



APPLIES TO ACADEMIC YEAR  
2002/2003

## GRA 6535 Derivatives

### Program

Advanced Specialization Course (MSc), Master of Science in Business Administration (MScBA), Master of Science (Financial Economics)

### Responsible for the course

Bernt Arne Ødegaard

### Department

Financial Economics

### Term

Fall

### ECTS Credits

6

### Objective

A thorough understanding of the workings and pricing of derivative securities.

### Prerequisites

Financial Theory, Introduction to Derivatives and Risk management

### Compulsory literature

Hull, John C. 2002. *Options, futures and other derivatives*. 5th ed. Upper saddle river, NJ: Prentice-Hall.

### Recommended literature

### Course outline

1. Derivative Payoffs
2. Derivative combinations
3. Arbitrage bounds
4. The binomial model and its continuous time limit.
5. The mathematics of continuous time (heuristically).
6. The Black Scholes model.
7. Adjusting the Black Scholes and binomial to price futures and currency options.
8. Delta hedging
9. The basics of the term structure of interest rates.
10. Modelling the evolution of the term structure of interest rates.
11. Fixed income derivatives.
12. Credit derivatives.
13. Exotic derivatives.

### Computer-based tools

Will be used

### Course structure

Lectures

### Evaluation

Homeworks and three hour written exam. The homeworks will count for 25% of the grade.

### Evaluation code(s)

GRA 65351 homework 25%

GRA 65352 Three hour written exam

**Aids at the examination**

Calculator, Berck and Sydsæter, Economists' mathematical manual, in Norwegian or English

**Makeup exam**

At the next ordinary exam