STT 4300/6300/BMS 9910, Fall 2017

**Meetings:** 3:35 – 4:55 PM Mon/Wed in 232 Oelman Hall

**Instructor:**

Dr. Brandon Greenwell  
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**Office hours:** TBD.

**Textbook:** No textbook is required. Although, the recommended text for this course is Fundamentals of Biostatistics, 7th Edition, by Bernard Rosner. The notes will follow the reading material compiled by Dr. Thaddeus Tarpey which can be found at <http://www.wright.edu/~thaddeus.tarpey/stt630.html>.

**Course website:** https://github.com/bgreenwell/STT6300

**Course description:** This is an applied course that focuses on statistical methods that are suitable for the analysis of data arising in the health, medicine, and biological sciences. Topics covered will include:

* Descriptive statistics and graphics
* Probability
* Discrete and continuous distributions
* Estimation and confidence intervals (i.e., point and interval estimation)
* One and two-sample inference (e.g., one- and two-sample *t*-tests)
* Regression
* Analysis of variance (ANOVA)
* Special topics (as time allows)

**Statistical software:** We will be using the statistical software R, which is available from <https://www.r-project.org/>. It is also recommended that you install RStudio (after installing R), which is available from <https://www.rstudio.com/>. R is the most popular statistical software in the world and is available for free. RStudio is essentially an IDE for R that provides syntax highlighting and much more.

**Homework (70%):** Homework will be assigned at the end of class every Wednesday, and collected at the beginning of class on the following Wednesday. Working together is encouraged, but everyone must provide their own solutions (no copying). Late homework will only be accepted the Monday after for half credit.

**Exams (30%):** There will be two exams: an in-class midterm (15%) and an in-class final (15%). Dates for these exams will be determined later, but with plenty of time to allow for preparations.

**Course grade:** The course grade will be determined from the homework assignments and exams, and will follow the usual scale (e.g., 90-100 for an A).