

Study plan

Name of study plan: kombi - Project and Process Innovation Management, N0413A050002 Projektové řízení inovací

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Innovation Project Management

Type of study: Follow-up master combined

Required credits: 120

Elective courses credits: 0

Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses

Minimal number of credits of the block: 69

The role of the block: Z

Code of the group: N0413-K-BASE

Name of the group: Povinné předměty, kombinovaná forma, N0413

Requirement credits in the group: In this group you have to gain at least 69 credits

Requirement courses in the group:

Credits in the group: 69

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (Gar.)	Completion	Credits	Scope	Semester	Role
32MC-K-CORI-01	Controlling Arnošt Klesla Arnošt Klesla Arnošt Klesla (Gar.)	Z,ZK	4	12B		Z
32MC-K-DIPR-01	Diploma Thesis Arnošt Klesla, Otakar Schlossberger, Vladimíra Šilhánková, Martin Maštálka, Tomáš Sadílek, Petr Fanta, Zuzana Dvořáková, Lucie Plzáková, Radim Bureš, Dagmar Skokanová Dagmar Skokanová (Gar.)	Z	12			Z
32MC-K-EKON-01	Economics František Hřebík, Jaroslav Krameš, Martin Petříček Martin Petříček Martin Petříček (Gar.)	Z,ZK	6	24B		Z
32MC-K-FIPR-01	Financial Law Jana Brodani Jana Brodani Jana Brodani (Gar.)	ZK	3	10B		Z
32MC-K-FRPI-01	Financial Management of Corporate Innovation Martin Petříček, Vojtěch Menzl Martin Petříček Martin Petříček (Gar.)	Z,ZK	3	10B		Z
32MC-K-MKIN-01	Marketing of Innovations Tomáš Sadílek, Lenka Nováková Tomáš Sadílek Tomáš Sadílek (Gar.)	Z,ZK	4	12B		Z
32MC-K-PJDP-01	Diploma Thesis Project Petr Vymětal, Petr Studnička Petr Studnička Petr Vymětal (Gar.)	Z	0	2B		Z
32MC-K-PRIS-01	Designing of Information Systems Jiří Kaiser Jiří Kaiser Jiří Kaiser (Gar.)	Z,ZK	6	20B		Z
32MC-K-PRIN-01	Innovation Project Management Marek Jemala Marek Jemala Marek Jemala (Gar.)	Z,ZK	6	18B		Z
32MC-K-ROAN-02	Decision Analysis Jiří Zmatlík Jiří Zmatlík Jiří Zmatlík (Gar.)	Z,ZK	4	12B		Z
32MC-K-RINV-01	Innovation Management Petr Fanta, Petra Jílková Petra Jílková Petra Jílková (Gar.)	Z,ZK	4	10B		Z
32MC-K-STAN-01	Statistical Analysis Tomáš Löster Tomáš Löster Tomáš Löster (Gar.)	Z,ZK	5	24B		Z
32MC-K-STRR-01	Strategic Management Vladimíra Šilhánková, Tomáš Sadílek, Štěpán Chalupa Vladimíra Šilhánková Tomáš Sadílek (Gar.)	Z,ZK	6	20B		Z
32MC-K-SRLZ-01	HR Management Systems Zuzana Dvořáková, Kateřina Tomešková Zuzana Dvořáková Zuzana Dvořáková (Gar.)	Z,ZK	3	10B		Z
32MC-K-ZUDR-01	Principles of Sustainability Michael Pondělíček Michael Pondělíček Michael Pondělíček (Gar.)	ZK	3	10B		Z

Characteristics of the courses of this group of Study Plan: Code=N0413-K-BASE Name=Povinné předměty, kombinovaná forma, N0413

