

# Probability Theory 1: Syllabus

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Purdue University

Probability – MA 538

# Outline

1 Presentations

2 Ground rules

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# My Purdue information

## History:

- 10th year:  
↔ as Professor at Purdue
- Before that:  
↔ in Nancy (France)

Office: 434, Math building

Email: [stindel@purdue.edu](mailto:stindel@purdue.edu)

Office hours: Monday 2:30pm-4:00pm, on Zoom

Webpage: <https://www.math.purdue.edu/stindel/>



# Advertising probability theory

## Probability theory:

- Challenging from a mathematical point of view.
- Crucial for modeling in many areas.

## Great names related to the field:

- 17th century: Pascal, Fermat
- 18th century: Bernoulli
- 19th century: Laplace, Gauss
- 20th century: Markov, Borel, Kolmogorov, Doob, Wiener, Itô

# Brief outline of the course

## Books:

- Grimmett-Stirzaker:  
Probability and Random Processes, 4th edition
- Durrett:  
Probability: Theory and examples, 5th edition

## Chapters covered:

- 1 Modes of convergence for random variables
- 2 Laws of large numbers
- 3 Conditional expectation
- 4 Martingales
- 5 Gaussian vectors and central limit theorem

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# Webpage

## Course webpage:

<https://www.math.purdue.edu/stindel/teaching/ma538/ma538.html>

## Contents:

- Announcements
- Calendar and schedule
- Slides
- Written notes from class

## Boilercast:

- Unfortunately not available in this classroom

# Grades

## Total score calculation:

- Homework 200 pts.
- 1 Midterm exam (1 hour) 150 pts.
- Final Exam (1 hour) 150 pts.
- Participation bonus 20 pts.

# Participation bonus

## Participation bonus rule:

- Questions will be asked in class
- Volunteers will get some points towards the bonus
- You are expected to participate, not to give an exact answer
- Stupid answers don't exist
- Aim: get to know everyone
- Remark: this is an experimental system

# Rules for exams

## Some rules:

- The exams will be taken from the HW
  - ↔ But might be more in-depth version of the HW
- A cheat sheet is allowed
  - ▶ 2 pages (not 2 sheets) for Midterm
  - ▶ 4 pages (not 4 sheets) for Final
  - ▶ Only theorems and formulae
  - ▶ No example or problem with solution
- Redaction is an important part of the grade
- Calculators (price under \$100) authorized

# TA's

For Sections MA 538 and STAT 538:

- Name: Di Yu
- Email: `yu1128@purdue.edu`

# Emails

## About emailing me:

- I do my best to answer emails
- However, I am not always extra quick at answering them

# More rules

Access to the main rules:

*Follow this link*