# Thesis themes Academic Year 2024/2025

**Study Programme: Economics**

**Study Programme Leader: prof. Ing. Martin Macháček, Ph.D.**

## doc. Ing. Jiří Balcar, Ph.D., dep. 114, +420 597 322 291

* The impact of personality, soft skills and attitudes on labour market success
* Beauty and its implications for the labour market
* Microeconomic determinants of employment/wages
* Environmental migration
* Gender roles and gender in the labour market

## doc. Ing. Martina Halásková, Ph.D., dept. 153, +420 597 322 315

* Financing of services of general interest
* Fiscal federalism - theoretical and practical aspects
* Economic and political aspects of curruption

## prof. Ing. Jana Hančlová, CSc., dept. 157, +420 597 322 285

* Panel econometric modeling of energy consumption and emission reduction

## doc. Ing. Martin Hodula, Ph.D., dept. 114, +420 597 322 214

* Non-bank financial intermediation (shadow banking, fintech, big tech)
* Regulation and financial stability
* Meta-analysis of selected macro-financial relations

## doc. Ing. Jan Janků, Ph.D., dept. 114, +420 597 322 214

* (Re)distributional Effects of Monetary and Macro-Prudential Policy
* Interaction of Monetary and Macro-Prudential Policy in a Low Interest Rate Environment (LIRE) and in a High Inflation Period
* Economic Analysis of Politics: The Impact of Voter’s Awareness and Other Macroeconomic and Socioeconomic Factors on the Electoral Performance of Populist and Extremist Political Parties
* Regional Impacts and Asymmetric Effects of Monetary Policy in State Districts

## doc. Ing. Zuzana Kučerová, Ph.D., dept. 114, +420 597 322 405

* Monetary Policy, Communication of Central Banks and its Credibility in High Inflationary Episodes, the Role of Inflation Expectations and Determinants
* Financial cycle, Identification, Determinants, Synchronisation with Economic Cycle,

Stabilisation Instruments of Macroeconomic Policies

## prof. Dr. Ing. Jan Libich, dept. 114, +420 597 322 480

* Macroeconomic effects of demographic changes
* The optimal design of pension systems
* Monetary – fiscal policy interactions
* Bank runs and deposit insurance
* Financing tertiary education
* Financial stability and macroprudential policy

## prof. Ing. Martin Macháček, Ph.D., dept. 114, +420 597 322 343

* Economic Impacts of Technological Transition in Disadvantaged Regions

## doc. Ing. Aleš Melecký, Ph.D., dept. 114, +420 597 322 153

* Housing prices – meta-analysis
* Housing prices – housing affordability, reginal differences in housing prices
* Determinants of housing affordability and spatial inequality
* Government debt management and fiscal sustainability
* Behavioral economics – experimental analysis of individual economic decision making
* Behavioral and experimental economics approaches to environmental problems

## prof. Dr. Ing. Martin Melecký, Ph.D., dept. 114, +420 597 322 284

* Banking sector efficiency, capital reallocation, and equitable growth
* Climate change crisis, natural disasters, and disaster risk financing
* Green finance, ESG and impact investing
* State owned enterprises, state owned banks, and PPPs

## prof. Ing. Richard Pospíšil, Ph.D., +420 732 285 453, richard.pospisil@upol.cz

* The economic and legal aspects of independence of Czech National Bank in relation to future membership of the Czech Republic in the Euro area
* Social entrepreneurship in the Czech Republic in the context of economic policy
* The instruments of the European Union to restore and maintain the fiscal discipline.

## doc. Ing. Michaela Melecká Staníčková, Ph.D., dept. 120, +420 597 322 230

* Impacts of spending finances from EU Funds on regional development
* Economic resilience and adaptability of the territory to external shocks
* Spatial patterns of socio-economic differentiation and progressiveness of the territory
* Regional development and regional disparities
* Development potential and regional specialization as a competitive advantage of the territory
* Territorial dimension of societal inequalities

## doc. Ing. Iveta Vrabková, Ph.D., dept. 153, +420 597 322 306

* Gaps in the performance of selected sectors of the public sector (health, education, security, culture, public administration)
* Latent performance factors of public programs (health insurance, social support, specific subsidy programs)
* Perspectives and limitations of distance forms of distribution of public services (in healthcare, social care, education)
* The influence of socio-economic factors on the concentration and deconcentration of the supply of public goods

