

## MATH 344 / Statistics - Syllabus

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**Prerequisites:** Math101.

**Exams & Grading:** There will be three quizzes (each 10%), one midterm (each 30%) and a final exam (40%).

**Course Schedule:** Monday – 11:00-12:00 – NH 304  
Wednesday – 11:00-13:00 – NH 304

**Course web page:** <https://sites.google.com/site/umitislak/teaching/math344fall2017>

**Suggested text :** E.A. Tanis, R.V. Hogg, *A Brief Course in Mathematical Statistics*

Students are assumed to follow all announcements done in lectures, done via web site or through e-mails.

We will cover the following topics throughout the semester.

Probability axioms, conditional probability, independent events, Bayes' theorem discrete probability distributions, special discrete distributions, continuous distributions, special continuous distributions, likelihood estimation, law of large numbers, markov type inequalities, central limit theorem, confidence intervals using  $Z$ ,  $\chi^2$ ,  $F$  and  $T$  statistics, basic tests involving  $Z$  and  $T$  statistics, tests of equality of two parameters, simple linear regression, chi-square goodness of fit tests, tests for independence, non-parametric tests, basics of likelihood ratio tests, selected topics depending on time we have.