Department of Economics
18 August 2004
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ECON3120/4120 Mathematics 2, autumn 2004

Lecture schedule (Note: Changes may occur)

Lectures:
Monday 12.15—14.00 in auditorium 1, ES (ES = Eilert Sundt's house).
Thursday 8.15—10.00 in auditorium 3, ES.

Seminars (problem sessions):
Tuesday   10.15—12.00, group room 4, GS.   Seminar leader Maria Shikalova.
Friday   10.15—12.00, seminar room 201, HH.   Seminar leader Øystein Bieltvedt Skeie.

GS = Georg Sverdrup's house (University library), HH = Harriet Holter's house ("C-building").

First seminars during the week 30.8—3.9.

Curriculum:

EMEA: K. Sydsæter and P. Hammond: **Essential Mathematics for Economic Analysis,** Financial
Times Prentice Hall, 2002. The entire book, except Sections 10.5—10.7, 14.7, 14.8, and 16.9.

The curriculum listed above includes the curriculum of the mathematics part of the course ECON2200
Mathematics I/Micro I.

The final **exam** is scheduled for Wednesday 24 November, 14.30—17.30 (but this may be changed).

**Note! In order to be allowed to sit for the exam, you must complete two compulsory problem
sets satisfactorily.**

Mon 16.8	Brief review of things that you should know from before.
Thu 19.8	Exponential and logarithmic functions. (EMEA 4.9—4.10, 6.10—6.11)
Mon 23.8	Limits and continuous functions. (EMEA 7.7—7.8)
Thu 26.8	Compound interest and present value. The intermediate value theorem. Inverse functions. (EMEA 7.9, 10.1—10.3, 5.3)
Mon 30.8	Inverse functions. Indefinite expressions. (EMEA 5.3, 5.6, 7.11)
Thu 2.9	Linear and quadratic approximation. Taylor's formula. (EMEA 7.3—7.5)
Mon 6.9	Integration and methods of integration. (EMEA 9.1—9.3)
Thu 9.9	Integration and methods of integration. (EMEA 9.4—9.6) **Problem set 1 is announced.**

Mon 13.9	Integration and methods of integration. (EMEA 9.6—9.7)
Thu 16.9	Vectors. Scalar products. Summation notation. (EMEA 15.7—15.9, 3.1—3.3)
Mon 20.9	Matrices. (EMEA 15.1—15.5)
Thu 23.9	Gaussian elimination. Determinants. (EMEA 15.6, 16.—16.3).
Fri 24.9	**Deadline for problem set 1.**
Mon 27.9	Determinants. (EMEA 16.4—16.5)
Thu 30.9	Inverse matrices. Cramer's rule. (LA 16.6—16.8)
Mon 4.10	Functions of several variables. Partial derivatives. (EMEA I 11.1—11.7)
Thu 7.10	Chain rule with several variables. (EMEA I 12.1—12.2)
Mon 11.10	Homogeneous functions. (EMEA 12.5—12.6) **Problem set 2 is announced.**
Thu 14.10	Derivatives of implicit functions. Slope of level curves. Derivatives of inverse functions. (EMEA I 7.1—7.2, 12.3)
Week 43	18.10—22.10. "Reading week"—no lectures or seminars.
Mon 25.10	Tangent planes. Differentials. (EMEA 12.7—12.8)
Wed 17.10	**Deadline for problem set 2.**
Thu 28.10	Differentiation in equation systems. (EMEA 12.9—12.10)
Mon 1.11	Maxima and minima. (EMEA 8.1—8.5 (brief review), 13.1—13.5)
Thu 4.11	Maxima and minima. Constrained maxima and minima. (EMEA 14.1—14.2, 14.5—14.6)
Mon 8.11	Constrained maxima and minima. (EMEA 14.5—14.6)
Thu 11.11	Constrained maxima and minima. The envelope theorem. (EMEA 14.5—14.6, 13.6)
Mon 15.11	Elasticities. Finding elasticities of implicit functions. (EMEA 7.6, 11.8, 12.4)
Thu 18.11	Final review and summing up.

Keep an eye on the **ECON4120** homepage!