

Math 105 – Geometry and Methods of Proof
CRN: 76113

Fall 2015

Class Hours:

TR: 7:15–8:35pm

Room: SSV 202



Instructor: James Dorn

Web Page: <http://www.mrdorn.com>

e-mail: jdorn1@avc.edu (Put your name and class in subject)

Phone: 661.722.6300 x 6811

Office: HS254

Drop In Hours:

M – Th 10:30 –12:00pm

Fall Calendar:

Aug. 24 Classes Begin

Sep. 07 Labor Day (no school)

Nov. 11 Veteran's Day (no school)

Nov. 13 Last Day to Drop w/ W

Nov. 26 Thanksgiving (no school)

Dec. 10 Final Exam

Required Materials:

Proofs in Geometry and Pre-Calculus, 1st Edition, by Anderson and Mason

Scientific Calculator

Course Description: Using Euclidean geometry as a paradigm of deductive systems, this course is designed to give STEM students an introductory overview, appreciation, and understanding of the role of theorem and proof in mathematics in preparation for the calculus sequence and beyond. The deduction of geometric concepts and theorems important in later courses will emphasize the anatomy of a deductive system and basic direct proof. This experience will then be extended to non-geometric systems, where students will be introduced to some basic analytical methods of proving familiar mathematical statements about numbers, sets, and functions.

Statement of Access: If you have a legally protected disability under the Americans with Disabilities (ADA) or California discrimination law, and you believe you need reasonable accommodation to participate fully in this class, please make an appointment to see me during my private office hours to discuss your need.

Attendance/Participation: **You are required to attend class every day.** If you MISS MORE THAN FOUR class sessions, you may be dropped from the course. It is **your responsibility** to keep your enrollment status current. You risk an "F" if you stop attending without officially withdrawing. Do not bring friends or children to class.

Comfort and Courtesy: It is hoped that the learning environment will be comfortable and that students will feel free to ask questions and offer answers. It is the instructor's expectation that all students will extend common courtesy to each other and to the instructor. It is also expected that students will refrain from any unnecessary noise when other students are trying to listen and learn. **This includes but is not limited to conversing with friends and/or the use of cell phones. Please turn off any cell phones or other electronic devices during class time (or switch them to silent mode).** No cell phones or electronic devices will be allowed on your desk during exams. I am aware that you are all adults and it is my expectation that you act as such.

Grading Policies: Grades will be based on homework, quizzes, tests, and final exam. No notes, “cheat sheets”, or cell phones will be allowed on any exam.

Homework: There will be 4 homework assignments worth 25 points each. Each assignment will cover two chapters of material except for the last homework which will only cover 1 chapter. Homework will be due on the day of the test covering the respective chapters, except for the last assignment that will be due on the day of the last quiz. **No late homework will be accepted.**

Quizzes: We will have 4 quizzes and each will be worth 25 points. **No make-up quizzes will be given.**

Tests: There will be 3 tests worth 200 points each. Tests will be taken in class. It is expected that all tests will be taken on schedule. **No make-up tests will be given.**

Final Exam: A 200 point comprehensive final exam will be given during finals week.

KEEP all of your homework, quizzes and tests! I rarely make an error but the only way it can be fixed is if you can show me your grade on that item. ALSO, all of these items are helpful study guides for your final exam!!

Grading Summary:

Homework	= 100 pts. (10%)
Quizzes:	= 100 pts. (10%)
Tests:	= 600 pts. (60%)
Final:	= <u>200 pts.</u> (20%)
Total:	1000 pts.

Grading Scale: A = 90% or above; B = 80%-89%; C = 70%-79%; D = 60%-69%; F =below 60%

Honesty Policy: Your grade is intended to be a reflection of what you have learned about this subject and how well you can demonstrate that learning. If cheating occurs it will be dealt with as college policy dictates, the minimum outcome being a zero score. Depending on the severity of the offense the dean and vice president of instruction may be notified, you may receive an F in the class and/or you may be removed from the course or the college. Do not take this risk.

Syllabus Disclaimer: It is the intention of the instructor to follow this schedule as closely as possible. There may be factors that arise that would cause a deviation from this schedule. The instructor reserves the right to amend the syllabus when circumstances dictate. Students will be duly notified.

Student Learning Outcomes:

1. Solve problems involving geometric figures by recognizing, identifying, and applying appropriate properties and formulas.
 2. Prove statements about geometric figures using direct two-column proofs, indirect proof, or coordinate proofs.
 3. Recognize and identify the elements of an axiomatic system, the role of conditional statements, and valid forms of deduction.
 4. Use elementary analytic methods of proof to prove mathematical statements about numbers, sets, functions, and sequences.
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MATH 105 Tentative Schedule

Week	Tuesday	Thursday
1	25-Aug Introduction / 1.1	27-Aug 1.2 - 1.3
2	1-Sep 1.4 - 1.5	3-Sep 2.1 Quiz 1
3	8-Sep 2.2 - 2.3	10-Sep 2.4
4	15-Sep Test 1	17-Sep 3.1
5	22-Sep 3.2	24-Sep 3.3
6	29-Sep 3.4	1-Oct 4.1 Quiz 2
7	6-Oct 4.2 - 4.3	8-Oct 4.3 - 4.4
8	13-Oct Test 2	15-Oct 5.1 - 5.2
9	20-Oct 5.3	22-Oct 5.4
10	27-Oct 6.1 - 6.2	29-Oct 6.3 - 7.1
11	3-Nov 7.2 - 7.3	5-Nov 8.1 Quiz 3
12	10-Nov 8.2	12-Nov 8.3
13	17-Nov Test 3	19-Nov 10.1 - 10.2
14	24-Nov 10.3 - 10.4	26-Nov Thanksgiving - No School
15	1-Dec 10.7	3-Dec 10.8 Quiz 4
16	8-Dec Review for Final	10-Dec Final Exam