

Study plan

Name of study plan: Project management, prezen ní forma, AR 2022/2023

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 full-time

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: 81

The role of the block: Z

Code of the group: PJM P 1S 22/23 PV

Name of the group: Povinné p edm ty, 1. sem. Project management, prezen ní forma,

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

Requirement courses in the group: In this group you have to complete at least 4 courses

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
G16E1401	Marketing Innovations	Z,ZK	6	2P+2C	Z	z
G16C1401	Innovation Marketing	Z,ZK	6	2P+2C		z
G16C1201	Project Management	Z,ZK	6	2P+2C		z
G63C1301	Corporate Financial Management	Z,ZK	6	2P+2C		z
G63C1102	Statistical Analysis	Z,ZK	6	2P+2C		z

Characteristics of the courses of this group of Study Plan: Code=PJM P 1S 22/23 PV Name=Povinné p edm ty, 1. sem. Project management, prezen ní forma,

G16E1401	Marketing Innovations	Z,ZK	6	The primary role of innovation in marketing is to gain new customers, improve goodwill, increase sales and profitability of the company. At the beginning of the innovation process, innovative marketing should help identify new market opportunities and risks and improve the research of customer needs. During developing a new product, innovation marketing is to ensure the constant involvement of customers and users in this process. And at the end of the innovation process, innovation marketing ensures the successful introduction of a new product, technology, and service to the target audience. Innovation marketing should therefore be present at all stages of the innovation process to ensure that customer and market orientation is in line with advances in products and technologies, which often lead to the application of new marketing approaches. We address these main aspects in this subject.		
G16C1401	Innovation Marketing	Z,ZK	6			
G16C1201	Project Management	Z,ZK	6			
G63C1301	Corporate Financial Management	Z,ZK	6	The course provides a comprehensive view of building the essential aspects of financial management of business processes and projects. Students have the opportunity to understand the main concepts, tools and methods of financial management of processes and projects and their use in decision-making practice. Substantial emphasis is placed on evaluating the financial performance of the company, evaluation and valuation of tangible and financial investment projects, working capital management, methods of financing the company, project financing, methods of financial planning and forecasting, and valuation techniques.		
G63C1102	Statistical Analysis	Z,ZK	6	The course builds on the introductory courses of statistics and prefaces slightly advanced statistical analysis methods.		

Code of the group: PJM P 2S 22/23 PV

Name of the group: Povinné p edm ty, 2. sem. Project management, prezen ní forma,

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

Requirement courses in the group: In this group you have to complete at least 5 courses

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
G63C2301	Controlling	Z,ZK	6	2P+2C	L	z
G63C2302	Financial Law	ZK	3	2P+0C		z
G63C2201	Microeconomic Theory	ZK	3	2P+0C	*	z
G00C3101	Diploma Thesis Project	Z	0	1P+0C		z
G16C2501	HR Management Systems	Z,ZK	6	2P+2C		z

Characteristics of the courses of this group of Study Plan: Code=PJM P 2S 22/23 PV Name=Povinné p edm ty, 2. sem. Project management, prezen ní forma,

G63C2301	Controlling	Z,ZK	6	Controlling methods are presented from the initial detection of deviations to advanced models of managerial decision support in strategic horizons in the context and against the background of the management of basic business processes with an emphasis on the processes determining the effect of added value in the company's activities. The tasks of controlling are systematically explained according to the time perspective in the scope of corporate strategies and operational management, including the role of the controller in the individual phases of management from analysis to reporting. The content of the course is also focused on the presentation of methods and management tools that can be used to manage individual components (entities) in mutual interaction, especially in the area of cost management. Examples of models and case studies and tasks are used to present the key principles of controlling in the company.		
G63C2302	Financial Law	ZK	3			
G63C2201	Microeconomic Theory	ZK	3	The course introduces the analysis of the theory of consumer, the theory of firm, and the market interactions of consumers and firms.		
G00C3101	Diploma Thesis Project	Z	0			
G16C2501	HR Management Systems	Z,ZK	6	The course is focused on the development of managerial skills in managing people in the organization. Through lectures and seminars, students will learn effective strategies, policies and practices for efficient people management in the organization and the main tasks of managers in various activities of people management in the organization.		

