#### Study plan

#### Name of study plan: Stavební inženýrství - ízení projekt

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Civil Engineering - Project Management

Type of study: Follow-up master full-time

Required credits: 90
Elective courses credits: 0
Sum of credits in the plan: 90

Note on the plan: platí pro nástup od akad. roku 2024/25

Name of the block: Compulsory courses Minimal number of credits of the block: 82

The role of the block: Z

Code of the group: NP20230100

Name of the group: Stavební inženýrství - ízení projekt , 1. semestr

Requirement credits in the group: In this group you have to gain at least 30 credits

Requirement courses in the group: In this group you have to complete at least 6 courses

Credits in the group: 30 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
126INZG	Engineering Dana M š anová, Václav Tatýrek Václav Tatýrek Dana M š anová (Gar.)	Z,ZK	5	2P+2C	Z,L	Z
126OCS1	Construction Pricing 1 Iveta St elcová, Lucie Brožová, Stanislav Vitásek Lucie Brožová Lucie Brožová (Gar.)	Z,ZK	5	2P+2C	Z	Z
126PM1	Project Management 1 Michal Vondruška Michal Vondruška (Gar.)	Z,ZK	5	3P+1C	Z	Z
126MSFP	Managament in Construction Company Martin ásenský Martin ásenský Eduard Hromada (Gar.)	Z,ZK	7	3P+2C	Z	Z
126SLEG	Building Legislation Dana M š anová Dana M š anová (Gar.)	Z	2	2P	Z	Z
126PRRS	Construction Planning and Operations Management Lucie Brožová, Jaroslava Tománková Lucie Brožová Lucie Brožová (Gar.)	Z,ZK	6	2P+3C	Z	Z

# Characteristics of the courses of this group of Study Plan: Code=NP20230100 Name=Stavební inženýrství - ízení projekt , 1. semestr 126INZG Engineering Z,ZK 5

Conceptual and operational management of development projects from perspective of time, resources, cost, analysis of resources, solution design, external examination, investment opportunities study, feasibility study, interest optimization, technological, legal, financial resources, price determination, commercial contractual law, engineering contracts specimens, VOB (Verdingungsordnung für Bauleistungen) delivery conditions used by german investors - FIDIC contractual terms used in international construction practice, contractual determination of performance and quality parameters, contractual sanctions, time realistic plans, territorial, constructional governance, law no. 183/2006 Sb. fulfilment, construction order assignment, investment engineering, supplier engineering, suppliers coordination, financial management, capacity management, quality control, technological regulations, handover proceedings plan, test run operation, parameters fulfilment assessment, construction maintenance planning, marketing, building changes prior completion, building handover and acceptance, handover documentation, performance audit, decision processes and methods, invested energy. BIM. Documentation rules. Insolvency, Social responsibility in construction firms, RIPRAN method.

126OCS1	Construction Pricing 1	Z.ZK	5	

Costs are operation-related consumption of work and resources, valued and expressed in monetary units. The aim of the course is to teach the student to use basic calculation techniques and procedures. Furthermore, use the normative and data base, and adapt the normative base for new materials and technologies, or creating. Basic principles of cost calculation in the construction industry. Organization and standardization of work in the company, production process, time consumption. Standardization of labor consumption, methods of setting standards, examples, documents. Standardization of material consumption, examples, documents. Standardization of the need for machines - productivity, capacity standards, examples, documents. Salary costs - payroll system, job catalog, wage rate calculation. Costs - breakdown of costs, calculation methods and techniques, calculation bases. Dynamic and normative method of calculation, examples, documents. Individual costing - costing formula, content of components, examples, documents. Methods of non-absorption costing (ABC, method of variable costs), examples. Influencing the amount of material costs, wages, machine operation, overhead. Cost modeling, break-even analysis, examples. Managerial concept of costs.