32MC-K-CORI-01	Controlling Controlling is a method of effective management oriented towards the future, with a preference for an ex-ante approach. Controlling management is focused on results according to the requirements for managing a company by value. VBM, active controlling is a prerequisite for a strategic approach to planning and maintaining the financial health of the company, while meeting the requirements of investors for a return on invested capital. Operational controlling is a prerequisite for liquidity and ensuring the solvency of the company	Z,ZK	4
32MC-K-DIPR-01	Diploma Thesis	Z	12
32MC-K-EKON-01	Economics	Z,ZK	6
32MC-K-FIPR-01	Financial Law	ZK	3
32MC-K-FRPI-01	Financial Management of Corporate Innovation	Z,ZK	3
32MC-K-MKIN-01	Marketing of Innovations	Z,ZK	4
32MC-K-PJDP-01	Diploma Thesis Project	Z	0
32MC-K-PRIS-01	Designing of Information Systems Fundamental terms, information systems architecture, basic types of software applications for information system of enterprise, information system lifecycle, approaches to information system development, management information systems, web audit, business process modeling using BPMN, UML and others, information system modeling - UML and data modeling using ER diagrams	Z,ZK	6
32MC-K-PRIN-01	Innovation Project Management Successful innovation requires much more than the management of individual aspects of the innovation process within the institution; it also requires a systemic project approach that deals with the interactions between various stakeholders, their goals, objectives, markets, and organizations. Traditional innovation management usually focuses on goals and procedures for innovation planning, usually on implementation and control within the institution. Procedures are often repeated. This creates a framework that can limit project team members to working only within the set of rules and measures of the institution. However, most innovation projects require an individual approach so that project team members are highly flexible, innovative, and creative. Each innovation project is individual and requires an individual approach. A clear strategy in the area of innovation, a supportive corporate culture, a focus on the socio-ecological goals of innovation, constant study of trends and risks, an appropriate budget, Change- and Risk management, and adequate motivation for innovation are often the basic prerequisites for an innovation project. The main goal of this course is to acquaint students with the key specifics of innovation projects, Innovation management, the implementation and commercialization of innovations, and related intellectual property protection. After completing the course, the student should answer the following framework topics: how to identify and manage the framework of an innovation project, create a project breakdown structure, create a project innovation plan, create a project budget, define and allocate resources for innovation, manage project development, identify and manage innovation risks, and understand the sourcing process for the project. How to adequately protect intellectual property and how to implement and commercialise innovations. The course includes approaches, experience, and examples of the best innovative companies.	Z,ZK	6
32MC-K-ROAN-02	Decision Analysis The aim of the subject Decision Analysis is to acquaint students with the basic methods of decision-making in technical and economic, to use appropriate tools within decision-making processes.	Z,ZK	4
32MC-K-RINV-01	Innovation Management	Z,ZK	4
32MC-K-STAN-01	Statistical Analysis The course builds on the introductory courses of statistics and prefaces slightly advanced statistical analysis methods.	Z,ZK	5
32MC-K-STRR-01	Strategic Management The subject is focused on strategic planning and management, including the necessary contexts and links, as one of the main tools for long-term planning and direction of the organization as a whole or part of it (enterprise or institution of any type or even municipality, region or state). As part of teaching the subject, relevant case studies from practice will be used. In the center of attention are questions of competitiveness, competitive advantages, changes in the configuration of business processes and their influence on the process of integration of the Czech economy and Czech companies into global trade.	Z,ZK	6
32MC-K-SRLZ-01	HR Management Systems The course includes personnel/human resource management concepts, policies, and practices. The objective is to lecture and train personnel/HRM practices applied by employers with a good reputation in the labor market. Contents cover managerial role and HR department role, HRM systems, personnel/HR planning, recruitment, selection and orientation, training and development, performance management, compensation and benefits, the quality of work life, collective labor relations and social dialogue, career development, and talent management.	Z,ZK	3
32MC-K-ZUDR-01	Principles of Sustainability	ZK	3

Name of the block: Povinné předměty zaměření

Minimal number of credits of the block: 24

The role of the block: PZ

Code of the group: N0413-K-601

Name of the group: Povinně volitelné předměty oborového zaměření, 601 - Project and Process management, N0413

Requirement credits in the group: In this group you have to gain at least 24 credits

Requirement courses in the group:

