

**CO 739 Fall 2017**

**Combinatorics of Partially Ordered Sets**

**Class Time:** M, W, F 10:30-11:20 in MC 6486

**Instructor:** David Wagner

The prerequisites for this course are very few.

At a minimum:

- \* Linear algebra up to the level of MATH 235,
- \* Graph theory and enumeration up to the level of MATH 239. Some familiarity with abstract algebra would be helpful, as in
- \* Groups and Rings, PMATH 347 but is not essential.

One topic is related to the Max-flow/Min-cut theorem of combinatorial optimization:

\* [https://en.wikipedia.org/wiki/Max-flow\\_min-cut\\_theorem](https://en.wikipedia.org/wiki/Max-flow_min-cut_theorem)

but knowing this is not essential.

Another topic uses the idea of simplicial homology from algebraic topology:

\* [https://en.wikipedia.org/wiki/Simplicial\\_homology](https://en.wikipedia.org/wiki/Simplicial_homology)

but again this is not essential.