

**Gannon University**  
**Math 105-02, Spring 2009**  
**Fundamentals of Mathematics 1**  
**TTh 12:00pm – 1:20pm**  
**Beyer 210**

**Instructor:** Dr. Geoffrey D. Dietz  
**Department:** Mathematics  
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**Office Phone:** 871-7595  
**Office Hours:** MWF 10am–11am, Th 9am – 11am, or by appointment  
**Text:** **Mathematics All Around, 3rd Edition.** Pirnot, 2007.  
**Web Site:** [http://www.gannon.edu/faculty\\_staff/faculty/dietz005/teaching/S09-105.html](http://www.gannon.edu/faculty_staff/faculty/dietz005/teaching/S09-105.html)

1. **Credits and Prerequisites.** Math 105 is worth 3 credits. The prerequisite is two years of high school algebra.
2. **Course Content.** This course investigates the nature of mathematical relationships through problem solving. Topics include set theory, logic, systems of numeration, number theory and the real number system, and algebraic models. We will cover Chapters 1, 2, and 4–6 from the text listed above. You are expected to read the assigned sections before every class and be prepared to answer questions.
3. **Course Outcomes.** Apply problem-solving strategies, including the use of Venn diagrams. Compute truth tables for compound statements using negation, conjunction, disjunction, conditional, and biconditional connectives. Determine the validity of arguments. Perform calculations in ancient numeration systems and different based place-value systems. Perform operations in the real number system and understand its basic properties. Analyze data using linear, quadratic, and exponential functions. Solve problems using direct and inverse variation, ratios, and proportions. Demonstrate an appreciation for the development of mathematics and an understanding of how mathematics affects the world around them.
4. **Evaluation.** An project for each chapter will be collected and graded. These projects will include collections of homework problems from the chapter or other problems to solve. Homework problems from the text will also be assigned. Although they will mostly not be collected or graded, correctly solving these problems is essential to prepare for exams. Three exams will be held during regular class time. The fourth exam will be during finals week.
5. **Grading.** Final grades will be based on

A: 90–100   B+: 85–89   B: 80–84   C+: 75–79   C: 70–74   D: 60–69   F: 0–59.

The ranges may be widened at my discretion. The grades are weighted as follows:

Projects:	20%
Exam 1 (Tues. 2/3):	20%
Exam 2 (Thurs. 2/26):	20%
Exam 3 (Thurs. 4/2):	20%
Final Exam (Tues. 5/5, 11:00am–1:00pm):	20%

6. **Attendance.** Attending every class is necessary to maximize your success in this course. Regular attendance of scheduled office hours is also recommended if you have additional questions or concerns about any aspect of the course. You are responsible for obtaining any information missed due to absence.
7. **Excused Absences.** An excused absence from an exam will only be given when the absence is truly unavoidable and beyond your control. If you have advanced warning of a situation that will cause you to miss an exam, you must arrange to take a make-up exam before your absence. An exam missed due to illness must be made up the following day unless excused by a doctor.

8. **Technology.** A calculator may be helpful during portions of this course, but there may also be times when calculator use is restricted. It is your responsibility to understand how to operate your calculator.
9. **Academic Integrity.** Students are assumed to be familiar with the Academic Integrity Policy found in the current edition of the student handbook. Cheating or dishonesty may result in a failing course grade or even expulsion from the University.
10. **Student Disabilities.** Gannon University is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with me as early in the semester as possible. You must also be registered with The Program for Students with Learning Disabilities prior to receiving accommodations in this course.
11. **Project Guidelines.**
  - Graded projects in this course must consist of complete, neatly written solutions to the assigned problems. I am more interested in seeing the method of solution than the final answer. If a final answer is given without a sufficient amount of work, then you may receive little or no credit for the problem.
  - If a problem submission ends with an answer (possibly from the back of the text) that does not match the work for the problem, a score of **zero** may be assigned for that problem.
  - Assignments are due at the beginning of class on the next exam date, except for Chapter 4. The Chapter 4 project is due Thursday 3/19.
  - Print your name(s) and “Math 105” at the top of the first page.
  - Staple all pages before submission.
  - Label each problem by section and number. The problems should be written out in the proper order when submitted.
  - Start each problem with a *brief* summary.
  - You may work together in groups of at most three people. Include the names of your group as well as anyone you consulted with for each solution.
  - Failure to follow these guidelines may result in the loss of points on assignments.

# Math 105-02 Tentative Schedule for Spring 2009

Date	Day	Sect.	Practice Problems	Projects
1/13	T	1.1	19–50, 61–70	59, 60 86, 88, 89 59–64(all) 78–84(even) 40
1/15	Th	1.2	1–3, 13–35, 41, 43–59	
		1.3	7–60, 65–80, 87	
1/20	T	1.4	1, 2, 4, 6, 10, 11–50, 55	
1/22	Th	1.5	1–6, 11–88	
1/27	T	1.6	1, 2, 5, 6, 7–29, 37, 39	
1/29	Th	Review		
2/3	T	<b>Exam #1 and Project #1 due</b>		
2/5	Th	2.1	7–34, 39, 40, 43, 49, 52	46, 59
		2.2	1–7, 11, 37–50, 53, 54, 65–70	logic puzzles
2/10	T	2.3	5, 9–29, 37–45(odd), 49–54, 61, 63, 65	73, 74, 78
2/12	Th	2.4	5–16, 17–33(odd), 45–52	73, 74
2/17	T	2.5	11–34, 41–48	sylogisms
2/19	Th	2.6	4, 9–28	
2/24	T	Review		
2/26	Th	<b>Exam #2 and Project #2 due</b>		
<b>Spring Break, 3/2 – 3/6</b>				
3/10	T	4.1	1, 4–24	83, 84, 85
		4.2	9–58	60, 67, 70
3/12	Th	4.3	9–64	95–98(all)
3/17	T	5.1	1, 2, 5–16, 23, 29–72, 78	67, 68
		5.2	7–82	95–98(all)
3/19	Th	5.3	6, 9–105, 109, 112–115 and <b>Project #4 due</b>	86, 119, 121
3/24	T	5.4	1–5, 9–67, 71, 73, 81–90	68, 107, 108
3/26	Th	5.5	9–44, 47–70, 83, 84, 87, 93, 97, 100, 103, 111	45, 46, 110, 114
3/31	T	Review		
4/2	Th	<b>Exam #3 and Project #5 due</b>		
4/7	T	6.1	4–63, 65, 67, 73, 77, 83	70, 85, 86
<b>Easter Break, 4/9 – 4/14</b>				
4/16	Th	6.2	4, 7–24, 27, 28, 35	36, 38
		6.3	3, 5–16, 23–25, 29, 30, 33	35, 36
4/21	T	6.4	5–47, 49, 55, 57	56, 58, 60
4/23	Th	6.5	4–34, 38, 39, 41, 42, 51, 52	59–62(all)
4/28	T	6.6	2–32, 37–60	34, 38, 40
4/30	Th	Review		
5/5	T	<b>Final Exam, 11:00am – 1:00pm and Project #6 due</b>		