

Module Description

MA3703: Fixed Income Markets

TUM Department of Mathematics

Module Level: Master	Language: English	Duration: one semester	Frequency: winter semester
Credits:* 5	Total Hours: 150	Self-study Hours: 105	Contact Hours: 45

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:

Klausur

Type of Examination: written	Duration of Examination (min.): 60	Repeat Examination: End of Semester
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(Recommended) Prerequisites:

MA4405 Stochastic Analysis, MA3702 Continuous Time Finance

Content:

Coupon Bonds, Forward Agreements on Coupon Bonds, Modeling of Fixed Income Markets, Pricing of Contingent Claims, Short-Rate Models, Heath-Jarrow-Morton Framework, Multi-Factor Models, LIBOR Market Model, Interest-Rate Derivates (Futures, Swaps, Caps, Floors, Options), Management of Interest Rate Risk.

Intended Learning Outcomes:

At the end of the module students are able to understand the fundamentals of Fixed Income Markets. They are able to evaluate interest rate derivatives, and manage interest rate risk.

Teaching and Learning Methods:

Vorlesung, Übung, Übungsaufgaben zum Selbststudium

Media:

Tafelarbeit, Semesterapparat, Folien, Übungsblätter.

Reading List:

- R. Zagst: Interest Rate Management, Springer Finance, 2002.
D. Brigo and F. Mercurio: Interest-Rate Models: Theory and Practice, Springer Finance, 2005.
J.C. Hull: Options, Futures and Other Derivatives, Prentice-Hall, 2008.
M. Musiela and M. Rutkowski: Martingale Methods in Financial Modelling, Vol. 36, Springer, 2005.
R. Rebonato: Interest-Rate Option Models, John Wiley & Sons, 1998.
R. Rebonato: Modern Pricing of Interest-Rate Derivatives: The LIBOR Market Model and Beyond, Princeton University Press, 2002.
D. Filipovic: "Term-Structure Models", Springer Finance, 2009.

Responsible for Module:

Rudi Zagst, zagst@tum.de

Courses (Type of course, Weekly hours per semester), Instructor:

Fixed Income Markets (Lecture, 2 SWS)
Gaß M [L], Glau K

Fixed Income Markets (Exercise Session) (Exercise, 1 SWS)
Glau K, Gaß M

For further information in this module, please click
www.campus.tum.de or [here](#).