Code of the group: PJM P 3S 22/23 PV

Name of the group: Povinné p edm ty, 3. sem. Project management, prezen ní forma,

Requirement credits in the group: In this group you have to gain at least 21 credits

Requirement courses in the group: In this group you have to complete at least 4 courses

Credits in the group: 21

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
G63C3201		ZK	3	2P+0C	Z	z
G16C3103		Z,ZK	6	2P+2C		z
G16C3102	Innovation Management and Innovation Project	Z,ZK	6	2P+2C		z
G16C3101		Z,ZK	6	2P+2C	Z	z

Characteristics of the courses of this group of Study Plan: Code=PJM P 3S 22/23 PV Name=Povinné p edm ty, 3. sem. Project management, prezen ní forma,

G63C3201		ZK	3			
G16C3103		Z,ZK	6			
G16C3102	Innovation Management and Innovation Project	Z,ZK	6	Concepts of innovation, prerequisites and barriers to innovation, sources of innovation, strategic considerations of innovation, process innovation, product innovation, service innovation, a macroeconomic view of the role of innovation, organizational support and management of innovation, soft methods and techniques of innovation, systematic-analytical methods and techniques of innovation, economic aspects of innovation, intellectual property of innovation and legal aspects.		
G16C3101		Z,ZK	6			

Code of the group: PJM P 4S 22/23 PV

Name of the group: Povinné p edm ty, 4. sem. Project management, prezen ní forma

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

Requirement courses in the group: In this group you have to complete at least 2 courses

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
G00C4102	Diploma Thesis	Z	12			Z
G63C4401	Information System Design	Z,ZK	6	2P+2C		Z

Characteristics of the courses of this group of Study Plan: Code=PJM P 4S 22/23 PV Name=Povinné p edm ty, 4. sem. Project management, prezen ní forma

G00C4102	Diploma Thesis			Z		12
G63C4401	Information System Design			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

Name of the block: Povinné p edm ty zam ení

Minimal number of credits of the block: 18

The role of the block: PZ

Code of the group: PJM P 22/23 SP

Name of the group: Specializa ní p edm ty, Project management, prezen ní forma

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
G16E0201	Agile BootCamp	KZ	3	0P+2C		PZ
G16E2201	Modern Approaches in Project Management	Z,ZK	6	2P+2C	L	PZ
G16E0202	Project Technology Management	Z,ZK	6	2P+2C		PZ
G16E0501	Social Competences in Project and Process Management	Z	3	0P+2C		PZ
G16E1201	Standards of Project Management	Z,ZK	6	2P+2C		PZ

Characteristics of the courses of this group of Study Plan: Code=PJM P 22/23 SP Name=Specializa ní p edm ty, Project management, prezen ní forma

G16E0201	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. Teaching mode: completely online or hybrid, at a specific time/week during the semester.						
G16E2201	Modern Approaches in Project Management			Z,ZK		6
G16E0202	Project Technology Management			Z,ZK		6
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.						
G16E0501	Social Competences in Project and Process Management			Z		3
G16E1201	Standards of Project Management			Z,ZK		6
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.						

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 21

The role of the block: PV

Code of the group: PJM P 22/23 PVP

Name of the group: Povinn volitelné p edm ty, Project management, prezen ní forma

Requirement credits in the group: In this group you have to gain at least 12 credits

Requirement courses in the group:

Credits in the group: 12

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
G16C0101	Balanced Scorecard	Z,ZK	6	2P+2C	Z,L	PV
G16E2302	Business Process Management	Z,ZK	6	2P+2C		PV
127CP11	City Planning 11 <i>Ji í Kugl, Ivan Horký, Václav Jetel, Ji í Kupka Ji í Kugl Ji í Kugl (Gar.)</i>	ZK	2	2P	Z,L	PV
G63E3301	Economic and Financial Modelling	KZ	3	0P+2C		PV
G63E0201	Economics of Climate Change	Z,ZK	6	2P+2C		PV
G04E0201	English for Intercultural Communication	Z,ZK	6	0P+4C	Z,L	PV
G65C0202	Environmental Aspects of Regional Development	ZK	3	2P+0C		PV
G65E4101	European Union and Regional Policy	ZK	3	2P+0C		PV
G63E2301	Financial Markets and Risk Management	Z,ZK	6	2P+2C	L	PV
G63E0202	Green Transition	Z,ZK	6	2P+2C		PV
32-IPW-6	International Project Workshop	ZK	6	45B		PV
127XKRS	Landscape and Settlements <i>Ji í Kupka, Zuzana Pešková Ji í Kupka Ji í Kupka (Gar.)</i>	Z	2	2P	L	PV
G16E1302	Lean Manufacturing	Z,ZK	6	2P+2C		PV
G16E0102	Managing in an International Environment	Z,ZK	3	1P+1C		PV
G04E0202	Meetings and Negotiations in English	Z,ZK	6	0P+4C	L	PV
G63E4201	Monetary Economics and Policy	Z,ZK	6	2P+2C		PV
G66C0101	Reflections of Technical Innovations in Culture	ZK	3	2P+0C	L	PV
G00C4104	Practice	Z	6	180XH		PV
G16C0301	Lean Management Practice	ZK	3	0P+2C		PV
G16E0203	Project Innovation Management	Z,ZK	6	2P+2C		PV
G65C0103		Z,ZK	3	1P+1C		PV
G65E2301	Regional Development and Planning	Z,ZK	6	2P+2C	Z,L	PV
G16C0104	Solving Real World Problems	ZK	3	0P+2C		PV
G16C0201	Service Design	Z,ZK	3	0P+2C		PV
G16E3301	Six Sigma	ZK	3	0P+2C		PV
G65E1301	Smart Cities and Regions	Z,ZK	6	2P+2C		PV
G16E0401	Strategies of Entering New Markets	Z,ZK	3	1P+1C		PV
G65C0201	Territorial Management Planning	ZK	3	2P+0C		PV

