Syllabus math 7654
INFERENCE THEORY
SPRING 2016

<u>INSTRUCTOR:</u> Dr. D Bowman (Armstrong)

Office: 357 Dunn Hall

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Office hour: MW 12:30-1:30 and by appointment

<u>TEXTBOOK:</u>   Statistical Inference by Casella and Berger

<u>TOPICS COVERED:</u>

Random Variables, Distribution Functions, Distributions of functions of random variables, Expectations

Common discrete and continuous distributions, exponential families, joint, marginal and conditional distributions, bivariate transformations, multivariate distributions, covariance

Random samples, normal populations, order statistics, convergence

Estimation, properties of estimators, interval estimators

Hypothesis testing, properties of hypothesis tests

Asymptotics

<u>EVALUATION:</u> There will be a midterm and a final examination. Each test will count for 1/3rd of the grade. In addition there will be weekly homework assignments that will count collectively for the remaining third of the grade. The homeworks must be typed using a mathematical typesetting program such as latex. The student's final grade in the course will be determined by the percentage of the total possible points received.

The professor reserves the right to make any necessary changes to the information provided in the syllabus during the semester.