Department of Economics
January 2007
A. Strøm, room 1119, ES

ECON3120/4120 Mathematics 2, spring 2007

Lecture schedule (Note: Changes may occur)

Lectures:
Monday   14.15—16.00, auditorium 2, Eilert Sundt's House.
Thursday 10.15—12.00, auditorium 2, Eilert Sundt's House.

Seminars (problem sessions):
Wednesday   8.15—10.00, seminar room 201, Harriet Holter's house. Leader: Magnus Solhjell.
Wednesday 12.15—14.00, group room 4, Georg Sverdrup's House.   Leader: Marte Strøm.
Wednesday 16.15—18.00, seminar room 301, Harriet Holter's house. Leader: Marte Strøm.

The seminars start on Wednesday 31 January.

Curriculum:

EMEA: K. Sydsæter and P. Hammond: **Essential Mathematics for Economic Analysis, 2nd ed.,**
FT Prentice Hall, 2006. The entire book, except Sections 10.5—10.7 and 16.9 and Chapter 17.
(You can also use the first edition from 2002: The entire book, except Sections 10.5—10.7 and
16.9.)

FMEA: Knut Sydsæter, Peter Hammond, Atle Seierstad, and Arne Strøm: **Further Mathematics
for Economic Analysis,** FT Prentice Hall, 2005. Sections 5.1—5.4.

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 4 June, 09.00—12.00.

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

Mon 15.1	Exponential and logarithmic functions. (Review.) Indefinite expressions. (EMEA 4.9—4.10, 6.10—6.11, 7.12)
Thu 18.1	Exponential and logarithmic functions. More on indefinite expressions. (EMEA 6.10—6.11, 7.12, 10.1—10.3)
Mon 22.1	Compound interest and present values. Chain rules. Implicit differentiation. Slopes of level curves. (Review.) (EMEA 10.1—10.3, 7.1—7.3, 12.1—12.3)
Thu 25.1	Differentials. Differentiation in equation systems. Limits and continuous functions. (EMEA 7.8—7.9, 7.11, 12.8—12.11)
Mon 29.1	The intermediate value theorem. Integration. (EMEA 7.10, 9.1—9.4)
Thu 1.2	Integration and methods of integration. (EMEA 9.1—9.6)
Mon 5.2	Methods of integration. (EMEA 9.5—9.6)
Thu 8.2	Extensions of the integral concept. (EMEA 9.7)

Mon 12.2	First-order differential equations. Separable differential equations. (EMEA 9.8, FMEA 5.1—5.3)
Thu 15.2	Separable and linear differential equations. (FMEA 5.3—5.4)
Mon 19.2	Linear differential equations. (FMEA 5.4)
Thu 22.2	Vectors. Scalar products. Straight lines and planes. (EMEA 15.7—15.9)
Mon 26.2	Matrices. (EMEA 15.1—15.4)
Thu 1.3	Matrices. Gaussian elimination. (EMEA 15.5—15.6)
Mon 5.3	Determinants. (EMEA 16.1—16.3)
Thu 8.3	Determinants. Inverse matrices. (EMEA 16.4—16.6)
Week 11	"Reading week". No lectures or seminars in this course during the period 12.3—16.3.
Mon 19.3	Inverse matrices. Cramer's rule. (EMEA 16.7—16.8)
Thu 22.3	Homogeneous and homothetic functions. (EMEA 12.6—12.7)
Mon 26.3	Maxima and minima. Review. (EMEA 8.1—8.7, 13.1—13.2)
Thu 29.3	Maxima and minima. Envelope theorem. (EMEA 13.3—13.7)
Week 14—15	Easter. No lectures or seminars in this course during the period 2.4—10.4.
Thu 12.4	Constrained maxima and minima. Review. (EMEA 14.1—14.4)
Mon 16.4	Constrained maxima and minima. Envelope theorem. (EMEA 14.5—14.6)
Thu 19.4	Nonlinear programming. (EMEA 14.7)
Mon 23.4	Nonlinear programming. (EMEA 14.8.)
Thu 26.4	Linear and quadratic approximation. Taylor's formula. (EMEA 7.4—7.6 and handouts.)
Thu 3.5	Elasticities. Elasticity of substitution. Finding elasticities of implicit functions. (EMEA 7.7, 11.8, 12.5, and handouts)
Thu 10.5	Final review and summing up.

Keep an eye on the **ECON4120** home page!