

STATISTICS 4520
EXPERIMENTAL DESIGN II

Statistics 4520 is a continuation of Statistics 3520. The main emphasis is on multifactor experiments in which one experiments with two or more factors simultaneously to investigate their individual and joint effects. The identification of an optimum combination of factors is done by using response surface methods. Other topics taught in this course include analysis of covariance and unbalanced designs. An extensive use of a computer package for various calculations and graphics is made.

Text. In recent years, the book *Design and Analysis of Experiments* by Douglas C. Montgomery has been used.

Calendar description. **4520 Experimental Design II** is an introduction to factorial experiments including mixed effects models, unbalanced data in factorial designs, two level and three level factorial experiments, blocking and confounding in factorial designs, fractional factorial experiments, unreplicated factorial experiments, response surface designs, robust parameter designs, nested and split plot designs.
Prerequisite: Statistics 3520.

Offered. Winter, occasionally