Project Management 1

The subject is focused on important decision-making processes and management processes in the preparation and implementation of construction from the perspective of the owner of the construction project. The goal is to analyze the appropriateness of developer acquisition, project activity, legislative preparation, permitting processes, choice of supplier system, choice of supplier evaluation method, choice of contract form. The main attention will be paid to the comparison of the traditional construction delivery method (Design Bid Build) with current alternative delivery systems (Design Build, Integrated Project Delivery, Construction Management). The teaching is supplemented by a number of case studies.

126MSFP

Managament in Construction Company

The course provides a general overview of the problems of a business in the construction industry. The student is familiar and works actively with concepts strategy, strategic analysis, management - top, middle and operational; planning at all levels and implementation plans, organizational structure, management levels in the company, controlling, human resources management, marketing, process and project management, risk management in the company.

126SLEG Building Legislation Z 2
Territorial planning and construction code law. Public procurement law. Definition of terms. Commercial contractual relationships. Main contract types in construction - contract of the conclusion of a future contract, purchase contract, contract for work, Contents of the contract.

126PRRS Construction Planning and Operations Management Z,ZK 6

Construction project management, project life cycle, engineering, design phase, methods of time scheduling, cost management, procurement systems and contracts, contractor management. Safety, quality and environmental management,

Code of the group: NP20230200

Name of the group: Stavební inženýrství - ízení projekt , 2. semestr

Requirement credits in the group: In this group you have to gain at least 22 credits

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

Credits in the group: 22 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
126BIMP	BIM - Information modeling Josef Žák, Robert Bouška Josef Žák (Gar.)	Z,ZK	5	2P+3C	L	Z
126OS2P	Construction Pricing 2 Iveta St elcová Iveta St elcová	Z,ZK	4	2P+2C	L	Z
126PM2	Project Management 2 Michal Vondruška Michal Vondruška (Gar.)	Z,ZK	5	3P+1C	L	Z
126FAMG	Facility Management Daniel Macek Daniel Macek (Gar.)	Z,ZK	4	1P+3C	L	Z
126DSP	Diploma Seminar  Dana M š anová, Václav Tatýrek, Iveta St elcová, Lucie Brožová, Stanislav Vitásek, Michal Vondruška, Martin ásenský, Eduard Hromada, Jaroslava Tománková Eduard Hromada	KZ	4	3C	L	Z

Characteristics of the courses of this group of Study Plan: Code=NP20230200 Name=Stavební inženýrství - ízení projekt , 2. semestr

126BIMP	BIM - Information modeling	Z,ZK	5
126OS2P	Construction Pricing 2	Z,ZK	4
Date 1 te - 1			alama and and

Price and its importance, price factors, price strategies, types of contract, estimating at different stages of project, price setting data. Price creation - oriented to costs, demand and competition, method of price creation. Methods of creating the bid price. Labor and equipment rates per hour. IT support for estimating. Engineering and design activities pricing.

126PM2 Project Management 2 Z,ZK 5

The teaching of the subject Project management 2 is focused on the acquisition of project management methods in the implementation of large-scale technological constructions and constructions of transport infrastructure. The curriculum is based on the classical theory of project management according to the PMBOK (Project Management Body of Knowledge) and its application to the construction project management manuals of major construction companies (Best Practice). Detailed attention is paid to the main processes of project management (scope, time, cost, quality, human resources, risk and procurement management). The procedural management of construction projects is supplemented by the current issue of claims management and crisis management of construction projects.

126FAMG | Facility Management | Z,ZK | 4
The aim of the course is to understand the issue of integrated facility management in the context of the currently valid standards SN EN 15221 and SN EN ISO 41001 - Facility

The aim of the course is to understand the issue of integrated facility management in the context of the currently valid standards SN EN 15221 and SN EN ISO 41001 - Facility management. Students will become familiar with the principles of efficient building operation, including the provision of support activities in the form of in-house and outsourcing. As part of the life cycle of buildings, they solve the issue of operating costs, including maintenance and renewal planning, where they use the Buildpass application. Students will learn to work with the ARCHIBUS CAFM system, from linking the BIM model from the Revit application to solving practical tasks in building management and operation.

