### Study plan

### Name of study plan: Management a ekonomika ve stavebnictví

Faculty/Institute/Others: Department: Branch of study guaranteed by the department: Welcome page Garantor of the study branch: Program of study: Management and Economics in Civil Engineering Type of study: Bachelor full-time Required credits: 240 Elective courses credits: 0 Sum of credits in the plan: 240 Note on the plan: platí pro nástup od akad. roku 2023/24

Name of the block: Compulsory courses Minimal number of credits of the block: 117 The role of the block: Z

Code of the group: BE20230100 Name of the group: Management a ekonomika ve stavebnictví, 1. semestr Requirement credits in the group: In this group you have to gain at least 29 credits Requirement courses in the group: In this group you have to complete at least 6 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
101KG01	<b>Constructive Geometry</b> Iva K ivková, Iva Malechová, Jana ápová, Liya Gaynutdinova, Michal Zdražil, Iva Slámová, Hana Lakomá, Petra Vacková <b>Jana ápová</b> Iva K ivková (Gar.)	Z,ZK	5	2P+2C	Z,L	Z
126DOMT	Development, property valuation and real estate market Renáta Schneiderová Heralová, Eduard Hromada, Pavlína Píchová Eduard Hromada Renáta Schneiderová Heralová (Gar.)	Z,ZK	5	4P+1C	Z	Z
101MA1E	Mathematics 1 Iva Malechová, Iva Slámová, Petra Vacková, Aleš Nekvinda, Petr Mayer, Yuliya Namlyeyeva, František Bubeník, Milan Bo ík, Martin Soukenka, Aleš Nekvinda Aleš Nekvinda (Gar.)	Z,ZK	6	2P+3C	Z,L	Z
123CHE	<b>Chemistry</b> Jana Náb Iková, Martin Keppert, Milena Pavlíková <b>Milena Pavlíková</b> Milena Pavlíková (Gar.)	Z,ZK	4	3P+1C	L	Z
132SME1	Structural Mechanics 1 Anna Ku erová, David Šilhánek, Tomáš Janda, Tomáš Krej í Anna Ku erová Anna Ku erová (Gar.)	Z,ZK	6	2P+2C	z	Z
135GM01	Geomechanics 1 Kate ina Ková ová, Jan Jelínek, Svatoslav Chamra, Richard Malát Kate ina Ková ová Kate ina Ková ová (Gar.)	Z	3	2P+1C	L	Z

#### Characteristics of the courses of this group of Study Plan: Code=BE20230100 Name=Management a ekonomika ve stavebnictví, 1. semestr

101KG01	Constructive Geometry	Z,ZK	5					
Projections and projecti	Projections and projective methods. Axonometry. Oblique projection. Orthogonal axonometry. Displaying prisms, cones, cylinders, pyramids, balls. Simple problems in axonometry.							
Basics of lighting of soli	ds and groupes of solids. Perspective projection. Curves, parametrisation. Frenet's trihedron, torsion and curvature. Helical s	urfaces. Quadrics	Surfaces in					
building industry.								
126DOMT	Development, property valuation and real estate market	Z,ZK	5					
The subject provides ba	sic knowledge about the functioning of the commercial and residential real estate market, supplemented by examples from prac	tice in individual m	narket segments.					
The development proce	ss and its individual phases from acquisition, through planning, own construction and exit - practical examples. Compilation o	f the cash flow of	the development					
project. Financing option	ns for development projects and existing investment properties, different aspects of individual types of investors in real estate	projects. The deve	elopment project					
consists of a description	of the considered development in the specified area, including a layout design, market analysis, financing proposal, budget a	ind project valuation	on. Development					
project (in the form of consultations during the entire semester)								
101MA1E	Mathematics 1	Z,ZK	6					
https://mat.fsv.cvut.cz/bubenik/mat1detail.htm								

123CHE	Chemistry	Z,ZK	4					
Introduction to general of	chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere.	Chemistry of build	ling materials -					
inorganic binders, glass	, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building mate	erials and to anal	ytical chemistry.					
132SME1	Structural Mechanics 1	Z,ZK	6					
Concurrent forces, force	systems acting on rigid bodies in space/plane, moment of a force about a point and line. Supports of a rigid body, reaction fo	orces. Compound	two-dimensional					
structures. Trusses. Rea	action forces applying the principle of virtual work.							
135GM01	Geomechanics 1	Z	3					
The course focuses on	The course focuses on the understanding of basic geological laws and principles in relation to architecture, civil engineering and urban planning. Emphasis is placed on explaining the							
influence of geological processes, both endogenous and exogenous, on the rock environment and how the geological situation affects the design of structures and their interaction with								
the rock environment. A	the rock environment. At the same time, attention is paid to the technical properties of rocks with regard to their practical applications. The course also includes a brief introduction to							

### Code of the group: BE20230200

the regional geology of the Czech Republic.

