



COURSE (MODULE) DESCRIPTION

| Course title | Code |
|-----------------------------|------|
| Portfolio Management | |

| Staff | Department |
|---|---------------------------------|
| Coordinator: Assoc. prof. dr. Hab. Katarzyna Kuziak Associate Prof. Dr Hab. Krzysztof Piontek Other(s): | Wrocław University of Economics |

| Study cycle | Course type |
|-------------|---------------------|
| Second | Compulsory/Elective |

| Form of implementation | Period of implementation | Language of instruction |
|------------------------|--------------------------|-------------------------|
| Classroom | Autumn semester | English |

| Requirements for student | |
|---|---|
| Prerequisites: basic knowledge of finance theory, analysis of financial instruments, investment management, and statistics | Additional requirements (if any): none |

| Number of ECTS credits | Student's workload | Contact hours | Individual working hours |
|------------------------|--------------------|---------------|--------------------------|
| 5 | 130 | 24 | 106 |

| Purpose of the course and competences developed |
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| The subject offers a course of portfolio management, including portfolio theory, market models and advanced portfolio management. Such issues as integrating various types of assets in a portfolio, managing portfolio for different types of investors, as well as using a number of asset allocation approaches, are spanned by the course material. |

| Learning outcomes | Teaching methods | Assessment methods |
|--|---|---|
| Student will be able: - to apply the principal models of the building of an investment portfolio, as well as the financial theories, and financial behaviour; - to analyse the risk of an investment portfolio when taking decisions on investment; - to perform asset selection and construct a portfolio suiting the investment horizon and preference structure of an investor - to calculate return and estimate expected return and risk of a portfolio - to apply main market equilibrium models in portfolio management - to apply some chosen portfolio-performance evaluation methods | Lectures, independent teaching, presentation of problem solutions, case study, individual assignment, discussions | Control work (a test). Individual assignment (the development and giving of a presentation). Written exam |

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| - to list and comment on main elements and stages of portfolio management process for an individual and institutional investor, | | |
| - to list, comment on asset allocation strategies, as well as propose one in some chosen model cases | | |
| - to conduct scientific research by working independently or in group and to present the obtained results to the audience. | | |
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| Course themes | Contact / Individual work: time and assignments | | | | | | | Assignments | |
|---|---|-----------|----------|-------------------|-----------------|----------|---------------|-------------|---|
| | Lectures | Tutorials | Seminars | Practical classes | Laboratory work | Practice | Contact hours | | Individual work |
| Portfolio and risk management- an overview the portfolio approach to investing; types of investors; defined contribution and defined benefit pension plans; the steps in the portfolio management process; mutual funds and other pooled investment products risk management; financial and non-financial sources of risk; methods for measuring and modifying risk exposures | 2 | | | | | | 2 | | Reading and discussion of the indicated literature, problem solution and discussion |
| Portfolio risk and return return measures ; characteristics of the major asset classes; the mean, variance, and covariance (or correlation) of asset returns; risk aversion; portfolio standard deviation; the effect on a portfolio's risk of investing in assets that are less than perfectly correlated; the minimum-variance and efficient frontiers of risky assets and the global minimum-variance portfolio; the selection of an optimal portfolio, given an investor's utility (or risk aversion) and the capital allocation line. | 6 | | | | | | 6 | | |
| Market Equilibrium Models the implications of combining a risk-free asset with a portfolio of risky assets, the capital market line (CML); | 6 | | | | | | 6 | | |

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| systematic and nonsystematic risk, return generating models (including the market model); beta; the capital asset pricing model (CAPM), arbitrage pricing theory (APT), the Sharpe ratio, Treynor ratio, M2, and Jensen's alpha, tracking error and the information ratio | | | | | | | | |
| Basics of portfolio planning and construction the reasons for a written investment policy statement (IPS); the major components of an IPS; risk and return objectives and how they may be developed for a client; the willingness and the ability (capacity) to take risk in risk tolerance; the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique circumstances; the specification of asset classes in relation to asset allocation; the principles of portfolio construction and the role of asset allocation in relation to the IPS. | 6 | | | | | | 6 | Reading and discussion of the indicated literature, case study |
| Measuring and managing market risk value at risk (VaR) in measuring portfolio risk; the parametric (variance-covariance), historical simulation, and Monte Carlo simulation methods for estimating VaR; advantages and limitations of VaR; extensions of VaR; evaluation of quantile based risk measures | 4 | | | | | | 4 | Reading and discussion of the indicated literature, problem solution and discussion |
| Total | 24 | | | | | | 24 | |

| Assessment strategy | Share in % | Time of assessment | Assessment criteria |
|--|------------|---------------------------------------|---|
| Control work (a test) | 25 | In compliance with an agreed schedule | The number of correct answers |
| Individual assignment (the development and giving of a presentation) | 25 | | The assessment criteria include: - the novelty and relevance of the topic, the consistency of its development; - the justification and presentation of the data analysis; - meeting of the requirements set for the work; - the persuasiveness of the presentation and the exhaustiveness of the answers; - students' creativity and participation in discussions. |
| Written exam | 50 | During the session | The number of correct answers Final grade shall be positive when student provides over 50% of correct answers to the exam questions. Final grade shall be the sum of the assessments for control work, individual assignments and exam. The assessment is based on a ten-point scale: - over 95%, or excellent: 10; |

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| | | | <ul style="list-style-type: none"> - over 85%, or very good: 9; - over 75%, or good: 8; - over 65%, or fair: 7; - over 55%, or satisfactory: 6; - over 45%, or poor: 5. <p>Under 45%, or unsatisfactory: 4–1.</p> |
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| Author | Published in | Title | Issue No. or Volume | Publishing house or Internet site |
|---|--------------|---|-------------------------|-----------------------------------|
| Required reading | | | | |
| Jones, Charles P. | 2007 | Investments: Analysis and Management | 12th Edition | John Wiley & Sons, Inc. |
| Jordan, Bradford D. Miller Jr., Thomas W. Dolvin, Steven D. | 2008 | Fundamentals of Investments: Valuation and Management | 7th Edition | McGraw-Hill Education |
| Elton E.J., Gruber M.J., Brown S.J., Goetzmann W.N. | 2006 | Modern Portfolio Theory and Investment Analysis | | Wiley Hoboken (New Jersey) |
| John L. Maginn, Donald L. Tuttle, Dennis W. McLeavey, Jerald E. Pinto | 2007 | Managing Investment Portfolios. A Dynamic Process. | 3 rd Edition | Wiley Hoboken (New Jersey) |
| Pickford, James | 2006 | Mastering Investment | | Prentice Hall Financial Time |
| John C. Hull, | 2015 | Risk Management and Financial Institutions | 4th Edition, | Wiley Finance |
| Reilly F.K., Brown K.C. | 2009 | Investment Analysis and Portfolio Management | 6th Edition | South-Western - Thomson Learning |
| Supplementary reading | | | | |
| Pompian, Michael M. | 2008 | Behavioral Finance and Wealth Management | | Wiley: New Jersey |