# Thesis themes Academic Year 2024/2025

**Study Programme: Economy and Management Chairman of the Branch Committee:**

**prof. Ing. Petra Horváthová, Ph.D., MBA**

## doc. Ing. Dagmar Bařinová, Ph.D., dept. 117, dagmar.barinova@vsb.cz

* Personal bankruptcy and its economic and social impact on the debtor
* Insolvency proceedings from the position of the business entity

## prof. Dr. Mgr. Ing. Alexander Bělohlávek, dept. 119, alexander.belohlavek@vsb.cz

* Economic criteria for determining the method for settlement of international commercial disputes
* The method of settlement of disputes as qualitative aspect for assessing the value of a commercial case
* Center of Main Interest (COMI) from the viewpoint of European law as a means for determining business management strategy
* Risk factors in managing business from the perspective of the application of the Rome I Regulation
* Risk factors in managing business from the perspective of the application of the Brussels I Regulation

## doc. Dr. Ing. Pavel Blecharz, dept. 152, pavel.blecharz@vsb.cz

* Use of Design of Experiments (Taguchi Approach) in Service Industry
* Use of advanced quality methods in product improvement

## doc. Ing. Václav Friedrich, Ph.D., dep. 151, vaclav.friedrich@vsb.cz

* Measuring the competitiveness and performance of the business using advanced statistical methods
* Analysis and modelling of customer satisfaction using advanced statistical methods
* Analysis of individual and business attitudes towards sustainable development, the use of alternative energy sources and waste management

## doc. Ing. Martina Halásková, Ph.D., dept. 153, martina.halaskova@vsb.cz

* Possibilities of using e-government to the management of public sector (public administration) institutions

## prof. Ing. Jana Hančlová, CSc., dept. 157, jana.hanclova@vsb.cz

* Evaluation of the sectors efficiency in terms of energy consumption and emission reduction
* Improving business performance

## prof. Ing. Petra Horváthová, Ph.D., MBA, dept. 115, petra.horvathova@vsb.cz

* Human resource management as a tool for increasing competitiveness of the organization
* Management of key positions and employees
* Application of talent management system in the enterprise
* Burnout syndrome and its impact on work and personal life

## doc. Ing. Lenka Kauerová, CSc., dept. 116, lenka.kauerova@vsb.cz

* Measurement of effects of CRM concept implementation
* Cultural dimension and their significance in international trade
* CRM as elements of modern marketing
* Creativity and effectiveness of marketing communication
* Systemic approach to customer oriented management

## doc. PhDr. ThDr. Lucjan Klimsza, Ph.D., dept. 115, lucjan.klimsza@vsb.cz

* The ethical theory of light and shadow site of leadership
* Descriptive ethics as a methodological approach to business ethics

## doc. RNDr. Jaroslav Koutský, Ph.D., dept. 116, Jaroslav.Koutsky@ujep.cz

* Economic specialization in organisational and spatial perspective
* Transformation and restructuring processes on selected industries or economic subjects

## doc. Ing. Michal Krajňák, Ph.D., MBA, LL.M, dept. 117, michal.krajnak@vsb.cz

* Quantification of the tax burden for small and medium-sized enterprises in the environment of the tax system of the Czech Republic
* Evaluation of the influence of tax and Levy burden on labor costs of the company in the business environment of the Czech Republic

## doc. Ing. Lukoszová Xenie, Ph.D., dept. 152, xenie.lukoszova@vsb.cz

* Supply chain management
* Modern purchasing directions in the enterprise

## doc. Ing. Marie Mikušová, Ph.D., dept. 115, marie.mikusova@vsb.cz

* Application of the crisis management system in the enterprises

## prof. Mgr. Maciej Mitrega, PhD., dept. 116, maciej.mitrega@vsb.cz

* Building blocks of dynamic capabilities in Central and Eastern European (CEE) firms
* Building blocks of dynamic marketing capabilities – insights from industry
* Social sustainability in business strategies
* Power concepts and power dynamics in inter-organizational relationships
* Marketing capabilities of CEE companies in international markets
* Verification of possibilities for applying selected management methods in Central and Eastern European (CEE) firms

