1. Presentation of the subject
This course focuses on derivative instruments such as futures, swaps and options. The primary objective is to give students a good understanding of derivative products, their valuation, their function, and their use by financial institutions and firms. The market of derivatives has grown exponentially over the last decades, both for hedging as well as speculative purposes. The correct understanding and use of derivatives is crucial in today’s financial markets.

2. Competences to be attained
Students obtain knowledge about using derivative products for hedging and speculation purposes. A large portion of the course is dedicated to valuation, in a no-arbitrage context as well as in a financial market equilibrium.

3. Contents
Chapter 0 – Review of Financial Economics (with a test)
Chapter 1 - Intro & Derivatives Market
Chapter 2 - Basic derivatives
Chapter 3 - Option Pricing 1 (Arbitrage Pricing)
Chapter 4 - Option Pricing 2 (Equilibrium Pricing)
Chapter 5 - Option Pricing 3 (Simulation)
Chapter 6 - Greeks & Hedging
Chapter 7 - Trading Strategies, Exotic Options, Structured Products

4. Assessment
This course consists of 30 hours of theory class (20 lectures of 1.5hrs) and 9 hours of practice classes (1.5hrs/wk during the last 6 weeks). At the end of the course there will be a final exam (FE).
During the course students will be graded 1) through online examinations and 2) through sit in examinations and 3) they will have to hand in 2 homeworks. The grade for the continuous evaluation (CE) will be computed as 50% of the online examination and 50% of the sit in examination.

The final grade for the course will be
Final Grade= MAX(0.4*FE+0.6*CE, 0.7FE+0.3*CE)
The minimum final passing grade is 5.0 out of 10.

Practice sessions are used to solve problem sets with active student involvement.

The grade CE as well as the formula for the Final Grade is preserved for the recuperation exam at the beginning of the 2nd trimester. Students are only allowed to attend the exam or recuperation exam if they were enrolled in the course during the first term of 2014-15.
For students unable to attend the recuperation exam due to exchange study placement in the second term, an extra recuperation exam date can be set at the end of the 3rd term.

5. **Bibliography and teaching resources**

5.1. **Basic bibliography**


6. **Methodology**

We will discuss theoretical issues and methodology during the lectures. All students are expected to come prepared for in-class discussions. There will be a total of six seminar assignments. These problems will be either uploaded on the course website in advance of the due date. The seminar assignments are meant to help students review the concepts covered during the previous weeks and to help them prepare for the final exam. The seminar classes are applied in nature and treat the solution of practical problems related to the theory taught during lectures. Students must submit solutions to 3 of the 6 seminars as homework.

7. **Activities Planning**

Students are recommended to attend lectures and classes and to prepare solutions to the seminar practice problems before attending seminar classes, even if the solutions do not have to be handed in. There are 2 homework sets to be handed in individually, at the beginning of practice class.