

Course Syllabus
MA127A Intuitive Geometry
Rivier College Fall 2004

Tuesdays & Thursdays 8:35 – 9:50 am

Instructor Dr. Olga Chuyan

Phone 654-9629

E-mail olga_chuyan@attglobal.net

Course Description

This course focuses primarily on geometry in the physical world, the intuitive exploration of concepts of geometry, and the aesthetic and recreational aspects of geometry. The emphasis is on investigation of key geometrical relationships.

Required Course Textbook

Geometry: An Investigative Approach, 2nd edition, by O'Daffer, P.G. and Clemens, S.R., Addison-Wesley, New York, 1992.

Required Course Materials

Tracing paper, colored pencils, small ruler with standard and metric units, protractor, compass, stapler, scissors, glue stick or scotch tape.

Course Objectives

- To involve students in active investigation of geometry
- To engage students in mathematical thinking, logical reasoning, and discussions focused on geometrical concepts
- To help students develop and use problem solving strategies
- To help students learn to explore, to read, and to visualize mathematics
- To help students become independent learners
- To make students aware of some of the current and historical questions and research in geometry

Teaching Strategies

- Exploratory, intuitive activities that involve students in the active doing of geometry
- Active student engagement in group work and discussions
- Lecture and large and small group discussions and activities
- Student writing about mathematical ideas
- Using geometrical software

Course Requirements

- Active participation in full-class, small group, and individual activities
- Written home assignments
- Lab and other exploratory activities
- Three written examinations (on October 7, November 9, and December 7)
- Final exam (on December 14)

Grading Method

Home assignments and labs	30%
Examinations	40%
Final exam	30%

Classroom Policies

- In case of illness or an emergency that will require missing a class, please contact me – if at all possible, before the class. If you can't avoid an absence, please arrange for a friend or a classmate to bring your home assignment to class.
- If, at any point, you have concerns about the course or your personal progress – please talk with me immediately. We can certainly deal successfully with all such problems – if we do it promptly, before they have a chance to become “chronic”. Please do not hesitate to contact me whenever you need some help

Tentative Course Outline

Th., September 9 – Tu., September 21	Ch. 6: Measurement
Th., September 23 – Tu., October 5	Ch. 2: Basic Ideas of Geometry
Th., October 7	Examination 1
Tu., Oct. 12 – Tu., October 19	Ch. 3: Discovering Polygonal Relationships
Th., October 21 – Th., October 28	Ch. 4: Tessellations
Tu., November 2 – Th., November 4	Ch. 5: Geometry in Three Dimensions
Tu., November 9	Examination 2
Th., November 11 – Th., November 18	Ch. 7: Motions in Geometry
Tu., November 23 – Th., December 2	Ch. 8: Magnification and Similarity and/or Ch. 10: Number Patterns in Geometry
Tu., December 7	Examination 3
Th., December 9	Review

Final exam: December 14, 9.00 – 11.00 am