CURRICULUM
MP "PROBABILITY, ACTUARIAL SCIENCES AND STATISTICS"
APPLIED MATHEMATICS

Courses	ECTS-kredits	Number of classes total	per week
I semester			
Probability theory and mathematical statistic	**11**	**60**	**2+2+0**
Introduction in actuarial mathematics	**7**	**30**	**2+0+0**
Introduction in functional analysis	7,5	45	3+0+0
Optimal control	5	30	2+0+0
Game theory	5	30	2+0+0
Measure Theory and Integration(Lebegue integral)	7	30	2+0+0
Introduction in Biostatistics	5	30	1+1+0
II semester			
Applied Statistics	**6**	**60**	**2+0+2**
Random processes	**7**	**45**	**1+2+0**
Actuarial Mathematics	**7**	**30**	**2+0+0**
Mortality models	6	30	2+0+0
Stochastic numerical methods and simulations	5	60	2+2+0
Investments and assets management	5	60	2+2+0
Statistical methods in actuarial sciences	5	60	2+2+0
Time series	5	30	2+0+0
Models in social sciences	5	60	2+0+2
Statistical methods in Bioinformatics	5	60	2+2+0
Biostatistics	7	60	2+2+0
III semester			
Probability theory 2	**7**	**60**	**2+2+0**
Mathematical statistics 2	**4**	**30**	**2+0+0**
Financial models with market shocks	5	30	2+0+0
Probability Methods in Combinatorics	4	30	2+0+0
Design of experiments	5	60	2+0+2
Linear models with R	5	60	2+0+2
Branching processes	5	30	2+0+0
IV semester			
Renewal processes	4	30	2+0+0
Stochastic processes 2	6	60	2+2+0
Generalized linear models and models of extremes	5	30	2+0+0
Seminar on mathematical modeling in finance	5	30	0+2+0
Seminar on Probability and Statistics	5	30	0+2+0
Internship	5		
Diploma Thesis	**15**		