Credits in the group: 24

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
32ME-K-AGBC-01	Agile BootCamp Petr Fanta, Dagmar Skokanová, Petra Jílková, Pavel Mužik Petra Jílková Petra Jílková (Gar.)	KZ	3	24B		PZ
32ME-K-BPMN-01	Business Process Management Petra Šeráková Petra Šeráková Petra Šeráková (Gar.)	Z,ZK	6	20B		PZ
32ME-K-LNIN-01	Lean Manufacturing Innovation Marek Jemala Marek Jemala Marek Jemala (Gar.)	Z,ZK	3	10B		PZ

32ME-K-PTMN-01	Project Technology Management <i>Marek Jemala Marek Jemala Marek Jemala (Gar.)</i>	Z,ZK	6	20B	PZ
32ME-K-PPMS-01	Standards of Project and Process Management <i>Petr Fanta Petr Fanta Petr Fanta (Gar.)</i>	Z,ZK	6	20B	PZ

Characteristics of the courses of this group of Study Plan: Code=N0413-K-601 Name=Povinně volitelné předměty oborového zaměření, 601 - Project and Process management, N0413

32ME-K-AGBC-01	Agile BootCamp Agile Bootcamp course teaches students the fundamentals of Design Thinking and other agile innovation principles. The course introduces three methods that work well together within the same cross-functional team: Design Thinking, Lean Startup and Agile across teams. In the main part, it will offer the right tools and techniques for the design and implementation of Design Sprints, including a practical test of the entire process.	KZ	3		
32ME-K-BPMN-01	Business Process Management	Z,ZK	6		
32ME-K-LNIN-01	Lean Manufacturing Innovation After completing the course, the student should be familiar with the following framework topics: Define the main meaning and basic functions of innovation project management, with a focus on lean manufacturing applications within the company. Explain the relationships of Lean management and innovation project management to the main departments of the company. Characterize pre-production, production, and manufacturing processes, as well as related lean manufacturing innovation processes. Explain the procedure for creating an innovation strategy and innovation project with a focus on Lean. Clarify the importance of joint planning/forecasting of new products, services and production technologies in the company. Etc.	Z,ZK	3		
32ME-K-PTMN-01	Project Technology Management Technology project management means not only decisions about one's own technological research, innovative cooperation, or technology transfer. Technological innovations, especially in production, have long tied up company resources, and poor decisions can pose significant financial problems for most companies. Therefore, it is necessary to examine the preparatory, implementation, and commercial activities of technology management in a more comprehensive form. Technology project management is more goal-oriented, time-bound, and has a project organizational structure and budget. After completing the course, students should answer the following framework topics: define the nature, importance, and key functions of project technology management with a focus on the analysis of technological trends, risks, and opportunities, innovation radar, and technology assessment. Explain the relationships of business management to the development of the product, production, and service technologies. Characterize the process of technological forecasts, foresight, and creation of the technology strategy of the company. Explain creating a project plan for implementing new technology. Clarify the importance of the necessary protection of technological intellectual property and the need to commercialize their own technologies at the level of industry, region, or state.	Z,ZK	6		
32ME-K-PPMS-01	Standards of Project and Process Management The subject acquaints students with good experience in the field of standards of project management After completing the course, students will be prepared to pass the international professional examinations.	Z,ZK	6		

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 27

The role of the block: PV

Code of the group: N0413-K-SKUP1

Name of the group: Povinně volitelné předměty - skupina 1:Technické předměty, N0413, kombinovaná forma

Requirement credits in the group: In this group you have to gain at least 9 credits

Requirement courses in the group:

Credits in the group: 9

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
32MC-K-HVVT-01	Technology Assessment <i>Karel Mráček Karel Mráček Karel Mráček (Gar.)</i>	ZK	3	10B		PV
32ME-K-ISAP-01	Introduction to SAP S/4 HANA <i>Miloš Ulman Miloš Ulman Miloš Ulman (Gar.)</i>	Z	3			PV
32MC-K-KSYS-01	Communication Systems and Networks <i>Dušan Maga Dušan Maga Dušan Maga (Gar.)</i>	ZK	3	10B		PV
32MC-K-PRDO-01	Transportation Engineering Projects <i>Helena Bínová Helena Bínová Helena Bínová (Gar.)</i>	ZK	3	10B		PV
32MC-K-ROBO-01	Robotics <i>Olga Štěpánková, Martin Macaš, Jaromír Doležal, Jindřich Adolf Jaromír Doležal Olga Štěpánková (Gar.)</i>	Z,ZK	6	20B		PV
32MC-K-TCHM-01	Technologie pro Smart Cities <i>Martin Maštálka Martin Maštálka Martin Maštálka (Gar.)</i>	ZK	3	10B		PV
32MC-K-TSMC-01	Smart Cities Technologies <i>Martin Maštálka</i>	ZK	3	10B		PV

