

# Study plan

## Name of study plan: obor Stavební management

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Building Management

Garantor of the study branch: doc. Ing. Aleš Tomek, CSc.

Program of study: Civil Engineering

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: tento studijní plán platí od nástupu 2017

Name of the block: Compulsory courses

Minimal number of credits of the block: 78

The role of the block: Z

Code of the group: NN20160100

Name of the group: obor Stavební management, 1. semestr

Requirement credits in the group: In this group you have to gain at least 29 credits (at most 30)

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

Credits in the group: 29

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	<b>Engineering</b> Dana M š anová, Václav Tatýrek Václav Tatýrek Dana M š anová (Gar.)	Z,ZK	5	2P+2C	L	z
126KN1	<b>Costing and Bidding 1</b> Renáta Schneiderová Heralová, Lucie Brožová, Stanislav Vitásek, Iveta St elcová Renáta Schneiderová Heralová Renáta Schneiderová Heralová (Gar.)	Z,ZK	5	2P+2C	Z	z
126MSFN	<b>Management in Construction Company N</b> Aleš Tomek, Radan Tomek, Martin ásenský Martin ásenský Aleš Tomek (Gar.)	Z,ZK	6	3P+2C	Z	z
126PM01	<b>Project Management 1</b> Michal Vondruška, Vít Kosina Michal Vondruška Michal Vondruška (Gar.)	Z,ZK	7	3P+3C	Z	z
126PRRS	<b>Construction Planning and Operations Management</b> Lucie Brožová, Dana ápová, Jaroslava Tománková Dana ápová Jaroslava Tománková (Gar.)	Z,ZK	6	2P+3C	Z	z

### Characteristics of the courses of this group of Study Plan: Code=NN20160100 Name=obor Stavební management, 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.
126KN1	Costing and Bidding 1	Z,ZK	5	Organization and norms setting in construction firm, analysis of construction processes, labor consumption - classification, methods of time analysis, setting the norms of labor consumption, breakdown of labor costs. Wage systems, legal regulation of wages, internal company regulations, catalogue of trades and workers activities, cost classification, standard estimation methods and techniques, methods of absorption estimates, dynamisation methods.
126MSFN	Management in Construction Company N	Z,ZK	6	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 .
126PM01	Project Management 1	Z,ZK	7	
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: NN20170200

Name of the group: obor Stavební management, 2. semestr

Requirement credits in the group: In this group you have to gain 19 credits

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

Credits in the group: 19

Note on the group: úpravy kreditů

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
126BIMB	<b>BIM - Information modeling</b> Robert Bouška, Petr Mat jka, Josef Žák <b>Robert Bouška</b> Petr Mat jka (Gar.)	Z,ZK	4	1P+3C	Z	z
126K2N	<b>Costing and Bidding 2E</b> Renáta Schneiderová Heralová <b>Renáta Schneiderová Heralová</b> Renáta Schneiderová Heralová (Gar.)	Z,ZK	6	2P+3C	L	z
126PM2	<b>Project Management 2</b> Michal Vondruška <b>Michal Vondruška</b> Michal Vondruška (Gar.)	Z,ZK	5	3P+1C	L	z
126DISN	<b>Diploma Seminar</b> Dana M šanová, Václav Tatýrek, Renáta Schneiderová Heralová, Aleš Tomek, Radan Tomek, Martin ásenský, Michal Vondruška, Dana ápová, Jaroslava Tománková, ..... <b>Eduard Hromada</b>	Z	4	3C	L	z

Characteristics of the courses of this group of Study Plan: Code=NN20170200 Name=obor Stavební management, 2. semestr

126BIMB	BIM - Information modeling	Z,ZK	4	Subject deals with Building Information Modeling (BIM) topic as with the modern tool for management and operation of construction projects. It is oriented to handling basic relevant software (Autodesk Revit, Autodesk Navisworks) and especially to understanding meaning of BIM in current construction business and its future and importance in specific phases of construction projects.
126K2N	Costing and Bidding 2E	Z,ZK	6	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 course focuses on important decision-making processes and management processes in the Construction projects from the point of view of the owner. The aim is to analyze the choice of the delivery system, the selection of evaluation methods, the choice of contract form and the quality of the works. The main focus is on the comparison of the traditional Design Bid Build with the current Design Build, Integrated Project Delivery, Multiple Prime Contracts and Construction Management at Risk. Questions in the area of quality assurance will be explained in the field of transport and building construction. Teaching is complemented by a number of case studies.
126DISN	Diploma Seminar	Z	4	Each student will ensure the supervisor of his work from the Department of Economics and Management in Civil Engineering at the beginning of the semester. In co-operation with the supervisor, the topic of work in the field of construction and economics is chosen. 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 <a href="http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaverecnou-praci">http://knihovna.cvut.cz/en/seminare-a-vyuka/jak-psat/jak-psat-zaverecnou-praci</a> .

