		STUDY MODULE D	ESCRIPTION FORM	
Name of the module/subject Mathematical finance			Code 1010341761010349409	
Field of	study		Profile of study (general academic, practical)	Year /Semester
Mathematics in technology			(brak)	3/6
Elective path/specialty			Subject offered in: Polish	Course (compulsory, elective)
Cycle o	f study:		Form of study (full-time,part-time)	
First-cycle studies			full-time	
No. of h	iours			No. of credits
Lectu	re: 30 Classe	s: 15 Laboratory: -	Project/seminars:	3
Status of the course in the study program (Basic, major, other) (brak)			(university-wide, from another field) <b>(brak)</b>	
(DTAK) Education areas and fields of science and art				ECTS distribution (number and %)
the sciences Mathematical sciences				3 100% 3 100%
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1. Written exam (theoretic and practical problems).

Practical lessons:

One large test (solving problems). Valuation of activity and student?s answers during classes.

## **Course description**

Time value of money. Annuities and perpetuities. Repayment of debts and credit costs. Financial market. Introduction to asset pricing. Demographic model and life-insurance mathematics. Calculation of premiums and reserves. Utility theory.

## Basic bibliography:

1. B. Błaszczyszyn, T. Rolski, Podstawy matematyki ubezpieczeń na życie, WNT, 2004

2. K. Jajuga, T. Jajuga, Inwestycje. Instrumenty finansowe, aktywa niefinansowe, ryzyko finansowe, inżynieria finansowa, PWN, Warszawa 2006.

3. J. Klimkowska, M. Podgórska, Matematyka finansowa, PWN, Warszawa 2005

## Additional bibliography:

Practical activities

1. N. L. Bowers et al, Actuarial Mathematics, 2nd edition, Society of Actuaries 1997.

2. Additional bibliography: 1. N. L. Bowers et al, Actuarial Mathematics, 2nd edition, Society of Actuaries 1997. 2. A. Weron, R. Weron, Inżynieria finansowa, WNT, Warszawa 1998.

## Result of average student's workload

Activity					
1. Participation in lectures and exercise classes.					
2. Home work: preparing to classes, work with textbook, consulting with the lecturer.					
3. Preparation to the tests.					
4. Preparation to the exam. Examination.					
Student's workload					
hours	ECTS				
103	3				
48	2				
	nd hours				

50

1