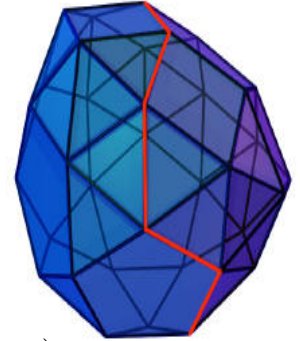
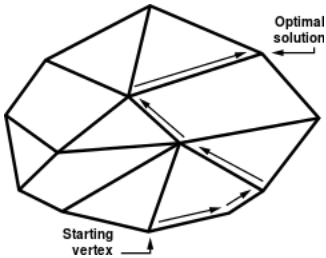


Department of Mathematical Sciences

Course Announcement – Autumn 2021

Linear Optimization



M 362 (Sec 01) Linear Optimization, 3 credits (CRN: 73797)
T,Th 11:00 am-12:20 pm in MATH 311

Instructor: Mark Kayll mark.kayll@umontana.edu
406.243.2403 hs.UMT.edu/math/people/default.php?s=Kayll

Linear optimization concerns optimizing a linear function subject to linear inequality constraints. This course (and its companion lab M 363, CRN 74047) focus on modeling real-world problems as linear programs (LPs) and solving the resulting LPs using various techniques, including via computer. Strayer's text will be our guide; we'll cover much of this book. The simplex algorithm and duality are of principal importance. In addition, topics from the following list will be considered as time permits: applications to graphs, matrix games, transportation and assignment problems, network-flow problems.

The course should appeal to anyone interested in optimization, especially linear and combinatorial optimization. In the past, this has included students majoring in Forestry, Economics, Computer Science, Business, and of course Mathematical Sciences.

Any questions? Just ask me in person, by telephone, or by email.

Credits: 3

Prerequisites: a flavor of Calculus II (M 162, 172, or 182) with Linear Algebra (M 221) recommended

Corequisite: Linear Optimization Lab (M 363) recommended

Text

James K. Strayer, *Linear Programming and Its Applications*, Springer, 1989
[ISBN 978-0387969305]