126DSP Diploma Seminar KZ 4

The project addresses problems mainly from building practice. The project is preparation for own diploma thesis. The output of the project is the assignment of the topic of the diploma thesis, elaboration of the curriculum, search and study of literature, research and detailed introduction to the solved problems. The student will study the methodological instructions of the Czech Technical University in Prague, how to write university graduate theses - see http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaverecnou-praci.

Code of the group: NP20230300

Name of the group: Stavební inženýrství - ízení projekt , diplomová práce

Requirement credits in the group: In this group you have to gain at least 30 credits

Requirement courses in the group: In this group you have to complete at least 1 course

Credits in the group: 30 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
126DPM	Diploma Thesis Dana M š anová, Václav Tatýrek, Iveta St elcová, Lucie Brožová, Stanislav Vitásek, Michal Vondruška, Martin ásenský, Eduard Hromada, Jaroslava Tománková Fduard Hromada Václav Tatýrek (Gar.)	Z	30	24C	Z	Z

### Characteristics of the courses of this group of Study Plan: Code=NP20230300 Name=Stavební inženýrství - ízení projekt , diplomová práce

 126DPM
 Diploma Thesis
 Z
 30

In his/her diploma thesis a student deals with topics from civil engineering and construction, economic and management. He/she solves problems both from operational practice and from research and development. A thesis contains a text part, drawings and possibly documentation. In the project conclusion a student will highlight his/her own contribution to the assigned topic. A thesis links to diploma project and augments knowledge gained of it. The student continuously consults the work with the supervisor, when he submits the individual parts in progress.

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 8

The role of the block: PV

Code of the group: NP20240200\_1

Name of the group: Stavební inženýrství - ízení projekt , PV p edm ty, 2. semestr Requirement credits in the group: In this group you have to gain at least 8 credits

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

Credits in the group: 8
Note on the group:

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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
126YCOC	Construction Contracting Aleš Tomek, Radan Tomek Josef Žák	Z,ZK	2	2P	L	PV
126YEMB	Energy Management Ji í Karásek Ji í Karásek Ji í Karásek (Gar.)	Z,ZK	4	2P+2C	L	PV
126YMCP	Management in Construction Company Vladimíra Nováková	Z,ZK	4	2P+2C	L	PV
126YOINS	Pricing of Civil Engineering Works  Iveta St elcová	Z,ZK	4	2P+2C	L	PV
126ZINP	Small Business Jana Frková, Olga Heralová Jana Frková (Gar.)	Z,ZK	4	2P+2C	L	PV
126YMMR	Management Decision-making Methods Eduard Hromada Eduard Hromada (Gar.)	Z,ZK	2	1P+1C	L	PV
126YVEI	Public Investment Construction Zita Prost jovská, Renáta Schneiderová Heralová Zita Prost jovská Renáta Schneiderová Heralová (Gar.)	Z,ZK	2	2P	L	PV
126IMBP	Building Information Management (BIM) Robert Bouška	Z,ZK	4	1P+3C	L	PV
126YPMP	Marketing in the Construction Industry - Project P Kate ina Eklová Kate ina Eklová	KZ	2	2C	L	PV
126ZIPN	Basics of innovative business Dana M š anová Dana M š anová (Gar.)	Z,ZK	2	1P+1C	L	PV
126YPER	Human resource management Eduard Hromada, Olga Heralová Michal Vondruška Olga Heralová (Gar.)	Z,ZK	2	1P+1C	L	PV
126YBVP	BIM in Public Investments Renáta Schneiderová Heralová	ZK	2	2P	L	PV

# Characteristics of the courses of this group of Study Plan: Code=NP20240200\_1 Name=Stavební inženýrství - ízení projekt , PV p edm ty, 2. semestr

126YCOC   Construction Contracting	Z,ZK	2
As every project manager in construction business has to be a contract manager at the same time, understanding the contract - respectively contract	cting in general - i	s a must. Course
of Construction Contracting is oriented on current business practices and methods, management techniques and understanding general legal prin	iples, codes and r	egulations. It is
about doing business in construction using standard procurement systems and applying given types of contracts, respectively standard contracts (	e.g. FIDIC). Lectur	es are based on
the real practice experience of both course's lecturers and various case studies are studied and solved.		

