

Math 630 — High School Math from an Advanced Perspective I

Instructor:

Email:

Office Hours:

Prerequisite: Department Permission.

Course Materials: The Mathematics That Every Secondary School Math Teacher Needs to Know
by Alan Sultan and Alice F. Artzt, 2nd Edition, Routeledge.

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ISBN: 978-1-138-22861-0 (paperback)

ISBN: 978-1-315-39190-8 (e-book)

You will also need a 1- or 2-line display *scientific* calculator, as well as a physical or electronic notebook.

Syllabus: We cover most of Chapters 8 – 12, as well as some supplemental material.

Learning: Upon successful completion of this course, students will have an understanding,

Outcomes: from an advanced perspective, of various topics they will be teaching their 7th to 12th grade mathematics classrooms. More specifically:

1. Students will be able to explain and apply definitions and properties related to real numbers.
2. Students will be able to analyze and plot complex numbers, write complex numbers in various forms, and perform various operations on complex numbers.
3. Students will be able to define a function, create various representations for functions, and apply related concepts.
4. Students will be able to create mathematical models for various real life situations.
5. Students will be able to perform and explain translations, rotations, and reflections of the plane.
6. Students will be able to calculate and relate the various measures of an angle.
7. Students will be able to evaluate the trigonometric functions of general angles.
8. Students will be able to explain and apply various trigonometric concepts.

Homework: Homework is assigned with each section. As in any math class, doing the homework thoroughly is essential to understanding and success in the course. Homework and participation are 20% of your course grade.

– Continued on the reverse side. –

Exams: There are two midsemester exams and a cumulative Final Exam. Exam I and II will each count once and the Final will count twice with the lowest grade dropped.

Grade Summary: Your total score for the course will be calculated in the following manner:

20% Homework and Participation

80% Exams (E1, E2, Fin, Fin; Lowest of These Four Dropped)

General Remarks: **Be responsible for your own learning!** This can't be stressed enough. It is up to you to find the best way for you to assimilate these ideas. Read the text, read your notes, do all the homework until you understand every problem, and think about the concepts as much as you can. Work on the course often—every day if possible! Don't be afraid to ask questions, and seek help when you need it. It is better to study often in small doses than infrequently for long periods. If you still find yourself struggling with the course, please seek assistance from the college's tutoring and academic support services. This is available at the Dolciani Mathematics Learning Center on the 7th floor of the college library.

"Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures"

"In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/or Learning) consult the Office of AccessABILITY located in Room E1124 to secure necessary academic accommodations. For further information and assistance please call (212-772-4857)/TTY (212-650-3230)."

"In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and

events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a) Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

b) All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123. CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-SexualMisconduct-12-1-14-with-links.pdf>

Note: I reserve the right to adjust this syllabus as required to address the needs of the class.