

Details

Lecturer Dr. Chris Boyd

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Office hours by appointment

Course Info Brightspace

Lectures Mon 9.00-9.50 Th. F (SCI-HUB)

Wed 9.00-9.50 Th. E (SCI-HUB)

Tutorial Fri 10.00-10.50 Th. F (SCI-HUB)

Tutorials Start in week 2, details TBA

Assessment Midterm 20%
Midterm takes place at 10.00 on Friday 10th of March

Grades are calculated using the alternative linear scale!!

<i>A+</i>	95-100%
<i>A</i>	90-94.99%
<i>A-</i>	85-89.99%
<i>B+</i>	80-84.99%
<i>B</i>	75-79.99%
<i>B-</i>	70-74.99%
<i>C+</i>	65-69.99%
<i>C</i>	60-64.99%
<i>C-</i>	55-59.99%
<i>D+</i>	50-54.99%
<i>D</i>	45-49.99%
<i>D-</i>	40-44.99%
<i>FM+</i>	30-39.99%
<i>FM-</i>	10-29.99%
<i>G</i>	0-9.99%

School Plagiarism Protocol available on Brightspace

Comments Do the exercises!
Go to the tutorials prepared!
Ask questions in class!
Talk to me!
Go to the Maths Support Centre!

- Extrema for one and several variables
- Hessians and the second derivative test for n variables
- Method of Lagrange multipliers
- Linear programming
- The simplex method
- Duality theory
- Non-linear programming
- Kuhn-Tucker theory
- Convexity and optimization
- Cobb-Douglas functions in n variables

This module is about using mathematical methods to solve optimization problems.

Typical examples of such problems are:

A cosmetic firm packages and sells two products, standard shower gel and moisturising shower gel. The wholesale price per carton that the firm receives is €2000 for standard and €2400 for moisturising. The cost of production is

$$1000x + 1200y + x^2 + 2xy + 2y^2 + 50000$$

where x is the number of cartons of the standard version; y , that of the moisturising version. Determine the pair (x, y) which maximizes profit, assuming that all the products can be sold.