

**MATH 4635/6635 - INTRODUCTION TO PROBABILITY THEORY**

**Instructor:** Ching-Chi Yang

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**Office Hours:** T R 4:30 pm - 5:30 pm via Zoom Meeting; or by appointment

**Office Location:** [Zoom Meeting](#), the number and passcode will be announced on eCourseware.

**Course Description:** Math 4635/6635 focuses on the basic concepts of probability theories and random variables. Main categories can be listed as follows:

- Probability: properties and notations.
- Discrete distribution:
  - Uniform distribution,
  - Bernoulli/Binomial distribution,
  - Geometric distribution,
  - Hypergeometric distribution,
  - Negative binomial distribution, and
  - Poisson distribution.
- Continuous distribution:
  - Uniform distribution,
  - Normal distribution,
  - Exponential distribution,
  - Gamma distribution,
  - Chi-Square distribution, and
  - Beta distribution.
- Bivariate distribution:
  - Correlation,
  - Conditional distribution, etc.
- The Central Limit Theorem.

**Prerequisite:** MATH 1920 or permission of the instructor.

**SEMESTER TIME FRAME:** JAN 19 TO APR 27, 2021.

**Course meeting Times:** T R 5:30pm - 6:55pm, [Zoom Meeting](#)

Zoom ID: 857 148 0400

Passcode: 178203

## MATERIALS AND POLICIES

**Required Textbook:** Probability and Statistical Inference, by Hogg, Tanis, and Zimmerman, 10<sup>th</sup> Edition. The 9<sup>th</sup> edition is also acceptable.

Statistical Software (for demonstration only): R

**Attendance Policy:** Attendance at lectures (TR) is highly recommended. You are responsible for everything that is discussed during the lecture. For more information on labs, see [Course Grades](#).

**UofM's Principle on Academic Integrity:** Academic integrity is the pursuit of scholarly activity in an open, honest, and responsible manner. It is acceptable to discuss homework problems together, but each student must write up every homework independently in his or her own words.

This course will follow the guidelines listed at <https://libguides.memphis.edu/academicintegrity> and <https://www.memphis.edu/osa/students/academic-misconduct.php>.

**Disabilities:** UofM welcomes students with disabilities into the University's educational programs. If you have a disability-related need for reasonable academic adjustments in this course, contact the Disability Resources for Students (DRS) at 901-678-2880 or at [drs@memphis.edu](mailto:drs@memphis.edu).

For further information regarding DRS, please visit the Disability Resources for Students Website at <https://www.memphis.edu/drs/>.

To receive consideration for course accommodations, you must contact DRS and provide documentation. If the documentation supports the need for academic adjustments, DRS will provide a letter identifying appropriate academic adjustments. Please share this letter and discuss the adjustments you're your instructor as early in the course as possible.

**Student Health:** Students who have a positive COVID-19 test should contact the Dean of Students at [deanofstudents@memphis.edu](mailto:deanofstudents@memphis.edu).

**Student Resources:** Students who need additional resources can visit the Dean of Students Office website at <https://www.memphis.edu/deanofstudents/crisis/>.

## COURSE GRADES:

**Grades (tentative):** The tentative final-grade scale is as follows. A higher grade may be received if this is modified, but you will not receive a lower grade than what is found below.

Grade	A	B	C	D	F
Percent	100-90	89-80	79-70	69-60	59-0

Grading:

	Math 4635/6635
Homework	40%
Quizzes	20%
Exam	40%

**Homework:** Homework will generally be assigned bi-weekly and due next week. No late submission will be allowed. The worst one will be dropped.

**In-Class/Virtual work:** There will be random quizzes on Tuesday or Thursday based on what was covered in the lecture over the last week. For quizzes, you may use any sources include online sources, but you need to complete it in time.

**Exams:** There will be two exams in this course. You may bring one hand-written formula sheet (letter size, may use both sides). More details will be announced.