Faculty of Economics / BUSINESS ECONOMICS / Portfolio management

Course:	Portfolio management			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
12446	Mandatory	2	5	2+2+0
Programs	BUSINESS ECONOMICS			
Prerequisites	None			
Aims	Portfolio Management provides an overview of basic theoretical concepts and analytical procedures necessary for understanding and managing financial assets After completing these course students will be able to understand complex analytical concepts behind the portfolio management process			
Learning outcomes	After passing this exam, the student will be able to: 1. Define the model for calculating return and risk of individual securities and financial portfolios. 2. Explain the statistical concepts of financial risks measurement. 3. Evaluate and forecast the relationship between expected return and risk of N securities portfolio, using statistical software. 4. Describe and solve the problem of the financial portfolio optimization. 5. Critically think about the concept of the capital market equilibrium and compare various forms of equilibrium models. 6. Make optimal portfolio selection in national and international context 7. Describe and select appropriate portfolio strategy.			
Lecturer / Teaching assistant	Saša Popović, Ph.D., Jelena Jovović, MSc			
Methodology	Lectures and Practical Exercises, Group and Individual Case studies			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction to Portfolio Management: Introduction with the course and literature; Method of examination and time schedule of exams; Initial test			
I week exercises	Introduction to Portfolio Management: Introduction with the course and literature; Method of examination and time schedule of exams; Initial test			
II week lectures	Models for securities risk and returns assessments: Rational investor definition; Multidisciplinary approach to portfolio management; Risk definition and types in securities trade			
II week exercises	Models for securities risk and returns assessments: Rational investor definition; Multidisciplinary approach to portfolio management; Risk definition and types in securities trade			
III week lectures	Basic statistical concepts in portfolio management: Risk and return of security; Gaussian distribution and 3 sigma rule; Risk and return of financial portfolio; Case study: descriptive statistics of securities returns in Excel			
III week exercises	Basic statistical concepts in portfolio management: Risk and return of security; Gaussian distribution and 3 sigma rule; Risk and return of financial portfolio; Case study: descriptive statistics of securities returns in Excel			
IV week lectures	Financial portfolio general characteristics: Portfolio of N securities; Correlation matrix			
IV week exercises	Financial portfolio general characteristics: Portfolio of N securities; Correlation matrix			
V week lectures	Combination of two risky assets: Analytical interpretation of two risky assets portfolio; Analysis of three scenarios: ρ=1, ρ1			
V week exercises	Combination of two risky assets: Analytical interpretation of two risky assets portfolio; Analysis of three scenarios: ρ=1, ρ1			
VI week lectures	Graphical interpretation of probable portfolio outcomes: Attainable set and efficient frontier; Short-selling effect on financial portfolio; Risk-free assets effect on financial portfolio			
VI week exercises	Graphical interpretation of probable portfolio outcomes: Attainable set and efficient frontier; Short-selling effect on financial portfolio; Risk-free assets effect on financial portfolio			
VII week lectures	Portfolio optimization: Efficient frontier calculation; Optimal portfolio selection; Case study: portfolio optimization in Excel using analytical tool Solver			
VII week exercises	Portfolio optimization: Efficient frontier calculation; Optimal portfolio selection; Case study: portfolio optimization in Excel using analytical tool Solver			
VIII week lectures	International diversification: International diversification methods; International diversification effect of financial portfolio; International diversification implementation			
VIII week exercises	International diversification: International diversification methods; International diversification effect of financial portfolio; International diversification implementation			

IX week lectures	Factorial models and methods: Single-factor model; Multi-factor model
IX week exercises	Factorial models and methods: Single-factor model; Multi-factor model
X week lectures	Capital market efficiency: Testing efficient market hypothesis; Theoretical basis of equilibrium model; Case study: efficient market analysis using Event Study method
X week exercises	Capital market efficiency: Testing efficient market hypothesis; Theoretical basis of equilibrium model; Case study: efficient market analysis using Event Study method
XI week lectures	Capital Market equilibrium models: Capital assets pricing model (CAPM); CML and SML forms of CAPM; Arbitrage pricing theory model (APT)
XI week exercises	Capital Market equilibrium models: Capital assets pricing model (CAPM); CML and SML forms of CAPM; Arbitrage pricing theory model (APT)
XII week lectures	Portfolio strategies: Portfolio management global concept; Active portfolio strategies; Passive portfolio strategies
XII week exercises	Portfolio strategies: Portfolio management global concept; Active portfolio strategies; Passive portfolio strategies
XIII week lectures	Case study: Financial assets strategic allocation model
XIII week exercises	Case study: Financial assets strategic allocation model
XIV week lectures	Exam
XIV week exercises	Exam
XV week lectures	Endterm exam
XV week exercises	Endterm exam
Student workload	2L+2E

Per week	**Per semester**
5 credits x 40/30=6 hours and 40 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises **2 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts** Total workload for the subject: **5 x 30=150 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **30 hour(s) i 0 minuts** Workload structure: **106 hour(s) i 40 minuts (cources), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)**
Student obligations	Compulsory attendance to lectures and exercises, group and individual case studies
Consultations	
Literature	Popovic, Sasa: Portfolio analysis – quantitative aspects of investing in securities, Podgorica, 2000. Frank Reilly and Keith Brown, Investment Analysis and Portfolio Management , SouthWesternCollege, 2005 Robert Strong, Portfolio Construction, Management, and Protection, vol 5, South-Western Cegage Center, 2009
Examination methods	• Lecture activities • Group research work – Case study • Practical individual work • Written exam • Final exam
Special remarks	• For the purpose of this course computer room necessary. • Lectures and exercises can be held in English. • For the purpose of this course we launched a web site www.finansije.net
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points