126YEMB	Energy Management	Z,ZK	4
The course on energy i	nanagement covers the issues of management in general, energy management, energy systems, and energy efficiency in th	e European legisl	ation framework.
The main target of the	course is to explain basic principles and future changes in the construction industry, specifically in the field of energy efficienc	cy economics. The	students will

The main target of the course is to explain basic principles and future changes in the construction industry, specifically in the field of energy efficiency economics. The students will increase their knowledge about strategies towards sustainable energy in buildings and mainly about energy efficiency. A specific part of the course is dedicated to the evaluation of energy efficiency measures, supporting schemes for energy efficiency, tackling energy poverty, multi-criterial evaluation of projects, LCA (live cycle assessment) and LCC (life cycle cost) moreover the students receive overview of the cost ontimum calculation.

energy efficiency meas	ures, supporting schemes for energy efficiency, tackling energy poverty, multi-criterial evaluation of projects, LCA (live cycle a	assessment) and	LCC (life cycle
cost), moreover the stud	dents receive overview of the cost optimum calculation.		
126YMCP	Management in Construction Company	Z,ZK	4

126YOINS	Pricing of Civil Engineering Works	Z,ZK	4
Cost database of tr	ansportation structures I – normative prices, aggregated items Cost database of transportation structures II – OTSKP catalogue	Schedule of works	and bill of
quantities – require	ments and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structu	ıres – EU, SFDI, PF	PP projects Cost
analysis of transpor	tation structures I – normative prices, aggregated items Cost database of transportation structures II – OTSKP catalogue Schedule of works a and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structures – EU, SFDI, PPP structures – real projects and cost categories Engineering constructions from the perspective of contracting authority – legal norms (FIDIC) an astructions from the perspective of contractor – managing of a contract within the construction company Life cycle costs of engineering constructions structures. Introduction to estimating software for transportation structures Building information modelling (BIM) and estimating – requirements do of planning, estimating and predicting transportation structure costs.    Management Decision-making Methods	and another	
egislature Enginee	ing constructions from the perspective of contractor – managing of a contract within the construction company Life cycle costs of e	native prices, aggregated items Cost database of transportation structures II – OTSKP catalogue Schedule of works and bill tion of transportation structures – basic principles, techniques Financing of transportation structures – EU, SFDI, PPP project and cost categories Engineering constructions from the perspective of contracting authority – legal norms (FIDIC) and another projects of contractor – managing of a contract within the construction company Life cycle costs of engineering constructions Ecoto estimating software for transportation structures Building information modelling (BIM) and estimating – requirements, scheding and predicting transportation structure costs	ctions Economic
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126ZINP	Small Business	Z,ZK	4
126YMMR	Management Decision-making Methods	Z,ZK	2
126YVEI	Public Investment Construction	Z,ZK	2
Public sector invest	men't project. Evaluation of revenues and costs, income and expenses in individual phases of the life cycle of the construction p	roject. Risk and und	certainty in
nvestment decision	structures I – normative prices, aggregated items Cost database of transportation structures II – OTSKP catalogue Schedule of works and bil cources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structures – EU, SFDI, PPP projectures – real projects and cost categories Engineering constructions from the perspective of contractor – managing of a contract within the construction company Life cycle costs of engineering constructions Entures Introduction to estimating software for transportation structures Building information modelling (BIM) and estimating – requirements, scholanning, estimating and predicting transportation structure costs    Business		
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126IMBP	- V	Z,ZK	4
126IMBP	Building Information Management (BIM)	1 ' 1	-
126IMBP The course deals w	Building Information Management (BIM) ith Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It for	ocuses on advanced	d applications of
126IMBP The course deals with information technologous, robotics in	Building Information Management (BIM) ith Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It for a construction and design companies. Software tools that are used for quality control, measurement, preparation of bills of quality and transportation construction, and cybercrime, its risks and measures in construction projects. The subject content including	ocuses on advanced uantities, simulation	d applications of of construction
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126IMBP The course deals with information technology or progress, robotics in digitisation on constant information to the course introduction compared master promoted in the course introduction compared master promoted in the course introduction in the course in the c	Building Information Management (BIM) ith Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It for one construction and design companies. Software tools that are used for quality control, measurement, preparation of bills of quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects. It for quality control, measurement, preparation of construction projects.	kZ construction compar a simple marketing  Z,ZK  Z,ZK  Z,ZK	d applications of a of construction contracting  2  ny, its role in the mix, i.e. know

