

Math 571 Syllabus, Fall 2016

MWF 2:20-3:20 in WH 309

Course Description

MATH 571 – Advanced Probability Theory.

The topics covered in this class include: “Measure theoretic probability. Axiomatic foundations. Caratheodory extension theorem. Lebesgue integration. Random variables. Types of convergence. Law of large numbers. Central limit theorem. Characteristic functions. Infinite divisibility and stable laws. Conditional probability and expectation. Martingales. Other topics as time permits.”

The main objective of the course is to teach the basic techniques whose knowledge is expected from a PhD student with specialization in probability or statistics.

Prerequisites

MATH 447 or 501, and MATH 506 or consent of instructor.

Required Textbook

Rick Durrett “Probability: Theory and Examples” 4th edition. Electronic version is available [here](#).

Instructor

Vladislav Kargin

E-mail: vkargin@binghamton.edu.

Office: WH-136.

Office hours: MW 11am–12pm, F 3:30pm–4:30pm in WH-136, or by appointment (made via e-mail). I will send announcements using [Piazza Forum](#), so enrollment to Piazza is required. If you have questions post them on Piazza. Helping other students is encouraged. You can also e-mail or text me.

Evaluation

Your final grade in the course will be based on your performance on homework and a final exam. The contribution of each to the final grade will be as follows:

Homework 50%

Final Exam: 50%

Homework will be assigned regularly. The final exam will be closed book. No cheat sheets will be allowed either.