Module Name: Actuarial Methods and Pricing

Module Code	w.BA.XX.3AMP-RI.XX
Module Description	Students will know, understand, and be able to master the mathematical tools of actuarial principles, especially common loss distributions, methods of premium calculation in life and non-life (composite), reserving procedures in life and non-life, and common modeling and simulation procedures. In addition, they will be able to apply these to the requirements in the underwriting processes and contribute to them.
Program and Specialization	Business Administration - Specialization in Risk and Insurance
Legal Framework	Academic Regulations BSc dated 29.01.2009, for the degree programs in Business Administration, International Management, Business Information Technology, Business Law, Business Law and Applied Law, first adopted on 12.05.2009
Module Category	**Module Type:** Compulsory **Program Phase:** Main Study Period
ECTS	3
Organizational Unit	W Institut für Risk & Insurance
Module Coordinator	Michaela Bruer (brri)
Deputy Module Coordinator	Wolfgang Sickinger (sici)
Prerequisite Knowledge	All previous modules of the Bachelor's program and the specialization in Risk & Insurance.
Contribution to Program Learning Goals (Affected by Module)	§ Professional Competence § Methodological Competence § Social Competence § Self-Competence
Contribution to Program Learning Objectives	Professional Competence § Knowing and Understanding Content of Theoretical and Practical Relevance § Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance § Evaluate Content of Theoretical and Practical Relevance Methodological Competence § Problem-Solving & Critical Thinking § Scientific Methodology § Work Methods, Techniques, and Procedures § Information Literacy § Creativity & Innovation Social Competence § Written Communication § Oral Communication § Teamwork & Conflict Management § Intercultural Insight & Ability to Change Perspective Self-Competence § Self-Management & Self-Reflection § Ethical & Social Responsibility § Learning & Change
Module Learning Objectives	Students... § are able to name and explain the key responsibilities and challenges of actuarial work in insurance. § know the actuarial principles of rate calculation and underwriting in life insurance. They can apply these and interpret/estimate results. § know the actuarial principles of rate calculation and underwriting for non-life insurance (composite). They can apply these and interpret/estimate results. § know the principles of calculating actuarial reserves in life insurance and can apply these to key issues. § know the principles of reservation procedures in non-life insurance (composite) and can apply these to key issues. § know the measures for estimating solvency in insurance companies and can apply them to examples.
Module Content	§ Tariff calculation and underwriting § Reservation and actuarial reserves § Solvency of insurance companies § Actuarial work and tasks
Links to other modules	The content of this module is linked to the following modules: w.BA.XX.1MatBO1.XX w.BA.XX.1MatBO2.XX

	w.BA.XX.1SK.XX
	w.BA.XX.1Stat.XX
	w.BA.XX.2Komm.XX
	w.BA.XX.3GRI-RI.XX

Methods of Instruction	§ Lecture § Interactive Instruction § Application Tasks § Case Studies § Exercises	**Social Settings Used:** § Individual Work § Pair Work § Group Work
Digital Resources	§ Teaching Videos § Practice and Application Exercises (with Key)	

Type of Instruction	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Large Class	20 h	55 h	
Small Class	-	-	
Group Instruction	-	-	
Practical Work	-	-	
Seminar	-	-	
Total	**20 h**	**55 h**	**15 h**

Performance Assessment

End-of-module exam	Form	Length (min.)	Weighting
Written exam	Specified documentation	60	40,00 %
Permitted Resources	Approved calculator according to "Guidelines on Supplementary Materials"	With dictionary	

Others	Assessment	Length (min.)	Weighting
Written Assignment	Grade	-	30,00 %
Talk/oral presentation	Grade	10	30,00 %

Classroom Attendance Requirement	Mandatory Attendance: Other Individual presentations; absences must be justified in writing.
Language of Instruction/Examination	German
Compulsory Reading	§ Cottin, C. & Döhler, S. (2013). Risikoanalyse: Modellierung, Beurteilung und Management von Risiken mit Praxisbeispielen, Studienbücher Wirtschaftsmathematik. 2., überarb. u. erw. Aufl edition. Wiesbaden: Springer Fachmedien. ISBN 9783658008291. § Ortmann, K. (2016). Praktische Lebensversicherungsmathematik : mit zahlreichen Beispielen sowie Aufgaben plus Lösungen, Studienbücher Wirtschaftsmathematik. 2., überarbeitete und erweiterte edition. Wiesband: Springer Spektrum. ISBN 9783658101992.
Recommended Reading	§ Goelden, H., Hess, K. & Schmidt, K. (2016). Schadenversicherungsmathematik. Berlin Heidelbert: Springer. ISBN 9783662488591.
Comments	-