

**Instructor:** Yinon Spinka (201).

**Contact:** [yinon@math.ubc.ca](mailto:yinon@math.ubc.ca)

**Lecture:** Section 201: MWF 11:00–12:00, LSK 200.

**Website:** <http://www.math.ubc.ca/~yinon/math302>

**Office hours:** See website for regular hours, or by appointment.

**Discussion board:** We will use a piazza discussion board this term. You can ask questions regarding the course there. It is encouraged to answer other students' questions there. Significant participation of this type may justify extra credit. Do not share solutions to assignments (on piazza or elsewhere) before the due date.

### Course outline:

The course will be based on “Introduction to Probability” by Anderson, Seppäläinen, and Valkó. Alternative useful references include “*A First Course in Probability*”, by Sheldon Ross and “*Introduction to Probability and its Applications*” by Scheaffer. Topics include:

1. Randomness sample spaces, events, axioms of probability,
2. Conditional probabilities, independence and Bayes' formula,
3. Discrete and continuous random variables,
4. Expectation and variance
5. Joint distributions, marginal distributions and conditional distributions,
6. Expectation of sums, covariance, moment generating functions,
7. Limit Theorems: the Law of Large Numbers and Central Limit Theorem.

**Evaluation:** The final mark will be based on homework (1/6), mid-term (1/3) and the final exam (1/2). Grades may be scaled for consistency across sections.

**Homework:** 10 weekly assignments will be given. These are to be submitted through canvas, and are due each Wednesday at midnight. No later assignments be accepted for credit. The single lowest assignment grade will be disregarded.

Due dates for assignments: Jan. 15,22,29; Feb. 5,26; Mar. 4,11,18,25; Apr. 1

**Midterm:** The midterm will take place during class on **Friday, February 14**.

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

**Missed midterm and assignments** There are no make-up midterm or assignments. Missing the midterm for a valid reason normally results in the weight of the midterm being transferred to the final exam. Personal travel and work conflicts are not considered valid. A student who misses the midterm must submit the Department of Mathematics self-declaration form within 72 hours of the midterm or due date. See the UBC Senate's Academic Concession Policy V-135. **A student who misses the midterm and has not completed a significant portion of the course work will not be allowed to write the final exam.**