

Course Programme TMS165/MSA350 Stochastic Calculus Part I, 7.5 credits, 1st quarter Fall 2011

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/tms165/1112/>

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, Second Edition 2005*, available from Cremona Chalmers' bookshop. Lecture notes on numerical methods and lecture notes on applications available through the course web-page.

Content of course. Selection of material from Chapters 1-6 and 10 in Klebaner's book. Details of the selection will be available from the course web-page. Lecture notes on numerical methods. Lecture notes on applications. The course is given in English.

Examination. Written exam 4 hours on Tuesday 18 October 2011, with reexams on Friday 13 January 2012 and Wednesday 11 April 2012. 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	Wednesday 31 August	1.15-3 pm in MVF33	Ch. 1 in Klebaner's book
Lecture 2	Friday 2 September	10-11.45 am in MVF33	Ch. 2 in Klebaner's book
Lecture 3	Wednesday 7 September	1.15-3 pm in MVF33	Ch. 2 in Klebaner's book
Lecture 4	Friday 9 September	10-11.45 am in MVF33	Ch. 3 in Klebaner's book
Lecture 5	Wednesday 14 September	1.15-3 pm in MVF33	Ch. 3-4 in Klebaner's book
Lecture 6	Friday 16 September	10-11.45 am in MVF33	Ch. 4 in Klebaner's book
Lecture 7	Wednesday 21 September	1.15-3 pm in MVF33	Ch. 4 in Klebaner's book
Lecture 8	Friday 23 September	10-11.45 am in MVF33	Ch. 5 in Klebaner's book
Lecture 9	Wednesday 28 September	3.15-5 pm in MVF33	Ch. 5-6 in Klebaner's book
Lecture 10	Friday 30 September	10-11.45 am in MVF33	Ch. 6-10 in Klebaner's book
Lecture 11	Monday 3 October	3.15-5 pm in MVF33	Ch. 10 in Klebaner's book
Lecture 12	Wednesday 5 October	1.15-3 pm in MVF33	Numerical methods
Lecture 13	Monday 10 October	3.15-5 pm in MVF33	Numerical methods
Lecture 14	Wednesday 12 October	Electronical lecture	Applications

Exercises. The course has no class room exercises. Instead students should study the following solved exercises carefully and then continue to work with the home exercises. Help with the home exercises are offered by Patrik Albin, primarily by means of email communication, but also in person when there is opportunity for that.

