

Course Programme TMS165/MSA350 Stochastic Calculus Part I, 7.5 credits, 1st quarter Fall 2013

Responsible teacher. Patrik Albin (Lectures 1-11 and 14), room L3072 Mathematica Sciences, email palbin@chalmers.se, tel. 31 772 3512.

Other teachers. Stig Larsson (Lectures 12-13), room L2078, email stig@chalmers.se, tel. 31 772 3543.

Course web-page. <http://www.math.chalmers.se/Stat/Grundutb/CTH/tms165/1314/>

Responsible university unit. Department of Mathematical Statistics, Mathematical Sciences, Chalmers Tvärgata 3. Expedition: Monday-Friday 9 am - 1 pm.

Literature. *Fima C. Klebaner: Introduction to Stochastic Calculus with Applications, Third Edition 2012*, available from Cremona Chalmer's bookshop. (The parts of the third edition we use do not differ from the second edition which can thus be used without any problems whatsoever.) A few theoretical additions to Klebaner's book (see "Contents of course" below). Lecture notes on applications and lecture notes on numerical methods available from the course web-page.

Content of course. Selections from and a few additions to material in Chapters 1-6 and 10 of Klebaner's book. Details of these selections and additions are available from the course web-page. Lecture notes on applications and lecture notes on numerical methods, both available from the course web-page. The course is given in english.

Examination. Written exam 4 hours am Tuesday 22 October 2013, with reexams pm Friday 17 January 2014 and am Wednesday 23 April 2014. No aids are permitted. The written exam will have 6 tasks that are worth 5 points each. Of the maximal total 30 points you need 12 points for grade 3/G, 18 points for grade 4, 21 points for grade VG and 24 points for grade 5, respectively.

It is an outspoken intention that all students that have worked properly with the home exercises should do correspondingly well on the written exam.

Admission and registration. Students that have not been admitted to the course or registered for it are very welcome anyway! Advice on how to register will be offered by Patrik at the lectures.

Lectures	Day	Time and place	Programme
Lecture 1	Tuesday 3 September	3.15-5 pm in MVF33	Ch. 1 in Klebaner's book
Lecture 2	Wednesday 4 September	10.00-11.45 am in MVF33	Ch. 2 in Klebaner's book
Lecture 3	Tuesday 10 September	3.15-5 pm in MVF33	Ch. 2 in Klebaner's book
Lecture 4	Wednesday 11 September	10-11.45 am in MVF33	Ch. 3 in Klebaner's book
Lecture 5	Tuesday 17 September	3.15-5 pm in MVF33	Ch. 3-4 in Klebaner's book
Lecture 6	Wednesday 18 September	10-11.45 am in MVF33	Ch. 4 in Klebaner's book
Lecture 7	Tuesday 24 September	3.15-5 pm in MVF33	Ch. 4 in Klebaner's book
Lecture 8	Wednesday 25 September	10-11.45 am in MVF33	Ch. 5 in Klebaner's book
Lecture 9	Tuesday 1 October	3.15-5 pm in MVF33	Ch. 5 in Klebaner's book
Lecture 10	Wednesday 2 October	10-11.45 am in MVF33	Ch. 6 in Klebaner's book
Lecture 11	Tuesday 8 October	3.15-5 pm in MVF33	Ch. 10 in Klebaner's book
Lecture 12	Tuesday 15 October	3.15-5 pm in MVF33	Numerical methods
Lecture 13	Wednesday 16 October	10-11.45 am in MVF33	Numerical methods
Lecture 14	Wednesday 16 October	1.15-3 pm in MVF33	Applications

Exercises. Students should study the solved exercises carefully and then continue to work with the home exercises. Help with the home exercises as well as other help needed are offered by Patrik Albin on Wednesdays 1.15-3 pm in Room MVF33. This help starts second course week Wednesday 11 September (that is, no help first week Wednesday 4 September).

