

**Mathematics 5
Course Syllabus
January 4, 2012**

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The list of topics below will give you some idea of the tentative schedule for Mathematics 5 this Winter. However, the topics may change depending upon the interests of the class, and if so, we will modify the schedule and agree on a new version. The chapter references are to the draft manuscript *Mathematics and Knowledge: Models of Reality* by Dwight Lahr.

Week	Topics	References
#1 Jan 4, 6	Visualization, Quantification, Abstraction	Chapter 1
#2 Jan 9, 11, 13	Abstraction, Idealization, Truth, Logic	Chapter 1, Chapter 2
#3 Jan 18, 20	Connectives, Thms, Prfs, Paradoxes	Chapter 2
#4 Jan 23, 25**, 27	Infinity, Zeno's Paradoxes	Chapter 6
#5 Jan 30, Feb 1, 3	Primes, Exponents	Ch. 3 (3.4, 3.5, 3.14, 3.15)
#6 Feb 6, 8	Congruence, ISBN	Chapter 4
#7 Feb 13, 15, 17	Fermat's Little Thm, Codes	Chapter 4
#8 Feb 20, 22**, 24	Euler's Thm, RSA Algorithm	Chapter 4
#9 Feb 27, 29, Mar 2	Einstein, Energy, $E = mc^2$	Chapter 9 (9.10 and 9.11)
#10 Mar. 5, 7	Wrap up; evaluations	Final Paper due Sat, 3/10

Notes:

* Week #3: MLK holiday on Monday, 1/16 (no class that day)
 Week #6: Winter Carnival on Friday, 2/10 (no class that day)

** Quizzes: Wednesday, January 25; Wednesday, February 22.

Final seven-page paper due on first day of finals: Saturday, March 10.

Special schedules: MLK holiday No class on Monday in week #3
 Winter Carnival No class on Friday in week #6