# Course Programme TMS165/MSA350 Stochastic Calculus Part I, 7.5 credits, 1st quarter Fall 2009

**Responsible Teacher.** Patrik Albin (Lectures 1-11), 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. Magnus Röding (exercise sessions and examination of hand-ins), room L3068, email `roding@chalmers.se`, tel. 31 772 3556.

**Course www-page.** `http://www.math.chalmers.se/Stat/Grundutb/CTH/tms165/0910/`

**Responsible University Unit.** Department of Mathematical Statistics, Mathematica Sciences, Chalmers Tvärgata 3. Expedition: Monday-Friday 8.30 am - 1 pm.

**Literature.** *Fima C. Klebaner: Introduction to Stochastic Calculus with Applications, Second Edition 2005*, available from Cremona Chalmer's bookshop.

Additional lecture notes on applications (Lecture 11) and on numerical methods (Lectures 12-13) will be distributed and are available through the course www-page.

**Language.** The course is given in english.

**Content of Course.** Chapters 1-5 in Klebaner's book. Additional lecture notes on applications and numerical methods.

**Examination** is handled by Magnus Röding (albeit Patrik is the formal examiner) through hand-ins, see the course www-page. Help with the hand-ins is offered by Magnus. The grades on the course will be based on the quality of the hand-ins. Electronically submitted hand-ins (by email to Magnus) are recomended. Non-electronical submissions must be in duplicate.

It is an outspoken intention that every student that is reasonably well prepared and reasonably well motivated should have a lot of positive things to get from the course. All such students should also pass the examination. If in doubt about anything of this, please contact Patrik.

**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** are in room EULER, except Monday 5 October when we are in room PASCAL.

| Schedule | Day | Time and place | Programme |
|---|---|---|---|
| **Lecture** | Thursday 3 September | 1.15-3 pm in EULER | Cancelled |
| **Lecture 1** | Monday 7 September | 3.15-5 pm in EULER | Ch. 1 in Klebaner's book |
| **Lecture 2** | Wednesday 9 September | 3.15-5 pm in EULER | Ch. 2 in Klebaner's book |
| **Lecture 3** | Monday 14 September | 3.15-5 pm in EULER | Ch. 2 in Klebaner's book |
| **Lecture 4** | Wednesday 16 September | 3.15-5 pm in EULER | Ch. 3 in Klebaner's book |
| **Lecture 5** | Monday 21 September | 3.15-5 pm in EULER | Ch. 3 in Klebaner's book |
| **Lecture 6** | Wednesday 23 September | 3.15-5 pm in EULER | Ch. 3 in Klebaner's book |
| **Lecture 7** | Monday 28 September | 3.15-5 pm in EULER | Ch. 4 in Klebaner's book |
| **Lecture 8** | Wednesday 30 September | 3.15-5 pm in EULER | Ch. 4 in Klebaner's book |
| **Lecture 9** | Monday 5 October | 3.15-5 pm in PASCAL | Ch. 5 in Klebaner's book |
| **Lecture 10** | Wednesday 7 October | 3.15-5 pm in EULER | Ch. 5 in Klebaner's book |
| **Lecture 11** | Selfstudies | Selfstudies | Applications |
| **Lecture 12** | Monday 12 October | 3.15-5 pm in EULER | Numerical methods |
| **Lecture 13** | Wednesday 14 October | 3.15-5 pm in EULER | Numerical methods |

**Exercises** are in room EULER Thursdays 1.15-3 pm starting Thursday 10 September. A separate programme for the exercises will be distributed by Magnus. See also the course www-page.