Characteristics of the courses of this group of Study Plan: Code=N0413-K-SKUP1 Name=Povinně volitelné předměty - skupina 1:Technické předměty, N0413, kombinovaná forma

32MC-K-HVVT-01	Technology Assessment	ZK	3		
32ME-K-ISAP-01	Introduction to SAP S/4 HANA	Z	3		
32MC-K-KSYS-01	Communication Systems and Networks	ZK	3		
32MC-K-PRDO-01	Transportation Engineering Projects	ZK	3		
32MC-K-ROBO-01	Robotics	Z,ZK	6		
32MC-K-TCHM-01	Technologie pro Smart Cities The subject Technology for smart cities introduces students to the cross-cutting issues of smart cities, the preparation of the Smart City concept and its planning procedure and indicators.	ZK	3		

32MC-K-TSMC-01 Smart Cities Technologies	ZK	3
The subject Technology for smart cities introduces students to the cross-cutting issues of smart cities, the preparation of the Smart City concept and its planning procedure and indicators.		

Code of the group: N0413-K-601-SKUP3

Name of the group: Povinně volitelné předměty - skupina 3:Odborné kompetence

Requirement credits in the group: In this group you have to gain at least 18 credits

Requirement courses in the group:

Credits in the group: 18

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
32ME-K-ADFM-01	Advanced Topics in Financial Management Helmuth Yesid Arias Gomez Helmuth Yesid Arias Gomez Helmuth Yesid Arias Gomez (Gar.)	Z,ZK	3	10B		PV
32MC-K-ENAR-01	Environmental Aspects of Regional Development Michael Pondělíček Michael Pondělíček Michael Pondělíček (Gar.)	ZK	3	10B		PV
32MC-K-HOPO-01	Economic Policy Jan Mládek Jan Mládek Jan Mládek (Gar.)	Z,ZK	3	10B		PV
32ME-K-MINE-01	Management in International Environment Vincent Blaise Montenero Vincent Blaise Montenero Vincent Blaise Montenero (Gar.)	Z,ZK	3	10B		PV
32ME-K-MAPM-01	Modern Approaches in Project Management Oldřich Bronec Oldřich Bronec Oldřich Bronec (Gar.)	Z,ZK	3	10B		PV
32MC-K-OTIK-01	Reflections of Technical Innovations in Culture Kateřina Tomešková Kateřina Tomešková Kateřina Tomešková (Gar.)	ZK	3	10B		PV
32MC-K-PMAG-01	Agile Product Management Petra Jílková Petra Jílková Petra Jílková (Gar.)	Z,ZK	3	10B		PV
32MC-K-PJVS-01	Production Systems Design Oldřich Bronec Oldřich Bronec Oldřich Bronec (Gar.)	Z,ZK	6	20B		PV
32MC-K-IND4-01	Industry 4.0 Jan Mládek Jan Mládek Jan Mládek (Gar.)	Z,ZK	3	10B		PV
32MC-K-REST-01	Case Studies of Innovation Projects in the Regions Vladimíra Šilhánková Vladimíra Šilhánková Vladimíra Šilhánková (Gar.)	KZ	3	10B		PV
32MC-K-RGIS-01	Regional Studies Vladimíra Šilhánková Vladimíra Šilhánková Vladimíra Šilhánková (Gar.)	ZK	3	10B		PV
32MC-K-SDES-01	Service Design Petra Jílková Petra Jílková Petra Jílková (Gar.)	Z,ZK	3	10B		PV
32ME-K-6SIG-02	Six Sigma Tomáš Macák Tomáš Macák Tomáš Macák (Gar.)	Z,ZK	3	10B		PV
32MC-K-SMCI-01	Smart Cities Martin Maštálka	ZK	3	10B		PV
32MC-K-SVRG-01	Social Relations in the Regions Lucie Plzáková, Petr Studnička Petr Studnička Lucie Plzáková (Gar.)	Z,ZK	3	10B		PV
32ME-K-SENM-01	Strategies of Entering New Markets Vincent Blaise Montenero Vincent Blaise Montenero Vincent Blaise Montenero (Gar.)	Z,ZK	3	10B		PV
32MC-K-UZMN-01	Territorial Management Planning Vladimíra Šilhánková Vladimíra Šilhánková Vladimíra Šilhánková (Gar.)	ZK	6	20B		PV
32MC-K-VSČR-01	Public Administration in the Czech Republic Radim Bureš Radim Bureš Radim Bureš (Gar.)	ZK	3	10B		PV

