## STAT 5378 – Stochastic Processes

Time & Place: TR 12:30 PM-1:50 PM in MATH 108,

Instructor: Hongwei Mei

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Office Hours: TR 2:00-3:00 PM

Textbook: An Introduction to Stochastic Modeling, 4th edition or 3rd edition.

**Course Goals:** This is a second course in Probability, studying the mathematically basic kinds of random process, intended for majors in Statistics and related quantitative fields. The prerequisite for the course is STAT 5328. Chapters to be covered are as follows:

Chapt 1: Introduction (review of mathematical statistics).

Chapt 2: Conditional Probability & Conditional Expectation.

Chapt 3: Introduction to Markov Chains.

Chapt 4: Long Run Behavior of Markov Chains.

Chapt 5: Poisson Processes.

Homework: One Homework for each chapter which will be posted online.

Final Exam: Take-home part: 4-5 problems.

## **Grading Policy:**

Attendance: 10% (Bonus) Homework:  $20\% \times 3$ Take-home Final: 40%

## Grading Scale:

 $\begin{array}{l} {\rm A:} \geq 90\% \\ {\rm B:} \geq 80\% \ \& < 90\% \\ {\rm C:} \geq 70\% \ \& < 80\% \\ {\rm D:} < 70\% \\ {\rm F:} \ {\rm Missing \ the \ Final \ Exam.} \end{array}$