Characteristics of the courses of this group of Study Plan: Code=PJM P 22/23 PVP Name=Povinn volitelné p edm ty, Project management, prezen ní forma

G16C0101	Balanced Scorecard	Z,ZK	6
G16E2302	Business Process Management	Z,ZK	6
127CP11	City Planning 11	ZK	2
Concepts in urban space design in history, form of the city, typology of urban space, philosophies behind, practices of urban space design in European cultural context, land-use, planning controls, preservation of cities, urban ecology, trends and policies in urban planning and regional development.			
G63E3301	Economic and Financial Modelling	KZ	3
The course is organized in 2 seminars weekly, 3 credits. Analyzing and solving models of optimal allocation of assets, management of risk, and Portfolio allocation			
G63E0201	Economics of Climate Change	Z,ZK	6
G04E0201	English for Intercultural Communication	Z,ZK	6
The seminar will focus on the importance of accuracy and comprehension in communication in a foreign language, and highlight cultural differences influencing communication, and examine the role of language means in intercultural negotiations. Outline of the subject: . Approaches to culture . Cultural and language context in communication . Intercultural theories and their influence on behaviour and language expression . International English as lingua franca . The most common mistakes as a cause of misunderstanding . Language practice and activities . Case studies on individual topics Language level: CEFR B2			
G65C0202	Environmental Aspects of Regional Development	ZK	3
G65E4101	European Union and Regional Policy	ZK	3
The course discusses developments in the EU and in the EU Regional Policy from the end of the Cold War until today. It focuses on relevant issues of the integration process. It is based on lectures, class discussions and presentations of various positions present in the debates (group projects / own positions). The objectives of the course are to explain a modern development of the EU, analyse key points in particular areas of integration and practise argumentation skills.			

