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Mathematics for Economic and Statistical Analysis  
Autumn 2017  
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## **Mathematics for Economic and Statistical Analysis, 7.5 hp**

### **Text**

*Essential Mathematics for Economic Analysis*; Sydsæter & Hammond, 4th ed., Pearson, 2012  
NB. This book can be accessed online from your university library account [here](#).

### **Content outline**

The course treats elementary functions, derivatives, maximum and minimum problems, Taylor's formula and Taylor series, integrals, functions of several variables, optimization problems with and without constraints, matrices, and determinants. The contents of the course may be used for modelling in a number of fields, for example economy and statistics.

### **Learning outcomes**

It is expected that the student after taking the course will be able to:

- use basic methods in analysis in one or several variables to solve mathematical and applied problems in e.g geometry and economics
- solve elementary problems on matrices, vectors and determinants.

### **Teaching**

Teaching consists of Lectures (15 sessions) and Tutorials (15 sessions). The lectures will mainly deal with the basic theory, while the Tutorials are entirely devoted to practical problem solving. The course will be taught in English.

### **Examination**

The course ends on Friday 22 Sept 2017, with a written exam on Wed 27 Sept 2017. The final exam consists of seven problems, with a maximum score of 70 points. At least 35 points are necessary for the grade E, 42 for D, 49 for C, 56 for B and 63 for A. Exam answers may be submitted in either English or Swedish.

### **Office hours**

At convenience by appointment.

### **Course webpage**

<http://kurser.math.su.se/course/view.php?id=595>

Stockholm, August 2017

Peter LeFanu Lumsdaine

## Preliminary lecture/tutorial plan

(Try to prepare suggested problems before each tutorial session)

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