

Fall 2019

Computer Science

Special Topics

CS 491-5 / CS 280-1

Monday, Wednesday, Friday

4:00 – 4:50 p.m.

EGRA 320

Instructor – Dr. Ming Yang

Computational Statistics I

(Graduate Category 1)

This course provides a basic introduction to probability and statistics as well as related computational approaches. Topics include basic probability models, combinatorics, random variables, discrete and continuous probability distributions, statistical estimation and hypotheses testing, confidence intervals and linear regression. Some selected computational approaches for statistical problems such as simulation of random variables from probability distributions, the visualization of multivariate data, Monte Carlo integration and methods in inference will also be discussed. The R language will be used for programming assignments.

Prerequisite: MATH 108 with a grade of “C” or better

Textbooks: *Statistical Computing with R*, Maria L. Rizzo, Chapman & Hall/CRC The R Series, 2nd Edition, Hardcover 2015, ISBN-13: 978-1466553323 ISBN-10: 1466553324.