Code of the group: NN20160300

Name of the group: obor Stavební management, diplomová práce

Requirement credits in the group: In this group you have to gain 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	<b>Diploma Thesis</b> Dana M šanová, Václav Tatýrek, Renáta Schneiderová Heralová, Lucie Brožová, Stanislav Vitásek, Iveta St elcová, Aleš Tomek, Radan Tomek, Martin ásenský, ..... <b>Jind iška Bušková</b> Petr Mat jka (Gar.)	Z	30	24C	Z	z

Characteristics of the courses of this group of Study Plan: Code=NN20160300 Name=obor Stavební management, 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. The number of consultations is set in min. range of four.
--------	----------------	---	----	--

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 12

The role of the block: S

Code of the group: NN20180200\_1

Name of the group: obor Stavební management, 2. semestr, povinn volitelné p edm ty

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

Requirement courses in the group: In this group you have to complete at least 3 courses

Credits in the group: 12

Note on the group: odstraněn 122YTSN

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
126FAMG	<b>Facility Management</b> <i>Daniel Macek Daniel Macek Daniel Macek (Gar.)</i>	Z,ZK	4	1P+3C	L	s
126KIST	<b>Calculation of Transport Infrastructure</b> <i>Iveta St elcová, Josef Žák Iveta St elcová Iveta St elcová (Gar.)</i>	Z,ZK	5	2P+2C	L	s
126YCON	<b>Construction Contracting</b> <i>Aleš Tomek, Radan Tomek Aleš Tomek Aleš Tomek (Gar.)</i>	Z,ZK	4	4P	L	s
126YEMB	<b>Energy Management</b> <i>Ji í Karásek Ji í Karásek Ji í Karásek (Gar.)</i>	Z,ZK	4	2P+2C	L	s
126YIPO	<b>Small Business Management</b> <i>Jana Frková Jana Frková Jana Frková (Gar.)</i>	Z,ZK	5	2P+2C	L	s
126YTRZ	<b>Decision -Making Theory</b>	Z,ZK	4	2P+2C	L	s

**Characteristics of the courses of this group of Study Plan: Code=NN20180200\_1 Name=obor Stavební management, 2. semestr, povinn volitelné p edm ty**

126FAMG	Facility Management	Z,ZK	4	EU standard SN EN 15221 "Facility management" defines this branch as integrated management of all services, which support basic activities of companies. From the construction point of view it is economic, nevertheless, flexible area (buildings, stadium, manufacturing hall), from the company point of view it is administration of a real estate and property and securing all supporting services. Students will learn the latest EU standards, in/outsourcing problems, they will be trained how to prepare a contract for services delivery in accordance with EU standards. Examples of current pilot projects with practising expets.
126KIST	Calculation of Transport Infrastructure	Z,ZK	5	Deepening of knowledge in the field of transport constructions (roads, bridges, culverts and retaining walls) both in terms of valuation and preparation of constructions (prices, cost calculation, construction site equipment) and in terms of technology.
126YCON	Construction Contracting	Z,ZK	4	As every project manager in construction business also has to be a contract manager at the same time, understanding of contracting principles is a must. Course of Construction Contracting is oriented on current business practices and methods, management techniques, codes and regulations. It is about doing business in construction using standard procurement systems and applying given types of standard contracts (mainly FIDIC). Lectures are based on the construction industry real practice experience of both course's lecturers.
126YEMB	Energy Management	Z,ZK	4	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.
126YIPO	Small Business Management	Z,ZK	5	The aim of the subject is to provide information necessary for entrepreneurial activity and to support and develop students' entrepreneurial thinking. Provide an objective and comprehensive view of business in the Czech Republic. Point out the business mistakes that cause high mortality. Students will acquire the knowledge necessary for establishing various forms of business subjects, knowledge necessary for orientation in tax matters, insurance payments, labor law relations. Topics: Modern business history, business environment in the Czech Republic and comparison with other countries. Small Business Specifics - Benefits - Disadvantages - Opportunities - Threats. Successful entrepreneurs and their secrets of success. The personality of the entrepreneur and the reasons for his failure. The life cycle of a small business and the crisis of growth. Building a small business. Management and planning in a small business. Leadership. Business idea, vision and mission. Business plan. Intuitive marketing. Financial resources for business. Establishment of a business entity - legal minimum. Issues of income tax and VAT, social and health insurance business - tax minimum.
126YTRZ	Decision -Making Theory	Z,ZK	4	Basic terms and managerial decision-making knowledge. Decision-making under certainty - methods of creation of variants, methods of defining criteria, methods of determination of importance (weight) of criteria. Multi-criteria evaluation, variant, value. Determination of variants costs. Decision-making under risk and uncertainty.

