

You will need a 3-hole binder with 3 separators, labeled as follows:

LECTURES

HOMEWORK

TESTS & QUIZZES

- **LECTURES** – Pay attention in class to what I say and do, and make careful notes. In particular, note the problems I work on the board, and copy the complete solutions as well as the theory presented in each section. Work as neatly as you can. Write your symbols clearly, and make sure the exercises are clearly separated from each other. Do not hesitate to ask questions in class. It is not a sign of weakness, but of strength. There are always other students with the same question who are too shy to ask.
- **HOMEWORK** – Before you start on homework assignments, rework the problems I worked in class as well as all examples from the textbook. This will reinforce what you have learned. Make sure you check your previous work against the solution sections posted on my website. Print out the solutions from my website for your reference.
- Keep all quizzes and tests that are returned to you in your binder. Use them when you study for future tests and for the final exam.

Assignments in the course are divided into five areas and are worth a total of 1000 points. Those earning 900 points or more will be awarded an A, 800 to 899 points a B, 700 to 799 points a C, 600 to 699 points a D and less than 599 points an F.

Class Participation 30 points

Your class participation grade includes completion of class exercises and contribution to solving exercises as well as attendance and audience behavior. Everyone starts with 30 points but may lose some of the points as the semester goes on. Students who are absent will be automatically forfeit a percentage of their class participation grade equal to the percentage of classes absent.

Homework 110 points

Homework will be assigned every class session we cover new material and will be collected twelve times (see due dates on the Tentative Class Schedule). Homework is due at the beginning of the class. Each homework is worth 10 points. The lowest score will be dropped. Read carefully all the directions from the homework handout. Late homework will not be accepted for any reason with the following exception: you are allowed ONE grace period until the next class period for ONE assignment. You get only one grace period – use it wisely! You are encouraged to discuss assignments with your classmates; however, you are required to write up your work independently. Copied homework will not be tolerated and identical, or nearly identical, assignments will share a single score.

Quizzes 150 points

Five quizzes will be given (see Tentative Class Schedule). They may be given at the beginning of class or at the end of the class! These quizzes will be given from exercises and examples done in class as well as homework problems assigned from the topics covered up to that point. For an exercise to be complete there needs to be a detailed solution to the problem. Do not just write down an answer. **No proof, no credit given!** Each quiz is worth 30 points.

Activity Labs (Projects) 70 points

There will be two or more sets of group problems (activity labs). The projects may be individual or group work (two or three students). These projects will be done using Geometer's Sketchpad. More details will be given during class.

Tests 390 points

Three tests will be given over the major areas addressed in the course. Each test is worth 130 points. For an exercise to be complete there needs to be a detailed solution to the problem. Do not just write down an answer. **No proof, no credit given!**

Comprehensive final 250 points

The final is a 2 ½ hour exam and it is held on **Tuesday, May 16** from **7:30 – 10:00 pm**. The final is a cumulative exam. You may use the final exam percent score to replace your lowest test score. You must take the final to pass this class.