G63E2301	Financial Markets and Risk Management	Z,ZK	6
The analysis of the management of financial risk recently tends towards strategies for hedging the portfolio, and for designing a investment strategy based on diversification. The course spans broad sections implementing the principles of variable income and fixed income. The Financial Models evolved rapidly from the inception of the Modern Theory of Portfolio. The original Mean - Variance analysis, the CAPM, The Black-Litterman model, the disruptive framework implicit in the Black Scholes model for pricing options and the Bob Merton's contribution, all of them represent theoretical breakthroughs in the field of finance. When tackling this study, solid statistical basis and advanced skills in Excel are required. The analysis of risk relies on Many of the models based on important benchmarks rooted in Merton's options theoretic approach and explains default in structural terms related to the market value of the firm's assets as compared to its debt obligations. Other model statistically decomposes observed risky debt prices into default risk premiums. The set of models pretends to measure the credit risk of a loan or a portfolio of loans. In this vein, the curse pursuits to simplify the technical details and analytics surrounding these models, while concentrating on their underlying economics and economic intuition. They learn to use market instruments and market analyses to design efficient investment and hedging strategies and methods for the company capital management hurled to financial markets.			
G63E0202	Green Transition	Z,ZK	6
Green transition is sometimes imagined as a technical question involving mostly energy production and industrial processes. Nonetheless, wider societal, economic and political contexts are indispensable to successful transformation. The course introduces different transition approaches focusing on such wider frameworks and stressing the interconnections between politics, markets, industry, and social changes. Theoretical concepts of transformation will then be linked to current reality in specific regions (with emphasis on but not limited to the EU).			
32-IPW-6	International Project Workshop	ZK	6
127XKRS	Landscape and Settlements	Z	2
The optional course presents selected chapters on landscape architecture and urbanism, focusing on two thematic blocks - garden art and settlements (urban and rural). It complements the series of compulsory and optional courses at Bachelor and Master level in Environmental Engineering and Architecture and Civil Engineering with various aspects, perspectives and complementary topics that were not covered in the compulsory and optional courses.			
G16E1302	Lean Manufacturing	Z,ZK	6
As a result of completing this course, the student should be able to: Describe and explain the main significance, meaning, and functions of innovation management with a focus on Lean production applications in the workplace. Explain the relationship between management, innovation management, and the main departments of the company. Characterize pre-production, production, and manufacturing processes and related Lean manufacturing innovation processes. Create an innovation strategy and an innovation project with a focus on Lean. Clarify the importance of joint planning/forecasting of upcoming Lean products, services, and production technologies in the company. Etc.			
G16E0102	Managing in an International Environment	Z,ZK	3
The preparatory phase. Implementation: knowledge transfer and possible adaptations. Strategic partnership and consequences on the cooperation. Relations with other foreign stakeholders. The DFI and its constraints. Parent company versus locals. Managing multi-cultural teams. Remote management. Expatriation. Managerial skills and competences. Knowing oneself and developing ones competences.			
G04E0202	Meetings and Negotiations in English	Z,ZK	6
English for Meetings and Negotiations is part of a series of courses for follow-up students focused on functional language. The course is intended for students at the upper intermediate level. The course focuses on a collaborative model of the English language intended for a range of business or business meetings and negotiations. Although the course is not primarily focused on confrontational negotiation and communication strategies, part of the explanation is devoted to strategies and language for preventing and coping with confrontational situations. The course is based on the modern, increasingly widespread model of "International English", ie international English understood as lingua franca. Listening materials work with recordings of native speakers of all English styles and focus on collocations and idiomatics of American and British English.			
G63E4201	Monetary Economics and Policy	Z,ZK	6
This course covers basic concepts from monetary economics, emphasizing how monetary policy can affect the domestic economy. It consists of two major parts. The first one starts with the definition of money, its functions, and monetary aggregates and leads to the inner workings of financial markets, particularly interest rate dynamics. The second one combines the practical conduct of monetary policy by central banks with the theoretical frameworks of what explains inflation in the long run and how monetary policy can stabilize the economy and inflation. The leading textbook is Mishkin (2022) listed with other optional readings below. There will be lectures and exercise sessions, where different problem sets based on lecture materials are solved together in class.			
G66C0101	Reflections of Technical Innovations in Culture	ZK	3
G00C4104	Practice	Z	6
The classification of the subject of professional practice is based on the decision of the MÚVS VUT during their studies to give students the opportunity to acquire quality skills and experience. MÚVS supports the establishment of a relationship between students and companies and emphasizes their mutual cooperation Part of the study plans is short-term professional internship of a pilot nature.			
G16C0301	Lean Management Practice	ZK	3
The aim of the course is to apply knowledge from the field of lean management and lean manufacturing acquired during the study to solve real problems from economic practice. According to the client's assignment, student teams solve the problem with the support of teachers who become their mentors.			
G16E0203	Project Innovation Management	Z,ZK	6
Successful innovation requires much more than managing individual aspects of the single innovation process inside an institution, but there is required a systemic project approach, which deals with interactions between different stakeholders, their goals, innovation, markets, and organizations. Traditional innovation management usually focuses on goals and procedures for innovation planning, implementation rules, and controlling. This creates a framework to confine project team members to operate within a set of rules and measures. However, most innovation projects require project team members to be innovative and creative. An obvious strategy also in innovation, supportive corporate culture, budget, and motivation to innovate are often the basic preconditions for an innovation project. The primary goal of this course is to acquaint students with the key specifics of project innovation, project innovation management, and related intellectual property protection. After completing the course, a student should answer the following framework topics: How to identify and manage the project innovation scope, build a project breakdown structure, create a project innovation plan, create the project budget, define and allocate resources for innovation, manage the project development, identify and manage project innovation risks, and understand the project procurement process.			
G65C0103		Z,ZK	3
G65E2301	Regional Development and Planning	Z,ZK	6
he goal is to understand the reason, mission and specifics of regional and municipal development in the context of European Union as well as Czech Republic, and of planning as a tool of development. Students should know the core European concepts of regional and municipal development. A particular attention will be paid to the Middle-European planning culture and planning system, which is rooted in the mutual interactions between spatial, urban, strategic and environmental planning. Students should perceive development from the perspectives of different stakeholders and professions, and understand the need of cooperation, participation and democracy in practice.			
G16C0104	Solving Real World Problems	ZK	3
The aim of the course is to apply knowledge from the field of economics and management acquired during the study to solve real problems from economic practice. According to the client's assignment, students solve the problem with the support of teachers who become their mentors.			
G16C0201	Service Design	Z,ZK	3
G16E3301	Six Sigma	ZK	3
The course is aimed at practical application of how the individual components (methods and techniques - mainly applied statistical methods and techniques) used in this approach and a common application of these components throughout the DMAIC cycle (Define, Measure, Analyze, Improve, Control).			
G65E1301	Smart Cities and Regions	Z,ZK	6
Smart Cities and Smart Regions study introduces students to the interdisciplinary issue Smart Cities, preparing concept SC and its planning and indicators.			