Tach   BIMP   BIM - Information modeling   Z,ZK
Diploma Thesis  In his/her diploma thesis a student deals with topics from civil engineering and construction, economic and management. He/she solves problems both from operation from research and development. A thesis contains a text part, drawings and possibly documentation. In the project conclusion a student will highlight his/her own co assigned topic. A thesis links to diploma project and augments knowledge gained of it. The student continuously consults the work with the supervisor, when he submorate in progress.  126DSP  Diploma Seminar  The project addresses problems mainly from building practice. The project is preparation for own diploma thesis. The output of the project is the assignment of the top of the Czech Technical University in Prague, how to write university graduate theses - see http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak
In his/her diploma thesis a student deals with topics from civil engineering and construction, economic and management. He/she solves problems both from operation from research and development. A thesis contains a text part, drawings and possibly documentation. In the project conclusion a student will highlight his/her own co assigned topic. A thesis links to diploma project and augments knowledge gained of it. The student continuously consults the work with the supervisor, when he submorant parts in progress.  126DSP  Diploma Seminar  KZ  The project addresses problems mainly from building practice. The project is preparation for own diploma thesis. The output of the project is the assignment of the top thesis, elaboration of the curriculum, search and study of literature, research and detailed introduction to the solved problems. The student will study the methodolog of the Czech Technical University in Prague, how to write university graduate theses - see http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaverer.  126FAMG  Facility Management  The aim of the course is to understand the issue of integrated facility management in the context of the currently valid standards SN EN 15221 and SN EN ISO management. Students will become familiar with the principles of efficient building operation, including the provision of support activities in the form of in-house and part of the life cycle of buildings, they solve the issue of operating costs, including maintenance and renewal planning, where they use the Buildings application. Students work with the ARCHIBUS CAFM system, from linking the BIM model from the Revit application to solving practical tasks in building management and operation building Information Management (BIM)  Z,ZK  The course deals with Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It focuses on advance information technology in construction and design companies. Software tools that are used for quality contr
from research and development. A thesis contains a text part, drawings and possibly documentation. In the project conclusion a student will highlight his/her own co assigned topic. A thesis links to diploma project and augments knowledge gained of it. The student continuously consults the work with the supervisor, when he submorated in progress.  126DSP  Diploma Seminar  KZ  The project addresses problems mainly from building practice. The project is preparation for own diploma thesis. The output of the project is the assignment of the top thesis, elaboration of the curriculum, search and study of literature, research and detailed introduction to the solved problems. The student will study the methodolog of the Czech Technical University in Prague, how to write university graduate theses - see http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaveret  126FAMG  Facility Management  The aim of the course is to understand the issue of integrated facility management in the context of the currently valid standards SN EN 15221 and SN EN ISO21 management. Students will become familiar with the principles of efficient building operation, including the provision of support activities in the form of in-house and part of the life cycle of buildings, they solve the issue of operating costs, including maintenance and renewal planning, where they use the Buildpass application. Students with the ARCHIBUS CAFM system, from linking the BIM model from the Revit application to solving practical tasks in building management and oper 126IMBP  Building Information Management (BIM)  Z,ZK  The course deals with Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It focuses on advance information technology in construction and design companies. Software tools that are used for quality control, measurement, preparation of bills of quantities, simulation progress, robotics in civil and transportation construction, and cybercrime, its risks and measures in c
assigned topic. A thesis links to diploma project and augments knowledge gained of it. The student continuously consults the work with the supervisor, when he submove parts in progress.  126DSP  Diploma Seminar  The project addresses problems mainly from building practice. The project is preparation for own diploma thesis. The output of the project is the assignment of the top thesis, elaboration of the curriculum, search and study of literature, research and detailed introduction to the solved problems. The student will study the methodolog of the Czech Technical University in Prague, how to write university graduate theses - see http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaveree 126FAMG  Facility Management  Facility Management  The aim of the course is to understand the issue of integrated facility management in the context of the currently valid standards SN EN 15221 and SN EN ISO management. Students will become familiar with the principles of efficient building operation, including the provision of support activities in the form of in-house and part of the life cycle of buildings, they solve the issue of operating costs, including maintenance and renewal planning, where they use the Buildpass application. Students with the ARCHIBUS CAFM system, from linking the BIM model from the Revit application to solving practical tasks in building management and oper 126IMBP  Building Information Management (BIM)  Z,ZK  The course deals with Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction projects. It focuses on advance information technology in construction and design companies. Software tools that are used for quality control, measurement, preparation of bills of quantities, simulation progress, robotics in civil and transportation construction, and cybercrime, its risks and measures in construction projects. The subject content includes information
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digitisation on construction projects.
126INZG Engineering Z,ZK
Conceptual and operational management of development projects from perspective of time, resources, cost, analysis of resources, solution design, external examina

