This web page, http://sites.stat.psu.edu/~gjb6/553/, is the official syllabus for STAT 553 in Spring 2018. Any changes to this document will be announced in class.

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Class Notes: http://sites.stat.psu.edu/~gjb6/553/notes.html.

Text and reference books:

- T. S. Ferguson (1996). *A course in large sample theory*, Chapman & Hall/CRC, New York.

- E. L. Lehman (1999, Third printing 2004). *Elements of large-sample theory*, Springer, New York. (Online Content of this book is available from Penn State Libraries. Click http://www.netLibrary.com/urlapi.asp?action=summary&v=&bookid=104550 to access this electronic book provided through the Access Pennsylvania Database project.)

- P. K. Sen and J. M. Singer (1992). *Large sample methods in statistics: an introduction with applications*, Chapman & Hall, New York.

- Lecture notes by Dr. Hunter (http://sites.stat.psu.edu/~dhunter/asymp/lectures/asymp.pdf).

Course description:

This course covers most standard statistical asymptotic theory. It covers weak and strong convergence of random variables in both the univariate and multivariate settings, Slutsky's theorem(s), delta method, the Lindeberg-Feller central limit theorem, likelihood-based estimation and testing, and some selected topics such as sample quantiles. It is a mathematically rigorous course and major results are proved. Many common applications of the theory in mathematical statistics will be discussed.

Grading:

There will be two in-class midterms (February 15 and March 29; each 20% of the grade), a comprehensive final exam (30% of the grade), and homework (30% of the grade). The exams will be closed-book. You may bring a 8.5x11in sheet of handwritten notes.

ACADEMIC INTEGRITY
All Penn State and Eberly College of Science policies (http://www.science.psu.edu/academic/Integrity/Policy.html) regarding academic integrity apply to this course.   The University policy on academic integrity, covering cheating, plagiarizing, and other acts of academic dishonesty, given in Section 49-20 of the Student Guide on Policies and Rules of the University (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/47-00-48-00-and-49-00-grades/#49-20), will be adhered to in this course.
The Eberly College of Science Code of Mutual Respect and Cooperation embodies the values that we hope our faculty, staff, and students possess and will endorse to make the Eberly College of Science a place where every individual feels respected and valued, as well as challenged and rewarded.

DISABILITY SERVICES
Penn State welcomes students with disabilities into the University's educational programs. It is Penn State's policy not to discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for reasonable academic adjustments in this course, please contact the Office for Disability Services (http://equity.psu.edu/ods).

Educational Equity Statement, and Report Bias site

Mental Health Services: The university offers a variety of confidential services to help students through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

DISCLAIMER STATEMENT
Please note that the specifics of this Course Syllabus can be changed at any time, and you will be responsible for abiding by any such changes. Changes will announced in the class.