Main themes for the examination of the lecture „Introduction to stochastic analysis".

1. Stopping times, optional sampling
2. Semimartingale, quadratic variation
3. **Construction of the Itô-Integral, Itô-Isometry**
4. **Itô-formula, exponential local martingale**
5. **Exponential local martingale, Lévy characterisation**
6. **Strong solutions of the SDE**
7. Time change and Dubins-Schwarz theorem
8. Change of measures and Girsanov theorem

There will be one small exercice plus a question. Of course, during the examination the questions will in general not be restricted to the chosen question, but may cover other parts of the lecture.