Characteristics of the courses of this group of Study Plan: Code=N0413-K-601-SKUP3 Name=Povinně volitelné předměty - skupina 3:Odborné kompetence

32ME-K-ADFM-01 Advanced Topics in Financial Management	Z,ZK	3
During the course, the strategies for recognizing the financial performance of firms will be studied. The market information, drawn from the transactions made at the financial markets, will be combined with firm data. The analysis of fixed income is focused on the analysis of bond structure of payoffs, the process of pricing, the plotting of yield curves, and the appraisal of the term structure of interest rates. Previously, the definition of spot and forward rates must be established. The course aims at overhaul the path research of the portfolio theory and recognize the main financial models intended to manage the assets. The exercises and theoretical perspective review a diversity of strategies developed for assigning a portfolio of investments, which combine assets of diverse degrees of risk, underpinning the position in accordance with the diversification principle. This overview starts with the pioneering Markowitz contribution; the course also analyzes the Merton Miller model of irrelevance of the equity-debt composition for the corporate structure of capital. The analysis also includes the Sharpe CAPM model. The course also tackles the methodologies of valuation intended to quantify the market value of companies.		
32MC-K-ENAR-01 Environmental Aspects of Regional Development	ZK	3
32MC-K-HOPO-01 Economic Policy	Z,ZK	3
The subject builds on the knowledge acquired in basic courses on economics. It introduces students to the system of economic policies as they are applied in the Czech Republic, the European Union and the world. They will thus gain knowledge about a wide range of economic policies implemented in the Czech Republic and in the European Union, from the perspective of theory and practice, politics and economics.		
32ME-K-MINE-01 Management in International Environment	Z,ZK	3
Go through several situations facing a new manager		
32ME-K-MAPM-01 Modern Approaches in Project Management	Z,ZK	3

32MC-K-OTIK-01	Reflections of Technical Innovations in Culture	ZK	3
The course is intended for students of the Master's study program Project Management of Innovations. The teaching is aimed at gaining a wide range of knowledge from the field of innovation processes, for the understanding and internalization of which a deep understanding of the connections between science and culture is an absolutely key.			
32MC-K-PMAG-01	Agile Product Management	Z,ZK	3
32MC-K-PJVS-01	Production Systems Design	Z,ZK	6
The purpose of the course is to become familiar with: Basic concepts of production and operational management Significant sectors of industrial production and operation of complex technological systems The nature, construction and design of industrial products and the function of complex technological systems The role of human and technological resources in production and operation The issue of material flows and logistics By managing supply purchasing and supply chains Supporting processes in production or operation, maintenance of machines and equipment Production or operation management: planning, organizing, securing resources, leading, controlling Design, innovation and re-engineering of manufacturing or operational systems and processes The issue of production, or operational economics and economic metrics, the KPI system The issue of some current trends, such as automation, robotization, digitalization, internetization, artificial intelligence, personalization, internationalization, localization The issue of complex systems of modern production, such as the Toyota Production System, Lean Management and others Issues of quality management, environmental protection, environmental, material and energy sustainability, circular economy, hygiene and occupational safety, social responsibility in production Issues of change production and operational management			
32MC-K-IND4-01	Industry 4.0	Z,ZK	3
I. Annotation The subject "Industry 4.0" deals with the topic of the fourth industrial revolution, explains concepts, terms and trends in this area. It deals with the history of industrial revolutions, current trends as well as individual technological breakthroughs that are typical for Industry 4.0. It analyzes the effects of "Industry 4.0" on the economy and society as a whole. Last but not least, it deals with the role of the state in the creation of economic and industrial policy, the need for which is generated by "Industry 4.0".			
32MC-K-REST-01	Case Studies of Innovation Projects in the Regions	KZ	3
32MC-K-RGIS-01	Regional Studies	ZK	3
32MC-K-SDES-01	Service Design	Z,ZK	3
32ME-K-6SIG-02	Six Sigma	Z,ZK	3
32MC-K-SMCI-01	Smart Cities	ZK	3
32MC-K-SVRG-01	Social Relations in the Regions	Z,ZK	3
32ME-K-SENM-01	Strategies of Entering New Markets	Z,ZK	3
The choice to internationalize; the various entry modes; impact of international activity on the business plan; the export plan; the marketing plan; the implementation; relations with partners; follow up and the results.			
32MC-K-UZMN-01	Territorial Management Planning	ZK	6
32MC-K-VSČR-01	Public Administration in the Czech Republic	ZK	3