### List of courses of this pass:

Code	Name of the course	Completion	Credits
126BIMB	BIM - Information modeling	Z,ZK	4
	Subject deals with Building Information Modeling (BIM) topic as with the modern tool for management and operation of construction projects. It is oriented to handling basic relevant software (Autodesk Revit, Autodesk Navisworks) and especially to understanding meaning of BIM in current construction business and its future and importance in specific phases of construction projects.		
126DISN	Diploma Seminar	Z	4
	Each student will ensure the supervisor of his work from the Department of Economics and Management in Civil Engineering at the beginning of the semester. In co-operation with the supervisor, the topic of work in the field of construction and economics is chosen. 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>.

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. The number of consultations is set in min. range of four.			
126FAMG	Facility Management	Z,ZK	4
EU standard SN EN 15221 "Facility management" defines this branch as integrated management of all services, which support basic activities of companies. From the construction point of view it is economic, nevertheless, flexible area (buildings, stadium, manufacturing hall), from the company point of view it is administration of a real estate and property and securing all supporting services. Students will learn the latest EU standards, in/outsourcing problems, they will be trained how to prepare a contract for services delivery in accordance with EU standards. Examples of current pilot projects with practising experts.			
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.			
126K2N	Costing and Bidding 2E	Z,ZK	6
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.			
126KIST	Calculation of Transport Infrastructure	Z,ZK	5
Deepening of knowledge in the field of transport constructions (roads, bridges, culverts and retaining walls) both in terms of valuation and preparation of constructions (prices, cost calculation, construction site equipment) and in terms of technology.			
126KN1	Costing and Bidding 1	Z,ZK	5
Organization and norms setting in construction firm, analysis of construction processes, labor consumption - classification, methods of time analysis, setting the norms of labor consumption, breakdown of labor costs. Wage systems, legal regulation of wages, internal company regulations, catalogue of trades and workers activities, cost classification, standard estimation methods and techniques, methods of absorption estimates, dynamisation methods.			
126MSFN	Management in Construction Company N	Z,ZK	6
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.			
126PM01	Project Management 1	Z,ZK	7
126PM2	Project Management 2	Z,ZK	5
The course focuses on important decision-making processes and management processes in the Construction projects from the point of view of the owner. The aim is to analyze the choice of the delivery system, the selection of evaluation methods, the choice of contract form and the quality of the works. The main focus is on the comparison of the traditional Design Bid Build with the current Design Build, Integrated Project Delivery, Multiple Prime Contracts and Construction Management at Risk. Questions in the area of quality assurance will be explained in the field of transport and building construction. Teaching is complemented by a number of case studies.			
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,			
126YCON	Construction Contracting	Z,ZK	4
As every project manager in construction business also has to be a contract manager at the same time, understanding of contracting principles is a must. Course of Construction Contracting is oriented on current business practices and methods, management techniques, codes and regulations. It is about doing business in construction using standard procurement systems and applying given types of standard contracts (mainly FIDIC). Lectures are based on the construction industry real practice experience of both course's lecturers.			
126YEMB	Energy Management	Z,ZK	4
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.			
126YIPO	Small Business Management	Z,ZK	5
The aim of the subject is to provide information necessary for entrepreneurial activity and to support and develop students' entrepreneurial thinking. Provide an objective and comprehensive view of business in the Czech Republic. Point out the business mistakes that cause high mortality. Students will acquire the knowledge necessary for establishing various forms of business subjects, knowledge necessary for orientation in tax matters, insurance payments, labor law relations. Topics: Modern business history, business environment in the Czech Republic and comparison with other countries. Small Business Specifics - Benefits - Disadvantages - Opportunities - Threats. Successful entrepreneurs and their secrets of success. The personality of the entrepreneur and the reasons for his failure. The life cycle of a small business and the crisis of growth. Building a small business. Management and planning in a small business. Leadership. Business idea, vision and mission. Business plan. Intuitive marketing. Financial resources for business. Establishment of a business entity - legal minimum. Issues of income tax and VAT, social and health insurance business - tax minimum.			
126YTRZ	Decision -Making Theory	Z,ZK	4
Basic terms and managerial decision-making knowledge. Decision-making under certainty - methods of creation of variants, methods of defining criteria, methods of determination of importance (weight) of criteria. Multi-criteria evaluation, variant, value. Determination of variants costs. Decision-making under risk and uncertainty.			

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

Generated: day 10. 08. 2020, time 13:14.