Costs are operation-related consumption of work and resources, valued and expressed in monetary units. The aim of the course is to teach the student to use basic calculation techniques and procedures. Furthermore, use the normative and data base, and adapt the normative base for new materials and technologies, or creating. Basic principles of cost calculation in the construction industry. Organization and standardization of work in the company, production process, time consumption. Standardization of labor consumption, methods of setting

investment engineering, supplier engineering, suppliers coordination, financial management, capacity management, quality control, technological regulations, handover proceedings plan, test run operation, parameters fulfilment assessment, construction maintenance planning, marketing, building changes prior completion, building handover and acceptance, handover documentation, performance audit, decision processes and methods, invested energy. BIM. Documentation rules. Insolvency, Social responsibility in construction firms, RIPRAN method.

The course provides a general overview of the problems of a business in the construction industry. The student is familiar and works actively with concepts strategy, strategic analysis, management - top, middle and operational; planning at all levels and implementation plans, organizational structure, management levels in the company, controlling, human resources management, marketing, process and project management, risk management in the company.

Z,ZK

Z,ZK

Managament in Construction Company

Construction Pricing 1

126MSFP

126OCS1

standards, examples, documents. Standardization of material consumption, examples, documents. Standardization of the need for machines - productivity, capacity standards, examples, documents. Salary costs - payroll system, job catalog, wage rate calculation. Costs - breakdown of costs, calculation methods and techniques, calculation bases. Dynamic and normative method of calculation, examples, documents. Individual costing - costing formula, content of components, examples, documents. Methods of non-absorption costing (ABC, method of variable costs), examples. Influencing the amount of material costs, wages, machine operation, overhead. Cost modeling, break-even analysis, examples. Managerial concept of costs. 126OS2P Construction Pricing 2 Z.ZK Price and its importance, price factors, price strategies, types of contract, estimating at different stages of project, price setting data. Price creation - oriented to costs, demand and competition, method of price creation. Methods of creating the bid price. Labor and equipment rates per hour. IT support for estimating. Engineering and design activities pricing. Project Management 1 The subject is focused on important decision-making processes and management processes in the preparation and implementation of construction from the perspective of the owner of the construction project. The goal is to analyze the appropriateness of developer acquisition, project activity, legislative preparation, permitting processes, choice of supplier system, choice of supplier evaluation method, choice of contract form. The main attention will be paid to the comparison of the traditional construction delivery method (Design Bid Build) with current alternative delivery systems (Design Build, Integrated Project Delivery, Construction Management). The teaching is supplemented by a number of case studies. 126PM2 Project Management 2 7.7K The teaching of the subject Project management 2 is focused on the acquisition of project management methods in the implementation of large-scale technological constructions and constructions of transport infrastructure. The curriculum is based on the classical theory of project management according to the PMBOK (Project Management Body of Knowledge) and its application to the construction project management manuals of major construction companies (Best Practice). Detailed attention is paid to the main processes of project management (scope, time, cost, quality, human resources, risk and procurement management). The procedural management of construction projects is supplemented by the current issue of claims management and crisis management of construction projects. 