List of courses of this pass:

Code	Name of the course	Completion	Credits
32MC-K-CORI-01	Controlling	Z,ZK	4
Controlling is a method of effective management oriented towards the future, with a preference for an ex-ante approach. Controlling management is focused on results according to the requirements for managing a company by value. VBM, active controlling is a prerequisite for a strategic approach to planning and maintaining the financial health of the company, while meeting the requirements of investors for a return on invested capital. Operational controlling is a prerequisite for liquidity and ensuring the solvency of the company			
32MC-K-DIPR-01	Diploma Thesis	Z	12
32MCK-EKON-01	Economics	Z,ZK	6
32MCK-ENAR-01	Environmental Aspects of Regional Development	ZK	3
32MC-K-FIPR-01	Financial Law	ZK	3
32MC-K-FRPI-01	Financial Management of Corporate Innovation	Z,ZK	3
32MCK-HOPO-01	Economic Policy	Z,ZK	3
The subject builds on the knowledge acquired in basic courses on economics. It introduces students to the system of economic policies as they are applied in the Czech Republic, the European Union and the world. They will thus gain knowledge about a wide range of economic policies implemented in the Czech Republic and in the European Union, from the perspective of theory and practice, politics and economics.			
32MC-K-HVVF-01	Technology Assessment	ZK	3
32MC-K-IND4-01	Industry 4.0	Z,ZK	3
I. Annotation The subject "Industry 4.0" deals with the topic of the fourth industrial revolution, explains concepts, terms and trends in this area. It deals with the history of industrial revolutions, current trends as well as individual technological breakthroughs that are typical for Industry 4.0. It analyzes the effects of "Industry 4.0" on the economy and society as a whole. Last but not least, it deals with the role of the state in the creation of economic and industrial policy, the need for which is generated by "Industry 4.0".			
32MCK-KSYS-01	Communication Systems and Networks	ZK	3
32MCK-MKIN-01	Marketing of Innovations	Z,ZK	4
32MC-K-OTIK-01	Reflections of Technical Innovations in Culture	ZK	3
The course is intended for students of the Master's study program Project Management of Innovations. The teaching is aimed at gaining a wide range of knowledge from the field of innovation processes, for the understanding and internalization of which a deep understanding of the connections between science and culture is an absolutely key.			
32MC-K-PJDP-01	Diploma Thesis Project	Z	0
32MC-K-PJVS-01	Production Systems Design	Z,ZK	6
The purpose of the course is to become familiar with: Basic concepts of production and operational management Significant sectors of industrial production and operation of complex technological systems The nature, construction and design of industrial products and the function of complex technological systems The role of human and technological resources in production and operation The issue of material flows and logistics By managing supply purchasing and supply chains Supporting processes in production or operation, maintenance of machines and equipment Production or operation management: planning, organizing, securing resources, leading, controlling Design, innovation and re-engineering of manufacturing or operational systems and processes The issue of production, or operational economics and economic metrics, the KPI system The issue of some current trends, such as automation, robotization, digitalization, internetization, artificial intelligence, personalization, internationalization, localization The issue of complex systems of modern production, such as the Toyota Production System, Lean Management and others Issues of quality management, environmental protection, environmental, material and energy sustainability, circular economy, hygiene and occupational safety, social responsibility in production Issues of change production and operational management			