G16E0401	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.			
G65C0201	Territorial Management Planning	ZK	3

Code of the group: PJM P 22/23 PVT

Name of the group: Povinn volitelné technické p edm ty, prezen ní forma, Project management

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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
G77C0001	Technology Assessment	ZK	3	2P+0C	Z,L	PV
G77C0007	Communication Systems and Networks	ZK	3	2P+0C		PV
127LAHE	Landscape Heritage Ji í Kugl, Ji í Kupka, Pavel Holubec, Jan Hendrych Jan Hendrych Jan Hendrych (Gar.)	ZK	4	3C	Z,L	PV
G16E0103	Management in the Automotive Industry	Z,ZK	6	2P+2C		PV
G16C1302		Z,ZK	6	2P+2C		PV
G77C0003	Transportation Engineering Projects	ZK	3	2P+0C	Z,L	PV
G77C2011	Industry 4.0	Z,ZK	3	1P+1C		PV
G51C0401		Z	3	2P+0C		PV
G77C0008	Robotics	Z,ZK	6	2P+2C		PV
G77C0004	Smart Cities Technologies	ZK	3	2P+0C	Z,L	PV
127UKKO	Urban and Landscape Design Ji í Kupka, Zuzana Pešková, Ivan Vorel Ji í Kupka Zuzana Pešková (Gar.)	ZK	3	2P	L	PV
127USRM	Urban Structures and Urban Development Ji í Kugl, Ji í Kupka, Jan Mužík Jan Mužík Jan Mužík (Gar.)	ZK	5	4P	Z	PV
G77C0009	Information Security Management and Implementation	ZK	3	2P+0C		PV

Characteristics of the courses of this group of Study Plan: Code=PJM P 22/23 PVT Name=Povinn volitelné technické p edm ty, prezen ní forma, Project management

G77C0001	Technology Assessment	ZK	3
G77C0007	Communication Systems and Networks	ZK	3
127LAHE	Landscape Heritage Cultural, historical, natural, and ecological processes traditionally shape the human environment, our shared cultural landscape heritage. The course will reveal intrinsic values, functions, and character, and the appropriate conservation techniques and strategies for urban landscape heritage protection.	ZK	4
G16E0103	Management in the Automotive Industry	Z,ZK	6
G16C1302		Z,ZK	6
G77C0003	Transportation Engineering Projects	ZK	3
G77C2011	Industry 4.0 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".	Z,ZK	3
G51C0401		Z	3
G77C0008	Robotics	Z,ZK	6
G77C0004	Smart Cities Technologies The subject Technology for Smart Cities introduces students to the interdisciplinary problematics of smart cities and places it in the context of the technological, social and economic development of society.	ZK	3
127UKKO	Urban and Landscape Design The course introduces selected chapters from urban and landscape composition and the theory of urbanism as a basis for urban and landscape design (city image, city environment, perception, landscape composition, composed landscape, cultural landmarks, the phenomenon of the garden in the historical context, etc.). The aim of the course is a comprehensive view of urban and landscape design as a creation of the environment. A theoretical basis and a sound analysis of existing towns and landscapes are subsequently a prerequisite for successful practical design. This extends the content of the basic urban planning courses from the Bachelor's degree. Theoretical issues are complemented by examples from history and examples of various urban analyses. It focuses mainly on the development of the urban form of Prague, its selected districts (Dejvice, Karlín), aspects of their planning (regulatory commissions) and some specific issues (high-rise buildings). The basic set of lectures is complemented by several extension topics by invited external speakers.	ZK	3
127USRM	Urban Structures and Urban Development The course deals with the characteristic features of the city structure of the Czech Republic, individual types of human settlements, their importance in the structure and their urban structure and form. Students will learn to identify the characteristic features of cities and villages, their urban uniqueness, arrangement of spatial structure, functional composition and operational relationships. Analyze their external and internal image. To identify their landscape, urban and architectural values. Attention is also paid to the forms of urban development, i.e. both their overall growth and the regeneration or transformation of their existing parts. It also deals with the structure and composition of public areas of cities and landscapes, their transformations, and the protection of historical, cultural and urban values.	ZK	5
G77C0009	Information Security Management and Implementation	ZK	3

List of courses of this pass:

Code	Name of the course	Completion	Credits
127CP11	City Planning 11 Concepts in urban space design in history, form of the city, typology of urban space, philosophies behind, practices of urban space design in European cultural context, land-use, planning controls, preservation of cities, urban ecology, trends and policies in urban planning and regional development.	ZK	2
127LAHE	Landscape Heritage Cultural, historical, natural, and ecological processes traditionally shape the human environment, our shared cultural landscape heritage. The course will reveal intrinsic values, functions, and character, and the appropriate conservation techniques and strategies for urban landscape heritage protection.	ZK	4
127UKKO	Urban and Landscape Design The course introduces selected chapters from urban and landscape composition and the theory of urbanism as a basis for urban and landscape design (city image, city environment, perception, landscape composition, composed landscape, cultural landmarks, the phenomenon of the garden in the historical context, etc.). The aim of the course is a comprehensive view of urban and landscape design as a creation of the environment. A theoretical basis and a sound analysis of existing towns and landscapes are subsequently a prerequisite for successful practical design. This extends the content of the basic urban planning courses from the Bachelor's degree. Theoretical issues are complemented by examples from history and examples of various urban analyses. It focuses mainly on the development of the urban form of Prague, its selected districts (Dejvice, Karlín), aspects of their planning (regulatory commissions) and some specific issues (high-rise buildings). The basic set of lectures is complemented by several extension topics by invited external speakers.	ZK	3
127USRM	Urban Structures and Urban Development The course deals with the characteristic features of the city structure of the Czech Republic, individual types of human settlements, their importance in the structure and their urban structure and form. Students will learn to identify the characteristic features of cities and villages, their urban uniqueness, arrangement of spatial structure, functional composition and operational relationships. Analyze their external and internal image. To identify their landscape, urban and architectural values. Attention is also paid to the forms of urban development, i.e. both their overall growth and the regeneration or transformation of their existing parts. It also deals with the structure and composition of public areas of cities and landscapes, their transformations, and the protection of historical, cultural and urban values.	ZK	5
127XKRS	Landscape and Settlements The optional course presents selected chapters on landscape architecture and urbanism, focusing on two thematic blocks - garden art and settlements (urban and rural). It complements the series of compulsory and optional courses at Bachelor and Master level in Environmental Engineering and Architecture and Civil Engineering with various aspects, perspectives and complementary topics that were not covered in the compulsory and optional courses.	Z	2
32-IPW-6	International Project Workshop	ZK	6
G00C3101	Diploma Thesis Project	Z	0
G00C4102	Diploma Thesis	Z	12
G00C4104	Practice The classification of the subject of professional practice is based on the decision of the MÚVS VUT during their studies to give students the opportunity to acquire quality skills and experience. MÚVS supports the establishment of a relationship between students and companies and emphasizes their mutual cooperation. Part of the study plans is short-term professional internship of a pilot nature.	Z	6
G04E0201	English for Intercultural Communication The seminar will focus on the importance of accuracy and comprehension in communication in a foreign language, and highlight cultural differences influencing communication, and examine the role of language means in intercultural negotiations. Outline of the subject: . Approaches to culture . Cultural and language context in communication . Intercultural theories and their influence on behaviour and language expression . International English as lingua franca . The most common mistakes as a cause of misunderstanding . Language practice and activities . Case studies on individual topics Language level: CEFR B2	Z,ZK	6
G04E0202	Meetings and Negotiations in English English for Meetings and Negotiations is part of a series of courses for follow-up students focused on functional language. The course is intended for students at the upper intermediate level. The course focuses on a collaborative model of the English language intended for a range of business or business meetings and negotiations. Although the course is not primarily focused on confrontational negotiation and communication strategies, part of the explanation is devoted to strategies and language for preventing and coping with confrontational situations. The course is based on the modern, increasingly widespread model of "International English", ie international English understood as lingua franca. Listening materials work with recordings of native speakers of all English styles and focus on collocations and idiomatics of American and British English.	Z,ZK	6
G16C0101	Balanced Scorecard	Z,ZK	6
G16C0104	Solving Real World Problems The aim of the course is to apply knowledge from the field of economics and management acquired during the study to solve real problems from economic practice. According to the client's assignment, students solve the problem with the support of teachers who become their mentors.	ZK	3
G16C0201	Service Design	Z,ZK	3
G16C0301	Lean Management Practice The aim of the course is to apply knowledge from the field of lean management and lean manufacturing acquired during the study to solve real problems from economic practice. According to the client's assignment, student teams solve the problem with the support of teachers who become their mentors.	ZK	3
G16C1201	Project Management	Z,ZK	6
G16C1302		Z,ZK	6
G16C1401	Innovation Marketing	Z,ZK	6
G16C2501	HR Management Systems The course is focused on the development of managerial skills in managing people in the organization. Through lectures and seminars, students will learn effective strategies, policies and practices for efficient people management in the organization and the main tasks of managers in various activities of people management in the organization.	Z,ZK	6
G16C3101		Z,ZK	6
G16C3102	Innovation Management and Innovation Project Concepts of innovation, prerequisites and barriers to innovation, sources of innovation, strategic considerations of innovation, process innovation, product innovation, service innovation, a macroeconomic view of the role of innovation, organizational support and management of innovation, soft methods and techniques of innovation, systematic-analytical methods and techniques of innovation, economic aspects of innovation, intellectual property of innovation and legal aspects.	Z,ZK	6
G16C3103		Z,ZK	6

