

# STATISTICS (STAT)

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## **STAT 7060 Advanced Theory of Probability 3 cr**

Probability as measure, convolutions, limit laws, conditional probability and expectation, law of large numbers and other selected topics.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7080 Advanced Statistical Inference 3 cr**

Selected topics from recent developments in parametric and/or non-parametric statistical inference.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7100 Analysis of Discrete Data 3 cr**

Inference concerning discrete distributions, analysis of categorical data, and other selected topics.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7140 Linear Models 3 cr**

Theory of linear models, regression analysis, and analysis of variance.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7200 Multivariate Analysis 1 3 cr**

Multivariate normal distribution, Hotelling's T<sup>2</sup>, Classification methods, principal components and canonical correlations.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7220 Seminar in Statistics 1 3 cr**

A seminar course on new development in statistics.

## **STAT 7240 Advanced Topics in Statistics 1 3 cr**

Special advanced research topics in statistics.

## **STAT 7250 Advanced Topics in Statistics 2 3 cr**

Special advanced research topics in statistics.

## **STAT 7260 Time Series 3 cr**

The auto-correlation function and spectrum, various processes, model identification, estimation and forecasting.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7270 Bayesian Inference 3 cr**

Bayesian decision problems, priors, Jeffrey's Rule, robustness of posteriors, Bayesian justification of ANOVA.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of instructor.

## **STAT 7290 Statistical Consulting 3 cr**

The role of a statistics consultant. Practical consulting experience.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: consent of department.

## **STAT 7310 Research Tools for Statistics 0 cr**

This course provides instruction in the use of a number of tools required for graduate level research in statistics. Topics include instruction in various software, such as LaTeX, R, SAS, etc. as well as Library usage, presentation and communication skills.

## **STAT 7320 Research Project in Statistics 3 cr**

This course will provide the student with practical experience in doing research in the statistical sciences. Students will be matched with a faculty advisor and carry out a research project. Deliverables include a final research report and a presentation to the department.

## **STAT 7350 Advanced Topics in Statistics 3 1.5 cr**

Special advanced research topics in statistics.

## **STAT 7360 Advanced Topics in Statistics 4 1.5 cr**

Special advanced research topics in statistics.