32MCK-PMAG-01	Agile Product Management	Z,ZK	3
32MCK-PRDO-01	Transportation Engineering Projects	ZK	3
32MCK-PRIN-01	Innovation Project Management	Z,ZK	6
Successful innovation requires much more than the management of individual aspects of the innovation process within the institution; it also requires a systemic project approach that deals with the interactions between various stakeholders, their goals, objectives, markets, and organizations. Traditional innovation management usually focuses on goals and procedures for innovation planning, usually on implementation and control within the institution. Procedures are often repeated. This creates a framework that can limit project team members to working only within the set of rules and measures of the institution. However, most innovation projects require an individual approach so that project team members are highly flexible, innovative, and creative. Each innovation project is individual and requires an individual approach. A clear strategy in the area of innovation, a supportive corporate culture, a focus on the socio-ecological goals of innovation, constant study of trends and risks, an appropriate budget, Change- and Risk management, and adequate motivation for innovation are often the basic prerequisites for an innovation project. The main goal of this course is to acquaint students with the key specifics of innovation projects, Innovation management, the implementation and commercialization of innovations, and related intellectual property protection. After completing the course, the student should answer the following framework topics: how to identify and manage the framework of an innovation project, create a project breakdown structure, create a project innovation plan, create a project budget, define and allocate resources for innovation, manage project development, identify and manage innovation risks, and understand the sourcing process for the project. How to adequately protect intellectual property and how to implement and commercialise innovations. The course includes approaches, experience, and examples of the best innovative companies.			
32MC-K-PRIS-01	Designing of Information Systems	Z,ZK	6
Fundamental terms, information systems architecture, basic types of software applications for information system of enterprise, information system lifecycle, approaches to information system development, management information systems, web audit, business process modeling using BPMN, UML and others, information system modeling - UML and data modeling using ER diagrams			
32MCK-REST-01	Case Studies of Innovation Projects in the Regions	KZ	3
32MCK-RGIS-01	Regional Studies	ZK	3
32MCK-RINV-01	Innovation Management	Z,ZK	4
32MCK-ROAN-02	Decision Analysis	Z,ZK	4
The aim of the subject Decision Analysis is to acquaint students with the basic methods of decision-making in technical and economic, to use appropriate tools within decision-making processes.			
32MCK-ROBO-01	Robotics	Z,ZK	6
32MCK-SDES-01	Service Design	Z,ZK	3
32MCK-SMCI-01	Smart Cities	ZK	3
32MCK-SRLZ-01	HR Management Systems	Z,ZK	3
The course includes personnel/human resource management concepts, policies, and practices. The objective is to lecture and train personnel/HRM practices applied by employers with a good reputation in the labor market. Contents cover managerial role and HR department role, HRM systems, personnel/HR planning, recruitment, selection and orientation, training and development, performance management, compensation and benefits, the quality of work life, collective labor relations and social dialogue, career development, and talent management.			
32MCK-STAN-01	Statistical Analysis	Z,ZK	5
The course builds on the introductory courses of statistics and prefaces slightly advanced statistical analysis methods.			
32MCK-STRR-01	Strategic Management	Z,ZK	6
The subject is focused on strategic planning and management, including the necessary contexts and links, as one of the main tools for long-term planning and direction of the organization as a whole or part of it (enterprise or institution of any type or even municipality, region or state). As part of teaching the subject, relevant case studies from practice will be used. In the center of attention are questions of competitiveness, competitive advantages, changes in the configuration of business processes and their influence on the process of integration of the Czech economy and Czech companies into global trade.			
32MCK-SVRG-01	Social Relations in the Regions	Z,ZK	3
32MCK-TCHM-01	Technologie pro Smart Cities	ZK	3
he subject Technology for smart cities introduces students to the cross-cutting issues of smart cities, the preparation of the Smart City concept and its planning procedure and indicators.			
32MCK-TSMC-01	Smart Cities Technologies	ZK	3
he subject Technology for smart cities introduces students to the cross-cutting issues of smart cities, the preparation of the Smart City concept and its planning procedure and indicators.			
32MCK-UZMIN-01	Territorial Management Planning	ZK	6
32MCK-VSCR-01	Public Administration in the Czech Republic	ZK	3
32MCK-ZUDR-01	Principles of Sustainability	ZK	3
32ME-K-6SIG-02	Six Sigma	Z,ZK	3
32ME-K-ADFM-01	Advanced Topics in Financial Management	Z,ZK	3
During the course, the strategies for recognizing the financial performance of firms will be studied. The market information, drawn from the transactions made at the financial markets, will be combined with firm data. The analysis of fixed income is focused on the analysis of bond structure of payoffs, the process of pricing, the plotting of yield curves, and the appraisal of the term structure of interest rates. Previously, the definition of spot and forward rates must be established. The course aims at overhaul the path research of the portfolio theory and recognize the main financial models intended to manage the assets. The exercises and theoretical perspective review a diversity of strategies developed for assigning a portfolio of investments, which combine assets of diverse degrees of risk, underpinning the position in accordance with the diversification principle. This overview starts with the pioneering Markowitz contribution; the course also analyzes the Merton Miller model of irrelevance of the equity-debt composition for the corporate structure of capital. The analysis also includes the Sharpe CAPM model. The course also tackles the methodologies of valuation intended to quantify the market value of companies.			
32ME-K-AGBC-01	Agile BootCamp	KZ	3
Agile Bootcamp course teaches students the fundamentals of Design Thinking and other agile innovation principles. The course introduces three methods that work well together within the same cross-functional team: Design Thinking, Lean Startup and Agile across teams. In the main part, it will offer the right tools and techniques for the design and implementation of Design Sprints, including a practical test of the entire process.			
32ME-K-BPMN-01	Business Process Management	Z,ZK	6
32ME-K-ISAP-01	Introduction to SAP S/4 HANA	Z	3
32ME-K-LNIN-01	Lean Manufacturing Innovation	Z,ZK	3
After completing the course, the student should be familiar with the following framework topics: Define the main meaning and basic functions of innovation project management, with a focus on lean manufacturing applications within the company. Explain the relationships of Lean management and innovation project management to the main departments of the company. Characterise pre-production, production, and manufacturing processes, as well as related lean manufacturing innovation processes. Explain the procedure for creating an innovation strategy and innovation project with a focus on Lean. Clarify the importance of joint planning/forecasting of new products, services and production technologies in the company. Etc.			
32ME-K-MAPM-01	Modern Approaches in Project Management	Z,ZK	3

