UAB Department of Mathematics
Syllabus
Fall 2013

MA 472/572-3B – Geometry I
Monday/Wednesday 5:30-6:45PM, CH 204

Instructor: Mitch Wyatt  E-mail: mswyatt@uab.edu  phone: 934-2154
Office Hours: M/W 4:15-5:15, CH 471 or feel free to email me for an appointment!

GENERAL INFORMATION

Class Times and Dates.  See the table below.  All dates are in 2013.

<table>
<thead>
<tr>
<th>Class Meetings</th>
<th>5:30-6:45PM</th>
<th>M/W</th>
<th>8/26–12/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Day Holiday</td>
<td></td>
<td>M</td>
<td>9/2</td>
</tr>
<tr>
<td>Last day to drop [No grade]</td>
<td></td>
<td>Tu</td>
<td>9/3</td>
</tr>
<tr>
<td>Last day to withdraw [Grade “W”]</td>
<td></td>
<td>F</td>
<td>10/25</td>
</tr>
<tr>
<td>Thanksgiving Break</td>
<td></td>
<td>M-F</td>
<td>11/25–11/29</td>
</tr>
<tr>
<td>Final Exam</td>
<td></td>
<td>4:15-6:45 PM</td>
<td>W</td>
</tr>
</tbody>
</table>

Course Structure.  This course is a “guided inquiry” course.  That is, your textbook will consist of statements of definitions, axioms, problems, and theorems, and occasional brief explanations.  *There will be very little lecture.*  You will be expected to solve the problems and prove the theorems yourself individually, and in small groups.  Daily small group assignment is at the instructor’s discretion and may be random, student-determined, or instructor-determined.  Individual and group work will be “processed” by the class as a whole.  Processing involves a whole class discussion of the problem or theorem, usually based upon one or more student presentations to the class.  You will keep a complete record of your achievements, as well as notes taken in class, in your permanent class notebook.  *Competence in oral and written communication of mathematics is a major goal of the course.*  In a guided inquiry course, when you are working, individually or in a group, you are expected NOT to consult outside sources such as other geometry textbooks, internet websites, smarter friends, or the like.  You may work with other students in the class, but if you present the work, you must give credit to all who contributed to it.  (For example, you would say “Ann and I worked together on this.”)  This will not diminish your credit, but is an essential component to academic honesty.  Moreover, your collaborators are not required to bail you out of difficulty, but may elect to do so.

Materials.  You will need to bring the following items to each class meeting

1. **Textbook:** *Euclidean Geometry* by David Clark
2. A 3-ring binder to contain your class notebook.  All entries must be up to date.  (see the Notebook section)
3. A compass and ruler/straightedge
4. Sharp pencils or pens.
5. Scientific Calculator (last few weeks only, depending on material covered)
Attendance Policy. Attendance at every class meeting is required. Roll will be taken by signing in. Active participation counts 20% of your final grade. The following rules apply:

1. Students may not sign the roll for other students. To do so constitutes academic dishonesty.
2. If you come late to the class meeting, do not ask to sign the roll; do not sign the roll if you intend to leave the class early.
3. In case of emergency, students may leave the class without the instructor’s permission. Just get the instructor’s attention and leave quietly with minimal disruption to the rest of the class.
4. If you will be absent on official university business or scheduled medical appointments, arrangements must be made in advance of the absence.

Cell Phones. Student cell phones must be on vibrate or off during all class meetings.

Grading Scheme. Students earn their grade in the course as determined in the tables below. How each grade component is determined is described in the paragraphs that follow. Recall that a grade of D cannot count toward the mathematics major.

