

**21-127 - CONCEPTS OF MATHEMATICS, SUMMER 1  
2014  
TENTATIVE SCHEDULE**

Day	Topic
M, May 19 T, May 20 W, May 21 R, May 22 F, May 23	<b>HW 1 out</b> , Administrivia, what is a proof? Numbers and inequalities Numbers and inequalities Basic logic: and, or, not, implies <b>HW 1 due, HW 2 out</b> , basic logic: quantifiers
M, May 26 T, May 27 W, May 28 R, May 29 F, May 30	<b>Memorial day: no class.</b> <b>HW 3 out</b> , basic logic: elementary proof techniques <b>HW 2 due</b> , Sets: basic operations and notation Induction <b>HW 3 due, HW 4 out</b> , Induction
M, June 2 T, June 3 W, June 4 R, June 5 F, June 6	Strong induction and the well-ordering principle <b>HW 4 due, HW5 out</b> , Relations and functions Cardinalities of finite sets Cardinalities of infinite sets <b>HW 5 due, HW 6 out</b> , Review
M, June 9 T, June 10 W, June 11 R, June 12 F, June 13	<b>Midterm.</b> Combinatorics: counting Combinatorics: counting Combinatorics: counting <b>HW 6 due, HW 7 out</b> , Combinatorics: the pigeonhole principle
M, June 16 T, June 17 W, June 18 R, June 19 F, June 20	Number theory: the fundamental theorem of arithmetic <b>HW 7 due, HW 8 out</b> , Number theory: the Euclidean algorithm Number theory: Modular arithmetic Number theory: The chinese remainder theorem, Fermat's little theorem <b>HW 8 due, HW 9 out</b> , RSA
M, June 23 T, June 24 W, June 25 R, June 26 F, June 27	Probability <b>HW9 due, HW10 out</b> , Probability Probability <b>HW 10 due</b> , Review <b>Final</b>

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*Date:* June 15, 2014.