126PRRS Construction Planning and Operations Management Construction project management, project life cycle, engineering, design phase, methods of time scheduling, cost management, procurement systems and contracts, contractor management. Safety, quality and environmental management, 126SLEG 2 Building Legislation Territorial planning and construction code law. Public procurement law. Definition of terms. Commercial contractual relationships. Main contract types in construction - contract of the conclusion of a future contract, purchase contract, contract for work, Contents of the contract. 126YBVP BIM in Public Investments ZK 2 126YCOC Construction Contracting Z,ZK 2 As every project manager in construction business has to be a contract manager at the same time, understanding the contract - respectively contracting in general - is a must. Course of Construction Contracting is oriented on current business practices and methods, management techniques and understanding general legal principles, codes and regulations. It is about doing business in construction using standard procurement systems and applying given types of contracts, respectively standard contracts (e.g. FIDIC). Lectures are based on the real practice experience of both course's lecturers and various case studies are studied and solved. 126YEMB **Energy Management** Z.ZK The course on energy management covers the issues of management in general, energy management, energy systems, and energy efficiency in the European legislation framework. The main target of the course is to explain basic principles and future changes in the construction industry, specifically in the field of energy efficiency economics. The students will increase their knowledge about strategies towards sustainable energy in buildings and mainly about energy efficiency. A specific part of the course is dedicated to the evaluation of energy efficiency measures, supporting schemes for energy efficiency, tackling energy poverty, multi-criterial evaluation of projects, LCA (live cycle assessment) and LCC (life cycle cost), moreover the students receive overview of the cost optimum calculation. 126YMCP Z,ZK Management in Construction Company 4 126YMMR Management Decision-making Methods Z,ZK 2 **126YOINS** Pricing of Civil Engineering Works Z.ZK 4 Cost database of transportation structures I - normative prices, aggregated items Cost database of transportation structures II - OTSKP catalogue Schedule of works and bill of quantities – requirements and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structures – EU, SFDI, PPP projects Cost analysis of transportation structures - real projects and cost categories Engineering constructions from the perspective of contracting authority - legal norms (FIDIC) and another legislature Engineering constructions from the perspective of contractor – managing of a contract within the construction company Life cycle costs of engineering constructions Economic efficiency of transportation structures Introduction to estimating software for transportation structures Building information modelling (BIM) and estimating – requirements, schedule of works International methods of planning, estimating and predicting transportation structure costs 126YPER Human resource management Z,ZK 2 Main intention is to make students familiar with practical HR management in construction company with focus on hiring, adaptation, motivation, leadership and remuneration. Within classes theory is combined with trainings (model situations). 126YPMP Marketing in the Construction Industry - Project P 2 The course introduces students to basic concepts and techniques in the field of marketing, the links between marketing and other activities in the construction company, its role in the construction company and in society. Students should learn to find market opportunities, segment the market, evaluate market opportunities, build a simple marketing mix, i.e. know and master promotion methods, master pricing principles, correctly define the product and determine distribution channels **Public Investment Construction** 

For updated information see <a href="http://bilakniha.cvut.cz/en/FF.html">http://bilakniha.cvut.cz/en/FF.html</a> Generated: day 2024-05-20, time 09:47.

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126ZIPN

Public sector investment project. Evaluation of revenues and costs, income and expenses in individual phases of the life cycle of the construction project. Risk and uncertainty in investment decision-making.

Small Business

Basics of innovative business

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