G16E0102	Managing in an International Environment	Z,ZK	3
The preparatory phase. Implementation: knowledge transfer and possible adaptations. Strategic partnership and consequences on the cooperation. Relations with other foreign stakeholders. The DFI and its constraints. Parent company versus locals. Managing multi-cultural teams. Remote management. Expatriation. Managerial skills and competences. Knowing oneself and developing ones competences.			
G16E0103	Management in the Automotive Industry	Z,ZK	6
G16E0201	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. Teaching mode: completely online or hybrid, at a specific time/week during the semester.			
G16E0202	Project Technology Management	Z,ZK	6
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.			
G16E0203	Project Innovation Management	Z,ZK	6
Successful innovation requires much more than managing individual aspects of the single innovation process inside an institution, but there is required a systemic project approach, which deals with interactions between different stakeholders, their goals, innovation, markets, and organizations. Traditional innovation management usually focuses on goals and procedures for innovation planning, implementation rules, and controlling. This creates a framework to confine project team members to operate within a set of rules and measures. However, most innovation projects require project team members to be innovative and creative. An obvious strategy also in innovation, supportive corporate culture, budget, and motivation to innovate are often the basic preconditions for an innovation project. The primary goal of this course is to acquaint students with the key specifics of project innovation, project innovation management, and related intellectual property protection. After completing the course, a student should answer the following framework topics: How to identify and manage the project innovation scope, build a project breakdown structure, create a project innovation plan, create the project budget, define and allocate resources for innovation, manage the project development, identify and manage project innovation risks, and understand the project procurement process.			
G16E0401	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.			
G16E0501	Social Competences in Project and Process Management	Z	3
G16E1201	Standards of Project Management	Z,ZK	6
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.			
G16E1302	Lean Manufacturing	Z,ZK	6
As a result of completing this course, the student should be able to: Describe and explain the main significance, meaning, and functions of innovation management with a focus on Lean production applications in the workplace. Explain the relationship between management, innovation management, and the main departments of the company. Characterize pre-production, production, and manufacturing processes and related Lean manufacturing innovation processes. Create an innovation strategy and an innovation project with a focus on Lean. Clarify the importance of joint planning/forecasting of upcoming Lean products, services, and production technologies in the company. Etc.			
G16E1401	Marketing Innovations	Z,ZK	6
The primary role of innovation in marketing is to gain new customers, improve goodwill, increase sales and profitability of the company. At the beginning of the innovation process, innovative marketing should help identify new market opportunities and risks and improve the research of customer needs. During developing a new product, innovation marketing is to ensure the constant involvement of customers and users in this process. And at the end of the innovation process, innovation marketing ensures the successful introduction of a new product, technology, and service to the target audience. Innovation marketing should therefore be present at all stages of the innovation process to ensure that customer and market orientation is in line with advances in products and technologies, which often lead to the application of new marketing approaches. We address these main aspects in this subject.			
G16E2201	Modern Approaches in Project Management	Z,ZK	6
G16E2302	Business Process Management	Z,ZK	6
G16E3301	Six Sigma	ZK	3
The course is aimed at practical application of how the individual components (methods and techniques - mainly applied statistical methods and techniques) used in this approach and a common application of these components throughout the DMAIC cycle (Define, Measure, Analyze, Improve, Control).			
G51C0401		Z	3
G63C1102	Statistical Analysis	Z,ZK	6
The course builds on the introductory courses of statistics and prefaces slightly advanced statistical analysis methods.			
G63C1301	Corporate Financial Management	Z,ZK	6
The course provides a comprehensive view of building the essential aspects of financial management of business processes and projects. Students have the opportunity to understand the main concepts, tools and methods of financial management of processes and projects and their use in decision-making practice. Substantial emphasis is placed on evaluating the financial performance of the company, evaluation and valuation of tangible and financial investment projects, working capital management, methods of financing the company, project financing, methods of financial planning and forecasting, and valuation techniques.			
G63C2201	Microeconomic Theory	ZK	3
The course introduces the analysis of the theory of consumer, the theory of firm, and the market interactions of consumers and firms.			
G63C2301	Controlling	Z,ZK	6
Controlling methods are presented from the initial detection of deviations to advanced models of managerial decision support in strategic horizons in the context and against the background of the management of basic business processes with an emphasis on the processes determining the effect of added value in the company's activities. The tasks of controlling are systematically explained according to the time perspective in the scope of corporate strategies and operational management, including the role of the controller in the individual phases of management from analysis to reporting. The content of the course is also focused on the presentation of methods and management tools that can be used to manage individual components (entities) in mutual interaction, especially in the area of cost management. Examples of models and case studies and tasks are used to present the key principles of controlling in the company.			
G63C2302	Financial Law	ZK	3
G63C3201		ZK	3

