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

| Day | Topic |
|---|---|
| M, May 19 | **HW 1 out**, Administrivia, what is a proof? |
| T, May 20 | Numbers and inequalities |
| W, May 21 | Numbers and inequalities |
| R, May 22 | Basic logic: and, or, not, implies |
| F, May 23 | **HW 1 due, HW 2 out**, basic logic: quantifiers |
| M, May 26 | **Memorial day: no class.** |
| T, May 27 | **HW 3 out**, basic logic: elementary proof techniques |
| W, May 28 | **HW 2 due**, Sets: basic operations and notation |
| R, May 29 | Induction |
| F, May 30 | **HW 3 due, HW 4 out**, Induction |
| M, June 2 | Strong induction and the well-ordering principle |
| T, June 3 | **HW 4 due, HW5 out**, Relations and functions |
| W, June 4 | Cardinalities of finite sets |
| R, June 5 | Cardinalities of infinite sets |
| F, June 6 | **HW 5 due, HW 6 out**, Review |
| M, June 9 | **Midterm.** |
| T, June 10 | Combinatorics: the pigeonhole principle |
| W, June 11 | Combinatorics: the pigeonhole principle, counting |
| R, June 12 | Combinatorics: counting |
| F, June 13 | **HW 6 due, HW 7 out**, Number theory: primes and divisibility |
| M, June 16 | Number theory: the fundamental theorem of arithmetic |
| T, June 17 | **HW 7 due, HW 8 out**, Number theory: modular arithmetic |
| W, June 18 | Number theory: the Chinese remainder theorem |
| R, June 19 | Number theory: Fermat's little theorem |
| F, June 20 | **HW 8 due, HW 9 out**, Probability: definitions |
| M, June 23 | Probability: conditional probability and Bayes' theorem |
| T, June 24 | **HW9 due, HW10 out**, Probability: random variables and expectation |
| W, June 25 | Selected topics (or most likely catching up) |
| R, June 26 | **HW 10 due**, Review |
| F, June 27 | **Final** |

*Date*: June 1, 2014.