

FALL 2018

APM 523

Optimization

Instructor: Dr. H. D. Mittelmann

Time: 3:00-4:15 Monday & Wednesday

Location: TBD

Class #: TBD

Credit Hours: 3

Topics: The important area of optimization will be covered with a strong emphasis on practical algorithms. The course requires only fundamental undergraduate background in linear algebra and calculus. It is of interest to students in mathematics, statistics, the sciences, engineering and business. Students will do several computer projects. In addition to material in the book, selected topics such as mixed-integer and global optimization will be covered.

The main topic is unconstrained and constrained nonlinear optimization, including interior point methods for linear programming. This class allows to get an overview of both continuous and discrete optimization in a single semester learning both fundamental theoretical results as well as *state of the art algorithms* including *software*.

See the instructor's webpage: <http://plato.asu.edu/guide.html>

Prerequisites: degree- or nondegree seeking graduate student, advanced undergraduate with approval of instructor

Textbook: J. Nocedal and S. J. Wright, Numerical Optimization (2nd ed.), Springer-Verlag, New York, 2006, available online at the ASU library