

## First Midterm – Information

PLACE AND TIME: Tuesday, October 13, 11:00, VV B211 (our usual classroom)

WHAT'S ON THE TEST?

- All material covered in weeks 1-5 of the course, everything on assignments 1-5. (Read the list of covered topics on the course web site for a more detailed list!)
- All material covered in the following sections of the textbook: **1.2-1.6, 2.2-2.4, 3.1-3.5, 4.1-4.3**
- You should be able to solve problems related to the following material (not an extensive list!):
  - Axioms of probability: simple properties, how to compute the union of events using intersections, the inclusion-exclusion identity. . .  
(E.g. review problems from Chapter 1: 2, 3, 4, 8, 11, 12, 15)
  - Counting the number of possible outcomes of an experiment: the basic principle of counting, ordering distinct elements, ordering symbols with possible repetitions, choosing a group of a given size from a given set, computing probabilities in sample spaces with equally likely outcomes. . .  
(E.g. review problems from Chapter 2: 1, 3, 5, 8, 10, 13, 18, 22, 24)
  - Conditional probabilities: definition, multiplication rule, law of total probability Bayes' formula, independent events  
(E.g. review problems from Chapter 3: 4, 5, 7, 8, 9, 11, 14)
  - Discrete (and non discrete) random variables, distribution function, probability mass function  
(E.g. review problems from Chapter 4: 1, 2, 4, 6, 9, 10)