<table>
<thead>
<tr>
<th>Grade Component</th>
<th>Points</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>120</td>
<td>88-100%</td>
<td>A</td>
</tr>
<tr>
<td>Participation</td>
<td>60+</td>
<td>75-88%</td>
<td>B</td>
</tr>
<tr>
<td>Notebook</td>
<td>60</td>
<td>62-75%</td>
<td>C</td>
</tr>
<tr>
<td>Final Exam</td>
<td>60</td>
<td>50-62%</td>
<td>D</td>
</tr>
<tr>
<td>Total</td>
<td>300+</td>
<td>0-50%</td>
<td>F</td>
</tr>
</tbody>
</table>

Notebook. Both work done in class, in small groups and individually, and any notes you take based upon whole group discussion or lecture, will be kept in your permanent class notebook (loose leaf 3-ring binder). Nothing should be erased – just mark it through like this (you should still be able to read what you strikethrough). Your notebook will be collected periodically and the extent to which you are keeping up with the work required will be evaluated for the Notebook portion of your grade. Your Notebook should contain the following sections: Class Discussion Notes, Work in Progress, Finished Work, and Quizzes. Expect your Notebook to be evaluated about every other week. You will be amazed at how your work will improve over the semester!

Participation and Presentations. You are expected to participate actively, particularly in small group work and class processing discussions. Normally you will earn 2 points per class meeting. As there are 27 class meetings, this makes for a total of 54 points.

Students are strongly encouraged to present their work to the class as often as possible. We will take volunteers for presentations regarding nearly every problem worked in the class. Your first presentation will earn you 4 additional participation points. Your second and third presentations will earn you 2 additional participation points each, and subsequent presentations will earn one additional participation point each.

Participation counts for 20% of your final grade. Full credit for participation is 60 points. Therefore, to earn full participation credit for the semester, you must make at least 2 presentations. It is possible to earn more than 60 participation points by presenting three or more times. The instructor will warn you privately if your participation is below the range
acceptable for full credit. It is tempting NOT to do the individual homework – do not fall for it! Mere presence does not constitute participation.

**Quizzes.** Quizzes will be given in class without prior announcement, and based primarily upon work done within the current and one or two prior class meetings. Quizzes will be of a similar nature to the types of problems, examples, constructions, and theorems encountered in class and in working through the textbook. You should expect a quiz nearly every week. Each quiz counts 10 points unless otherwise specified at the time. Quizzes count 40% of your final grade. (There are no tests that take a full class period.)

**Final Exam.** The final exam will consist of a number of problems similar to the major problems and theorems of the course, but not repeating problems in the course. You will be able to select a small number of problems to work on from a longer list for the IN-CLASS final exam. The final exam counts 20% of your final grade.

**Make-up policy.** There are no make-up quizzes or make-ups for absence resulting in decreased participation credit. If you miss a class for a verifiable emergency, necessary medical appointment, or on UAB official business, the instructor will work with you to find an accommodation. Since participation, particularly in small group work and class processing discussion, is a very important part of the course, repeated unexcused absences (or late arrivals or early departures) beyond 20% of the class meetings cannot be tolerated for any reason, and will result in a grade of F for the course.

**Disability Support Services (DSS).** DSS offers tutoring and special accommodations to students who qualify. The UAB DSS office is located in the 9th Avenue Office Building (1701 9th Ave. South), telephone: 934-4205, e-mail: dss@uab.edu. Students who have DSS-approved accommodations should see the instructor privately for further information.

**Withdrawal.** You are expected to be aware of official UAB withdrawal policies.

**Student Conduct Codes.** You are expected to be aware of, and rigorously adhere to, the UAB codes of conduct with regard to academic honesty and inter-personal relations.

**MA 572 Students Only.** MA 572 is scheduled with MA 472 and MA 572 students participate in all class activities described above without distinction being made between MA 472 students and MA 572 students. However, MA 572 students have an additional requirement: a 5-10 page mathematical expository paper on some aspect of advanced (beyond course topics) Euclidean or non-Euclidean geometry. Discuss your topic selection with the instructor well in advance. This is the one case where you can consult other sources. Toward the end of the semester, there will be an EXTRA class meeting at which this paper will be presented to the other graduate students in the class as an expository talk. The instructor will evaluate both the written paper and the oral exposition according to a rubric that you will receive in advance of writing the paper. The paper and presentation count an additional 60 points together toward your grade, for a total of 360 points (to which the percentage grade table above is applied). Students in graduate courses cannot receive a grade of D in the course, so any grade below 62% is an F.
Groups of 4 Rules

1. Each member is responsible for his/her own learning.
2. Each member of the group is willing to help every other group member who asks for help.
3. Groups may ask the teacher for help only when all group members have the same question.
4. There is always a further challenge!