

## **Advanced Probability and Inference I Statistics 6346**

**Lecture:** Monday, Wednesday, Friday, 11:15 – 12:05

**Instructor:** Eric Chicken, OSB 427  
Office hours: TBD

**Teaching Assistant:** Zishen Xu, OSB 106B, zx16@my.fsu.edu  
Office hours: TBD

**Zoom:** The class will be taught through zoom. See the canvas page for the course for zoom information. The course is both synchronous and asynchronous. The recordings that I place on zoom are the intellectual property of me and the University. They cannot be used by students for other purposes (for example, posted elsewhere), and FSU will take recourse if this happens. The first class will be live (synchronous).

**Text:** There is no required text for this course. Some fine reference books include

*Probability and Measure*, Billingsley, 1995.  
*A User's Guide to Measure Theoretic Probability*, Pollard, 2002.

**Goal of Course:** Students will be able to use measure theoretic methods to derive and explain probabilistic identities, inequalities and theorems.

**Course topics:** The material covered may include, but is not limited to,

- Measure spaces
- Measurable functions
- Expectation, conditional expectation
- Product spaces
- Independence
- Convergence, sums, limit theorems
- Characteristic functions
- Martingales

**Quizzes:** There will be multiple quizzes throughout the term on announced dates. The final exam period will be a quiz that can be taken only by students who have missed one or more quizzes during the semester.

**Homework:** There will be regular homework assignments. Homework will not be collected. These assignments will reinforce lecture and prepare you for the quizzes.

**Course Website:** <http://canvas.fsu.edu>

**Grades:** Your course grade is based on the quizzes. Final grades are assigned based on your performance on these quizzes. Your grades are maintained on Canvas. There will be no extra work available to enhance your grade, so put in the appropriate effort on the assigned homework.

**University Attendance Policy:** Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

**Academic Honor Policy:** The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University."(Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

**Americans With Disabilities Act:** Students with disabilities needing academic accommodation should:

- (1) register with and provide documentation to the Office of Accessibility Services; and
- (2) request a letter from the Office of Accessibility Services to be sent to the instructor indicating the need for accommodation and what type; and
- (3) meet (in person, via phone, email, skype, zoom, etc...) with each instructor to whom a letter of accommodation was sent to review approved accommodations.

This syllabus and other class materials are available in alternative format upon request.

For the latest version of this statement and more information about services available to FSU students with disabilities, contact the:

Office of Accessibility Services  
874 Traditions Way  
108 Student Services Building  
Florida State University  
Tallahassee, FL 32306-4167  
(850) 644-9566 (voice)  
(850) 644-8504 (TDD)  
[oas@fsu.edu](mailto:oas@fsu.edu)  
<https://dsst.fsu.edu/oas/>