

**MATH 155R - COMBINATORICS
TENTATIVE SCHEDULE**

Day	Topic
T, Sep 3	Introduction HW1 out
R, Sep 5	Orderings
T, Sep 10	Basic counting HW1 due. HW2 out
R, Sep 12	Asymptotics, estimating the factorial
T, Sep 17	Inclusion-exclusion HW2 due. HW3 out
R, Sep 19	Basics of graphs
T, Sep 24	Eulerian graphs, connectivity HW3 due. HW4 out
R, Sep 26	Extremal theory
T, Oct 1	Trees, testing for iso HW4 due. HW5 out
R, Oct 3	Spanning trees
T, Oct 8	Drawing graphs HW5 due. HW6 out
R, Oct 10	Euler's formula, graph coloring
T, Oct 15	Double counting, Sperner's lemma HW6 due. HW7 out
R, Oct 17	Midterm
T, Oct 22	Sperner's theorem, Graphs with no 4-cycles HW8 out
R, Oct 24	Number of spanning trees HW7 due
T, Oct 29	Finite projective planes, existence. HW8 due. Project proposal due. HW9 out
R, Oct 31	Applications of finite projective planes
T, Nov 5	Probabilistic method 1 HW9 due. HW10 out
R, Nov 7	Probabilistic method 2
T, Nov 12	Ramsey's theorem HW10 due. HW11 out
R, Nov 14	Generating functions 1
T, Nov 19	Generating functions 2 HW11 due. Project draft due. HW12 out
R, Nov 21	Block designs
T, Nov 26	More applications of linear algebra HW12 due. Project peer review due
R, Nov 28	No class (Thanksgiving break)
T, Dec 3	Student project presentations, or selected topics Final out
R, Dec 5	No class. Final due. Final project due Friday