

MATH 561-01 PROBABILITY

Spring 2017

Location: Most of the classes in NS 212C, all exams taken in NS 212C

Class Meetings: TTh 11:00am–12:15pm

Instructor: Xuwen Zhu

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Office: NS 246

Office Hours: Tuesday 12:15-12:45pm, Thursday 12:15-12:45pm, Friday 1:00-2:00pm or by appointment

Course Description: This course provides an introduction to probability theory. It covers fundamental concepts and theorems, such as probability distribution; random variable; mathematical expectation, variance, moments, independence, and transformations of random variables; multivariate distributions, sampling distributions, central limit theorem and law of large numbers.

Learning outcomes will be assessed through in-class exams, regular homework assignments which require clearly written explanations of work and solutions and quizzes.

Credit Hours: 3

Prerequisites: Prerequisite for Math 561 includes the Calculus I–III (Math 205, Math 206 and Math 301), especially, integration skills will be needed

Textbook: Introduction to Mathematical Statistics by Robert V. Hogg, Joseph W. McKean, Allen Craig (7th edition)

Software: R software environment for statistical computing and graphics. It is freely available at <http://cran.us.r-project.org/>. Detailed examples of code will be presented in class throughout the semester.

Other Resources: Slides, grades, homework and exam solutions and other course materials and resources will be made available on Blackboard (<https://blackboard.louisville.edu>). Additional resources provided with the textbook are available at <http://bcs.whfreeman.com/ips8e/>.

Grading Scale: Grades will be based on the two 50-minute exams (higher exam worth 25%, lower exam worth 20%), a comprehensive final exam (25%), and regular homework assignments or quizzes (30%). The final grade will be determined as follows: 90% will guarantee an A, 80% will guarantee a B, 70% will guarantee a C, and 60% will guarantee a D.

Important Dates: The instructor reserves the right to make changes in the syllabus when necessary.

Tuesday, 1/09	First class meeting	Thursday, 4/19	Last class meeting/final review
Friday, 1/12	Last day to drop/add	Thursday, 4/26	Final Exam (11:30am-2:00pm)
Tuesday, 2/13	Exam 1		
Thursday, 3/15	Exam 2		

Policies for Exams and Assignments: No exam or quizzes may be made up except for (i) a legitimate emergency, or (ii) an authorized campus activity. Permission to make up any exam must be obtained as soon as possible.

Academic Dishonesty: Academic dishonesty is prohibited at the University of Louisville. It is a serious offense because it diminishes the quality of scholarship, makes accurate evaluation of student progress impossible, and defrauds those in society who must ultimately depend upon the knowledge and integrity of the institution and its students and faculty.

Students with Disabilities: The University of Louisville is committed to providing access to programs and services for qualified students with disabilities. If you are a student with a disability and require accommodation to participate and complete requirements for this class, notify me immediately and contact the Disability Resource Center (Robbins Hall, 852-6938) for verification of eligibility and determination of specific accommodations.

Title IX/Clery Act Notification: Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer.

For more information, see the Sexual Misconduct Resource Guide (<http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure>).

Religious Holy Days and Observances: Students who observe work-restricted religious holy days must be allowed to do so without jeopardizing their academic standing in any course. Faculty are obliged to accommodate students' request(s) for adjustments in course work on the grounds of religious observance, provided that the student(s) make such request(s) in writing during the first two (2) weeks of term.

Attendance: Students are strongly encouraged to attend all lectures.