CS 2800: Discrete structures

- http://courses.cs.cornell.edu/cs2800/wiki
- Professor Michael George
- Today:
  - Introduction
  - Key skills overview: definitions, proofs, abstractions
  - Discrete structures overview:
    - Set, functions, relations
    - Number theory
    - Automata
    - Combinatorics
    - Probability
    - Metalogic
- Course logistics
About Professor George

- This is my 12th semester teaching CS 2800
- I’ve also taught:
  - CS 2110 (OO programming)
  - CS 3110 (functional programming)
  - CS 4820 (algorithms)
  - CS 4410 (operating systems)
- Research interests: programming language design, security
- Other interests: pottery, dancing, playing fiddle

Please see me!
About this class

Discrete math : Computer science :: Calculus : Physics

► Key skills:
  - writing proofs/argument.
  - working from definitions.
  - abstraction

► Topics:
  * Sets, functions, relations.
    - sizes of infinite sets
  * Number theory.
    - properties of modular #5s.
    - cryptography
  * Automata theory / Models of computation.
    - model computers
  * Combinatorics:
    - counting objects without listing.
  * Probability:
    - estimating likelihood.
  * Metalogic
    - define "proof", "definition"
Course Logistics

(this is a summary: you should read the syllabus)

- Lecture
  - for full participation credit can miss up to ___

- Assignments
  - graded: ___
  - partner: ___
  - hard: ___
  - 30% ___

- Exams
  - prelims: ___
  - final: ___
  - 15% each
  - 30% ___

- Discussion
  - participation: can miss 2 discussions
Academic integrity

- No solutions to problems you're working on
  - mine, others
- OK to:
  - talk with other groups
  - ask for help
  - other sources, with citation.

- Not OK:
  - uploading my materials