32MEK-MINE-01	Management in International Environment Go through several situations facing a new manager	Z,ZK	3
32MEK-PPMS-01	Standards of Project and Process Management The subject acquaints students with good experience in the field of standards of project management After completing the course, students will be prepared to pass the international professional examinations.	Z,ZK	6
32MEK-PTMN-01	Project Technology Management Technology project management means not only decisions about one's own technological research, innovative cooperation, or technology transfer. Technological innovations, especially in production, have long tied up company resources, and poor decisions can pose significant financial problems for most companies. Therefore, it is necessary to examine the preparatory, implementation, and commercial activities of technology management in a more comprehensive form. Technology project management is more goal-oriented, time-bound, and has a project organizational structure and budget. After completing the course, students should answer the following framework topics: define the nature, importance, and key functions of project technology management with a focus on the analysis of technological trends, risks, and opportunities, innovation radar, and technology assessment. Explain the relationships of business management to the development of the product, production, and service technologies. Characterize the process of technological forecasts, foresight, and creation of the technology strategy of the company. Explain creating a project plan for implementing new technology. Clarify the importance of the necessary protection of technological intellectual property and the need to commercialize their own technologies at the level of industry, region, or state.	Z,ZK	6
32MEK-SENM-01	Strategies of Entering New Markets The choice to internationalize; the various entry modes; impact of international activity on the business plan; the export plan; the marketing plan; the implementation; relations with partners; follow up and the results.	Z,ZK	3

For updated information see <http://bilakniha.cvut.cz/en/FF.html>

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