2012 Winter > UBC Vancouver > MATH > MATH 340 >

SAVE TO WORKLIST
OUTLINE/SYLLABUS

MATH 340 202 (Lecture)

Introduction to Linear Programming
Linear programming problems, dual problems, the simplex algorithm, solution of primal and dual problems, sensitivity analysis. Additional topics chosen from: Karmarkar's algorithm, non-linear programming, game theory, applications.

This course is eligible for Credit/D/Fail grading. To determine whether you can take this course for Credit/D/Fail grading, visit the **Credit/D/Fail** website. You must register in the course before you can select the Credit/D/Fail grading option.

Credits: 3

Location: Vancouver

Term 2 (Jan 02, 2013 to Apr 05, 2013)

Cr/D/F Grading Change Dates

Last day to change between Credit/D/Fail and percentage grading (grading options cannot be changed after this date):	**January 14, 2013**

Withdrawal Dates

Last day to withdraw without a W standing :	**January 14, 2013**
Last day to withdraw with a W standing (course cannot be dropped after this date) :	**February 08, 2013**

Term	Day	Start Time	End Time	Building	Room
2	Tue Thu	11:00	12:30	Buchanan	B213

Instructor: Solymosi, Jozsef

DETAILED COURSE OUTLINE

Book Summary:

Title	Req'd/Opt/Rel	Author	ISBN
Linear Programming	Required	CHVATAL	9781429280518

Both sections of MATH 340 will cover the topics listed below. Here a "week" represents approximately 150 minutes of class time, not necessarily a calendar week.

week #1 intro to linear programming; objective function, constraints, feasible solutions, standard form of an LP.
week #2 dictionary; the simplex method; slack variables, (non-)basic variables, pivoting.
week #3 tableau format; pitfalls in the simplex method, the Fundamental Theorem of Linear Programming.
week #4,5 duality; the Duality Theorem, applications.
week #6 Test #1.

week #7 Complementary Slackness, economic significance of dual variables.
week #8 LINDO
week #9 the Revised Simplex Method, matrix description of dictionaries.
week #10 the Duality Theorem, review, Test #2
week #11 sensitivity analysis
week #12 applications

CALENDAR

Wed, Jan 2	Term starts
Th, Feb 7	**Midterm 1**
Mon, Feb 11	Family Day (university is closed)
Feb 18-22	Winter break
Tue, Mar 19	**Midterm 2**
Fr, Mar 29	Good Friday (university is closed)
Mon, Apr 1	Easter Monday (university is closed)
Fr, Apr 5	Last day of classes
TBA	Final Exam

Links
Notes:
http://www2.isye.gatech.edu/~spyros/LP/LP.html
http://www.cs.uiuc.edu/~jeffe/teaching/algorithms/notes/25-lp.pdf
LINDO:
http://www.lindo.com