## doc. JUDr. Petr Mrkývka, Ph.D., dept. 119, petr.mrkyvka@vsb.cz

* Determination and diversification of public financial activity - impacts on legal regulation

## prof. Bogdan Oancea, Ph.D., bogdan.oancea@faa.unibuc.ro

* Predictive analytics models used in marketing
* Customer segmentation and predictive modeling

## prof. JUDr. Naděžda Rozehnalová, CSc., dept. 119, nadezda.rozehnalova@vsb.cz

* European Union – legal aspects of external trade regulations

## doc. Ing. Vojtěch Spáčil, CSc., dept. 116, vojtech.spacil@vsb.cz

* The antecedents of customer citizenship behaviour
* Intergenerational differences in consumer behaviour

## doc. Ing. Martin Svoboda, Ph.D., martin.svoboda@econ.muni.cz

* Structured financial products
* Investor behavior from the perspective of behavioral finance

## prof. Mehdi Toloo, Ph.D., dept. 152, mehdi.toloo@vsb.cz

* Robust data envelopment analysis
* Inverse data envelopment analysis
* Data selection in data envelopment analysis
* Discriminant analysis and data envelopment analysis
* Data envelopment analysis and big data
* Data envelopment analysis under uncertainty
* Machine learning and data envelopment analysis

## doc. Ing. Šárka Velčovská, Ph.D., dept. 116, sarka.velcovska@vsb.cz

* Consumer typology in the B2C market

## doc. Ing. Iveta Vrabková, Ph.D., dept. 153, iveta.vrabkova@vsb.cz

* Impact of IT implementation on the efficiency of social service/health service organizations
* Measuring the performance of the circular economy at the local level
* Socio-economic factors of technical efficiency of hospitals/outpatient clinics

## doc. Mgr. Ing. František Zapletal, Ph.D., dept. 157, frantisek.zapletal@vsb.cz

* Application of optimization and multi-criteria decision making methods at companies
* Efficiency at companies under risk and uncertainty
* Modelling the impacts of EU environmental policy on european companies

## prof. Dr. Ing. Zdeněk Zmeškal, dept. 154, zdenek.zmeskal@vsb.cz

* Application of the multi-attribute decomposition decision-making methods in management and business administration
* Game theory application in a companies decision-making
* Dynamical models in company management under risk, flexibility and interactivity
* Real option and real game option valuation and investment models
* Application of fuzzy-stochastic models in management and business administration
* Application of the ESG (economy, social, government) approaches and methods in the decision-making of companies and institutions
* Analysis of company and sector financial performance
* Forecasting company and sector performance
* Game theory application in investment and valuation

# Thesis themes Academic Year 2024/2025

**Study Programme: Finance**

**Study program guarantor: prof. Ing. Tomáš Tichý, Ph.D.**

## doc. Ing. Miroslav Čulík, Ph.D., dept. 154, +420 597 322 471, miroslav.culik@vsb.cz

* Advanced applications of real options in financial decision-making of companies

## prof. Dr. Ing. Dana Dluhošová, dept. 154, +420 597 322 361, dana.dluhosova@vsb.cz

* Application of value-based measurements in performance analysis of companies and comparation with sectors

## doc. RNDr. Ing. Miloš Kopa, Ph.D., dept. 154, +420 597 322 015, milos.kopa@vsb.cz

* Advanced dynamic portfolio optimization models with stochastic dominance constraints
* Investor's preference modelling with stochastic dominance

## doc. Ing. Michal Krajňák, Ph.D., MBA, LL.M, dept. 117, +420 597 322 222, michal.krajnak@vsb.cz

* Impact of tax legislation changes on financial decision making of business entity
* Influence of tax burden on location of permanent establishment of business entity
* Macroeconomic context of parameter changes in selected tax institute

## doc. Ing. Aleš Kresta, Ph.D., dept. 154, +420 597 322 173, ales.kresta@vsb.cz

* Beyond random walks: Profitable prediction models in financial markets
* Forecasting of firm specific variables using hybrid models
* Financial time series modelling and prediction
* Risk modelling and measurement: Advanced techniques and applications
* Advanced techniques for portfolio optimization problems
* Behavioral biases in financial decision-makingDevelopment of advanced risk measurement methods

