

Winter 2009 Math 330B/539 Course Information

Instructor: Mark Barsamian **e-mail:** Mark.Barsamian.1@ohio.edu

Office: Morton Hall Room 538 **Office phone:** (740) 593-1273

Office Hours: Monday - Thursday 10:10am-11:00am

Registration Info: This course is cross-listed:

- Math 330B Foundations of Geometry II, Section A01 (call number 04721)
- Math 539 Topics in Geometry, Section A01 (call number 04738)

Course Description: We will study similarity, then study transformations. In the final two weeks, we will study more recent geometric results and some uses of complex numbers in geometry.

Course Web Page: <http://www.math.ohiou.edu/~barsamian/2009w330B/2009w330B.html>

Text: *Euclidean and Transformational Geometry*, by Shlomo Libeskind, published by Jones and Bartlett, 2008 (ISBN-13: 978-0-7637-4366-6) (ISBN-10: 0-7637-4366-6)

Calculators: Will probably not be useful in the course, and will probably not be used on the exams.

Computers: Throughout the course, we will explore computer programs that are useful for making geometric drawings and animations. We will mainly use GeoGebra, but may also use Geometer's Sketchpad, NonEuclid, Spherical Easel, and Microsoft Word..

Grading:

You will accumulate points as shown in the table at right.

Written Homework (8 assignments, 25 points each):	200 points
In-Class Exams (2 exams, 250 points each):	500 points
Final Exam:	300 points
Total Points Possible for the Quarter:	1000 points

Your total points score will be converted to your course letter grade using the percentage scale shown in this table.

Total Score	Percentage	Grade	Interpretation
900 - 1000	90% - 100%	A	You mastered all concepts, with no significant gaps
850 - 899	85% - 89.9%	A-	
800 - 849	80% - 84.9%	B+	You mastered all essential concepts and many advanced concepts, but have some significant gaps.
750 - 799	75% - 79.9%	B	
700 - 749	70% - 74.9%	B-	
650 - 699	65% - 69.9%	C+	You mastered most essential concepts and some advanced concepts, but have many significant gaps.
600 - 649	60% - 64.9%	C	
550 - 599	55% - 59.9%	C-	
400 - 549	40% - 54.9%	D	You mastered some essential concepts.
0 - 399	0% - 39.9%	F	You did not master essential concepts.

Homework: There are eight Homework Assignments that will be graded. In addition, there is a list of Suggested Problems that will not be graded. The Homework Assignments and Suggested Problems are found on the course web page

Attendance: Attendance is mandatory and is recorded. Attendance is not part of your grade. However, data from previous quarters shows that there is a very strong correlation between attendance and performance in this course. If you do miss a class, it is your responsibility to copy a classmate's notes and study them. I will not use my office hours to teach topics that were discussed in class to students that missed class.

Special Needs: If you have physical, psychiatric, or learning disabilities that require accommodations, please let me know as soon as possible so that your needs may be appropriately met.

Tentative Schedule:

Date	Class topics
Mon Jan 5	Section 4.1 Ratio, Proportion, and Similar Polygons
Tue Jan 6	Section 4.1
Thu Jan 8	Section 4.1
Fri Jan 9	Section 4.2 Further Applications of Similarity (Homework 1 due at start of class)
Mon Jan 12	Section 4.2
Tue Jan 13	Section 4.3 Areas of Similar Figures
Thu Jan 15	Section 4.3
Fri Jan 16	Section 4.4 The Golden Ratio (Homework 2 due at start of class)
Mon Jan 19*	Holiday: no class
Tue Jan 20	Section 4.4
Thu Jan 22	Section 4.5 Circumference and Area of a Circle
Fri Jan 23	Section 4.5 (Homework 3 due at start of class)
Mon Jan 26	Section 4.7 Trigonometric Functions
Tue Jan 27	Section 4.7
Thu Jan 29	Section 4.7
Fri Jan 30	In-Class Exam 1 Covering Chapter 4
Mon Feb 2	Section 5.1 Reflections, Translations, and Rotations
Tue Feb 3	Section 5.1
Thu Feb 5	Section 5.1
Fri Feb 6	Section 5.2 Congruence and Euclidean Constructions (H4 due at start of class)
Mon Feb 9	Section 5.2
Tue Feb 10	Section 5.3 More on Extremal Problems
Thu Feb 12	Section 5.3
Fri Feb 13	Section 5.4 Similarity Transformations (Homework 5 due at start of class)
Mon Feb 16	Section 5.4
Tue Feb 17	Section 6.1 In Search of New Isometries
Thu Feb 19	Section 6.1
Fri Feb 20	Section 6.1 (Homework 6 due at start of class)
Mon Feb 23	Section 6.2 Composition of Rotations
Tue Feb 24	Section 6.2
Thu Feb 26	Section 6.2
Fri Feb 27	In-Class Exam 2 Covering Chapters 5 and 6
Mon Mar 2	Section 7.1 The Nine-Point Circle and Other Recent Results
Tue Mar 3	Section 7.1
Thu Mar 5	Section 7.1
Fri Mar 6	Section 7.2 Complex Numbers and Geometry (Homework 7 due at start of class)
Mon Mar 9	Section 7.2
Tue Mar 10	Section 7.2
Thu Mar 12	Course Review (Homework 8 due at start of class)
Fri Mar 13	Course Review; Course Evaluations
Mon Mar 16	Cumulative Final Exam 10:10am – 12:10pm