

Instructor: Omer Angel.

Contact: angel@math.ubc.ca

Lectures: Mon Wed Fri 14:00–15:00, Math annex 1100.

Course webpage: <http://www.math.ubc.ca/~angel/302>

Office hours: Mon 15:00-16:00, Fri. 11:00-12:00, Math annex 1210, or by appointment. **Discussion board:** We will use a piazza discussion board this term. You can ask questions regarding the course there, and answer other students' questions. Do not post solutions to assignments there.

Course outline:

The course will be based on topics from the first 8 chapters of “*A First Course in Probability*”, by Sheldon Ross. The 9th edition is the latest, but 7th edition or later should be fine. I will not assign homework from the book, but may suggest extra practice problems from 9th edition. Topics:

1. Sample spaces, events, axioms of probability (Ch. 2)
2. Some elementary combinatorics. Combinations and permutations (Ch. 1)
3. Conditional probabilities, independence and Bayes Formula (Ch. 3)
4. Discrete random variables (Ch. 4)
5. Continuous random variables (Ch. 5)
6. Joint distributions, marginal distributions and conditional distributions (Ch. 6)
7. Expectation: sums, covariance, moment generating functions (Ch. 7)
8. Limit Theorems: weak law of large numbers, central limit theorem (Ch. 8)

Evaluation: The final mark will be based on homework (15%), mid-term (35%) and the final exam (50%).

Homework: Weekly assignments will be given. These are due at the **beginning** of class on the due date, normally each Wed. Assignments handed in by Friday will receive 50% of the mark. No later assignments be accepted. The single lowest assignment will be ignored. Due dates for assignments: Sep. 10,17,24; Oct. 1,8,22,29; Nov. 5,12,19,26. Part of the homework will be done online on the WebWork system.

Mid-terms: Mid-terms will take place during class on **Wed., October 15.**

Final Examination: will take place in the December examination period. Please do not make travel plans before the exam schedule is announced.

Missed mid-terms and assignments will normally receive a zero grade. Exceptions may be granted by **prior consent** from me, or for a documented **medical emergency**. In the latter case, I must be notified as soon as possible (preferably before the test), and presented with a doctor's note immediately upon the student's return to UBC. When an exception is granted for a missed test, there is no make-up test, and the final exam mark will be used.