

Combinatorics and Graph Theory  
MATH 641  
Fall, 2017  
TR 4:30–5:45  
Exploratory Hall, 4106

Professor J. Lawrence  
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**Course web pages:** <http://math.gmu.edu/~lawrence/m641/m641.htm>

**Text:** *Combinatorics: Topics, Techniques, Algorithms*, by P. J. Cameron, Cambridge University Press, 1994.

The course will cover (at least some of) the following **topics**, including some of the material from the indicated chapters of the text and some additional material, as time permits.

Basic combinatorics (3, 4, 5).

Graph theory (10, 11, 18).

Configurations (6, 7, 8, 9, 16, 17).

Posets, lattices, matroids, valuations on lattices, oriented matroids (5, 12).

Enumeration (3, 4, 5, 13, 14, 15).

**Required work:** Two mid-term tests; homework; the final exam.

Your final numerical course grade will be based on homework and/or in-class participation and your test grades. These will be averaged to yield your final course grade, with the following weights: first and second tests and the final exam—30% each; other—10%.