## doc. Ing. Aleš Melecký, Ph.D., dept. 114, +420 597 322 153, ales.melecky@vsb.cz

* Influence of spatial differences on property prices
* Determinants of housing prices in Asian countries
* Behavioral biases in investor behavior
* Financial stability and macroprudential policy
* Impact of sentiment/confidence on the financial markets

## Dr. Sergio Ortobelli, dept. 154, +420 597 322 015, sergio.ortobelli@vsb.cz

* Credit risk management of large portfolios
* Optimization models with applications at financial markets

## doc. Ing. Petr Seďa, Ph.D., dept. 151, petr.seda@vsb.cz

* Advanced models of financial markets volatility
* Predictability of asset returns in the context of the efficient market hypothesis and adaptive market hypothesis
* Integration of financial markets in the context of global shocks

## prof. Ing. Tomáš Tichý, Ph.D., dept. 154, +420 597 322 401, tomas.tichy@vsb.cz

* Analysis of Corporate Risk Management
* Analysis of Selected Banking Risks
* Estimation and Management of Selected Risks in Insurance
* Optimization Techniques in Corporate Finance
* Modeling and Analysis of Interaction between Financial Markets and Real Sector
* Analysis of Systemic Risks using Market Based Measures

# Doctoral Thesis Topics Academic Year 2024/2025

**Study programme: Systems Engineering and Informatics**

**Study program guarantor: prof. Ing. Jana Hančlová, CSc.**

## doc. Ing. Václav Friedrich, Ph.D., dept. 151, +420 597 322 503, vaclav.friedrich@vsb.cz

* Statistical Analysis of Multidimensional Data, Multidimensional Models of Economic and Social Indicators
* Computational Modeling of Systems using Statistical, Numerical and Logical Methods (cs, en)

## prof. Ing. Jana Hančlová, CSc., dept. 157, +420 597 322 285, jana.hanclova@vsb.cz

* Econometric modelling of changes in energy prices for households or selected sectors.
* Modelling and optimization of energy consumption and emission reduction

## doc. Dr. Ing. Miroslav Hudec, dept. 157, +420 597 322 318, miroslav.hudec@vsb.cz

* Modelling asymmetry in evaluating alternatives and conditions by computational intelligence in economic processes
* Mining and interpreting relevant linguistic summaries from multidimensional and heterogeneous environmental data

## prof. Ing. Dušan Marček, CSc., dept. 155, +420 597 322 378, dusan.marcek@vsb.cz

* Statistical and Computational Intelligence models to Predict Chaotic High- frequency Financial Data
* Creating OLAP systems for analysis and forecasting of econometric models
* Convolutional neural networks in the prediction of economic time series
* Research of methods, tools and algorithms of 0LAP technology in the field of Business Intelligence of enterprises
* ITIL – Service improvement using Convolutional Neural Networks

## prof. RNDr. Václav Snášel, CSc., rector, +420 597 325 279, vaclav.snasel@vsb.cz

* Multiple-criteria decision analysis

## prof. Mehdi Toloo, Ph.D., mehdi.toloo@vsb.cz

* Performance Evaluation under Uncertainty
* Risk Management & Data Envelopment Analysis

## doc. Mgr. Ing. František Zapletal, Ph.D., dept. 157, +420 597 322 255, frantisek.zapletal@vsb.cz

* Stochastic and fuzzy optimization of economic processes
* Application of multi-criteria decision making methods under risk and uncertainty in economics and IT
* Impacts of emissions trading on competitiveness of EU companies
* Supplier portfolio optimization under uncertainty
* Dynamic maturity model of a company
* Benchmarking of companies using multi-criteria decision making methods with dependencies among criteria in multi-period environment

## prof. Dr. Ing. Zdeněk Zmeškal, dept. 154, +420 596 992 129, zdenek.zmeskal@vsb.cz

* Application of fuzzy-stochastic models (portfolio theory, derivatives valuation, dynamic programming)
* Application of the multi-attribute decomposition decision-making methods
* Application of the advanced decision-making models under risk (options), risk and flexibility (real options), risk, flexibility and interaction (real game option)