Module	**Futures and Options**		
Area of study/Profile	M.Sc. VWL (PO 2011): Quantitative Methoden, Volkswirtschaftstheorie, BWL M.Sc. VWL (PO 2014): Accounting, Finance, and Taxation M.Sc. Economics: Finance Profillinie		
Recommended semester	Second semester	Mandatory/elective	Elective
Module coordinator	Prof. Dr. Lütkebohmert-Holtz	Work load	120 hours
ECTS (credit points)	6	Contact hours (SWS)	2+2(+1)
Course type	Lecture + Tutorial (+ Practical Tutorial)	Language	English
Rotation	Every summer semester		
Requirements	Principles of Finance (should be taken in parallel)		
Learning/ qualification target	Introduction to basic principles of risk-neutral valuation of futures, standard and exotic options as well as interest rate derivatives.		
Content	This course covers an introduction to financial markets and products. Besides futures and standard put and call options of European and American type we also discuss interest-rate sensitive instruments such as swaps. For the valuation of financial derivatives we first introduce financial models in discrete time as the Cox-Ross-Rubinstein model and explain basic principles of risk-neutral valuation. Finally, we will discuss the famous Black-Scholes model which represents a continuous time model for option pricing. Additionally to the general tutorial there will be some practical tutorials where students learn how to implement the methods introduced in the lecture and how to apply them to real financial data. Implementations will be performed in the software R.		
Module title	Futures and Options		
Examination type	120 min. written examination at the end of the term		
Literature	Chance, D.M., Brooks, R.: *An Introduction to Derivatives and Risk Management*, 8th ed., South-Western, 2009. Hull, J.C.: *Options, Futures, and other Derivatives*, 7th ed., Prentice Hall, 2009. Shreve, S.E.: *Stochastic Calculus for Finance I: The Binomial Asset Pricing Model*, Springer Finance, 2005. Strong, R.A.: *Derivatives. An Introduction*, 2nd ed., South-Western, 2004.		
Additional information & links	Course outlines, dates, and further information can be found on the webpage of the department: http://www.finance.uni-freiburg.de/		

Zugeordnete Studiengänge (Bachelor *oder* Master):

a) Bachelor

☐ **B.Sc. VWL**

- ☐ Volkswirtschaftstheorie
- ☐ Volkwirtschaftspolitik
- ☐ Finanzwissenschaft
- ☐ Betriebswirtschaftslehre
- ☐ Quantitative Methoden
- ☐ Fachfremde Module

☐ **B.Sc. BWL (Public and Non-Profit Management)**

- ☐ PublicManagement
- ☐ Non-Profit Management
- ☐ Finanzwissenschaft
- ☐ Allgemeine Betriebswirtschaftslehre
- ☐ Volkwirtschaftslehre
- ☐ Quantitative Methoden
- ☐ Fachfremde Module

☐ **B.A. Nebenfächer VWL und BWL**

- ☐ Volkswirtschaftstheorie
- ☐ Volkswirtschaftspolitik
- ☐ Finanzwissenschaft
- ☐ Allgemeine Betriebswirtschaftslehre

☐ **Polyvalenter 2-Hauptfächer Bachelor (Wirtschaftswissenschaften)**

- ☐ Vertiefungsbereich I: Volkswirtschaftspolitik und Wirtschaftsethik
- ☐ Vertiefungsbereich II: Betriebswirtschaftslehre und Rechtswissenschaft.

b) Master

☒ **M.Sc. VWL (PO 2011)**

- ☒ Volkswirtschaftstheorie
- ☐ Volkwirtschaftspolitik
  - ☐ Mikropolitik
  - ☐ Makropolitik
  - ☐ Ordnungspolitik
- ☐ Finanzwissenschaft
- ☒ Betriebswirtschaftslehre
- ☒ Quantitative Methoden
- ☐ Wirtschaftsinformatik

☒ **M.Sc. VWL (PO 2014)**
hier im **Bereich/Spezialisierungsbereich**

- ☒ Accounting, Finance and Taxation
- ☐ Business Analytics
- ☐ Constitutional Economics and Competition Policy
- ☐ Corporate Governance, Business Ethics and Marketing
- ☐ Empirical Economics

☐ International and Development Economics
☐ Labor, Human Resource Management and Organization
☐ Network Economics and IT Risk Management
☐ Spezialisierungsbereich Public Sector Economics and International Taxation

☐ **M.Sc. BWL (Public and Non-Profit Management)**
hier im **Bereich**:

☐ Public Management
☐ Non-Profit Management
☐ Public Sector Economics
☐ Allgemeine Betriebswirtschaftslehre

☒ **M.Sc. in Economics**
hier in der **Profillinie**:

☐ Economics and Politics
☒ Finance
☐ Information Systems and Network Economics