Syllabus

for course at first level

Stochastic Processes and Simulation II	**7.5 Higher Education**
Stokastiska processer och simulering II	**Credits**
	7.5 ECTS credits

Course code:	MT5004
Valid from:	Autumn 2007
Date of approval:	2006-09-27
Department	Department of Mathematics (incl. Math. Statistics)
Subject	Mathematical Statistics
Specialisation:	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University on 27 September 2006.

Prerequisites and special admittance requirements

Prerequisites for the course is a course equivalent to Stochastic Processes and Simulation I FC, 7.5 hp.

Course structure

Examination code	Name	Higher Education Credits
S504	Stochastic Processes and Simulation II	7.5

Course content

The course covers renewal theory, queueing models, Brownial motion, some about stationary processes in continuous time and stochastic simulation: variance reducing methods.

Learning outcomes

It is expected that the student after taking the course will be able to:
* define advanced concepts in the theory of stochastic processes
* solve advanced problems on stochastic processes
* carry out stochastic simulation using mathematical computer programs
* give written presentation of a stochastic simulation

Education

The education consists of lectures, exercises and computer based assignments.

Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through written examination.

b. Grading is carried out according to a 7-point scale related to learning objectives:
A = Excellent
B = Very Good
C = Good

D = Satisfactory
E = Sufficient
Fx = Fail
F = Fail

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade E is required to pass the course.

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term "examination" here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

Interim
Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

Limitations
The course may not be included in a degree together with the course "Stochastic Processes and Simulation II" (MS 2210).

Misc
The course is a component of the Bachelor's Programme in Mathematics, Bachelor's Programme in Biomathematics, and Bachelor's Programme in Mathematics and Economics, and it can also be taken as an individual course.

Required reading
Course literature is decided by the departmental board and is described in an appendix to the syllabus.