G63C4401	Information System Design	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			
G63E0201	Economics of Climate Change	Z,ZK	6
G63E0202	Green Transition	Z,ZK	6
Green transition is sometimes imagined as a technical question involving mostly energy production and industrial processes. Nonetheless, wider societal, economic and political contexts are indispensable to successful transformation. The course introduces different transition approaches focusing on such wider frameworks and stressing the interconnections between politics, markets, industry, and social changes. Theoretical concepts of transformation will then be linked to current reality in specific regions (with emphasis on but not limited to the EU).			
G63E2301	Financial Markets and Risk Management	Z,ZK	6
The analysis of the management of financial risk recently tends towards strategies for hedging the portfolio, and for designing a investment strategy based on diversification. The course spans broad sections implementing the principles of variable income and fixed income. The Financial Models evolved rapidly from the inception of the Modern Theory of Portfolio. The original Mean - Variance analysis, the CAPM, The Black-Litterman model, the disruptive framework implicit in the Black Scholes model for pricing options and the Bob Merton's contribution, all of them represent theoretical breakthroughs in the field of finance. When tackling this study, solid statistical basis and advanced skills in Excel are required. The analysis of risk relies on Many of the models based on important benchmarks rooted in Merton's options theoretic approach and explains default in structural terms related to the market value of the firm's assets as compared to its debt obligations. Other model statistically decomposes observed risky debt prices into default risk premiums. The set of models pretends to measure the credit risk of a loan or a portfolio of loans. In this vein, the course pursues to simplify the technical details and analytics surrounding these models, while concentrating on their underlying economics and economic intuition. They learn to use market instruments and market analyses to design efficient investment and hedging strategies and methods for the company capital management hurled to financial markets.			
G63E3301	Economic and Financial Modelling	KZ	3
The course is organized in 2 seminars weekly, 3 credits. Analyzing and solving models of optimal allocation of assets, management of risk, and Portfolio allocation			
G63E4201	Monetary Economics and Policy	Z,ZK	6
This course covers basic concepts from monetary economics, emphasizing how monetary policy can affect the domestic economy. It consists of two major parts. The first one starts with the definition of money, its functions, and monetary aggregates and leads to the inner workings of financial markets, particularly interest rate dynamics. The second one combines the practical conduct of monetary policy by central banks with the theoretical frameworks of what explains inflation in the long run and how monetary policy can stabilize the economy and inflation. The leading textbook is Mishkin (2022) listed with other optional readings below. There will be lectures and exercise sessions, where different problem sets based on lecture materials are solved together in class.			
G65C0103		Z,ZK	3
G65C0201	Territorial Management Planning	ZK	3
G65C0202	Environmental Aspects of Regional Development	ZK	3
G65E1301	Smart Cities and Regions	Z,ZK	6
Smart Cities and Smart Regions study introduces students to the interdisciplinary issue Smart Cities, preparing concept SC and its planning and indicators.			
G65E2301	Regional Development and Planning	Z,ZK	6
The goal is to understand the reason, mission and specifics of regional and municipal development in the context of European Union as well as Czech Republic, and of planning as a tool of development. Students should know the core European concepts of regional and municipal development. A particular attention will be paid to the Middle-European planning culture and planning system, which is rooted in the mutual interactions between spatial, urban, strategic and environmental planning. Students should perceive development from the perspectives of different stakeholders and professions, and understand the need of cooperation, participation and democracy in practice.			
G65E4101	European Union and Regional Policy	ZK	3
The course discusses developments in the EU and in the EU Regional Policy from the end of the Cold War until today. It focuses on relevant issues of the integration process. It is based on lectures, class discussions and presentations of various positions present in the debates (group projects / own positions). The objectives of the course are to explain a modern development of the EU, analyse key points in particular areas of integration and practise argumentation skills.			
G66C0101	Reflections of Technical Innovations in Culture	ZK	3
G77C0001	Technology Assessment	ZK	3
G77C0003	Transportation Engineering Projects	ZK	3
G77C0004	Smart Cities Technologies	ZK	3
The subject Technology for Smart Cities introduces students to the interdisciplinary problematics of smart cities and places it in the context of the technological, social and economic development of society.			
G77C0007	Communication Systems and Networks	ZK	3
G77C0008	Robotics	Z,ZK	6
G77C0009	Information Security Management and Implementation	ZK	3
G77C2011	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".			

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

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