Name of the group: Management a ekonomika ve stavebnictví, 2. semestr Requirement credits in the group: In this group you have to gain at least 28 credits Requirement courses in the group: In this group you have to complete at least 6 courses Credits in the group: 28 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
101MA2E	Mathematics 2 Iva Malechová, Jana ápová, Iva Slámová, Yuliya Namlyeyeva, Martin Soukenka, Monika Rencová, Ond ej Zindulka Ivana Pultarová Ivana Pultarová (Gar.)	Z,ZK	6	2P+3C	L,Z	Z
102FYI	Physics Pavel Novák, Ji í Konfršt, Petr Pokorný, Pavel Demo Pavel Novák Pavel Novák (Gar.)	Z,ZK	4	3P+1C	L	Z
123SH01	Building Materials Eva Vejmelková, Alena Vimmrová, Miloš Jerman Alena Vimmrová Alena Vimmrová (Gar.)	Z,ZK	5	2P+2C	Z,L	Z
126BIM1	BIM Josef Žák Josef Žák Josef Žák (Gar.)	Z	1	1P+1C	Z	Z
132SME2	<b>Structural Mechanics 2</b> Anna Ku erová, David Šilhánek, Tomáš Janda <b>Anna Ku erová</b> Anna Ku erová (Gar.)	Z,ZK	6	2P+2C	L,Z	Z
154SG01	Land Surveying in Civil Engineering Rudolf Urban, Martin Štroner Rudolf Urban Rudolf Urban (Gar.)	Z,ZK	6	2P+3C	Z,L	Z

# Characteristics of the courses of this group of Study Plan: Code=BE20230200 Name=Management a ekonomika ve stavebnictví, 2. semestr

101MA2E Mathematics 2 Z,ZK 6 https://mat.fsv.cvut.cz/vyuka/bakalari/eng/ls/MT02/ 102FYI Physics Z,ZK 4 This is a basic physics course for students of the study programmes Civil Engineering; Management and Economics in Construction. The course focuses on mechanics and basic thermodynamics. The following areas are covered in the course: Mechanics of material points (particles) and deformable bodies. Discrete and continuous model of matter. Kinematics and dynamics of a material point (particle). Mechanical force fields. Gravitational field. Mechanical vibrations. Material deformation. Elastic waves. Acoustics. Hydromechanics. Fundamentals of thermodynamics. Heat transfer. 123SH01 Z.ZK 5 **Building Materials** Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing. 126BIM1 BIM Ζ The course focuses on teaching basic knowledge in the field of Building Information Management (BIM) in theoretical and practical areas, applicable across different specialisations and disciplines of the construction industry. Students will be introduced to data formats, data standards, intellectual property issues, working with digitized documents, raster and vector graphics, open data sources in the Czech Republic, ICT and enterprise systems, information systems for the construction industry, but also the context of BIM in the current construction industry in relation to the entire project life cycle and its specifics (delivery, expert focus, phases of construction projects, etc.) The theoretical knowledge is complemented by practical exercises aimed at mastering and understanding the basic principles of object-oriented parametric modelling. 132SME2 Z,ZK Structural Mechanics 2 6 Internal forces diagrams of simple statically determinate plane structures and compound two-dimensional structures. Multiaxially loaded cantilever. Definition of normal stress and prepositions of its distribution in a cross section. Equivalence of internal forces. Geometry of mass and areas, centre of gravity and moments of inertia. 154SG01 Land Surveying in Civil Engineering Z,ZK 6 The shape and size of the Earth, substitutive surfaces, cartographic projections Horizontal and vertical control, coordinate calculations Quality control, deviations and tolerations in build-up Angle and distance measurements Heighting measurements Other geodetic methods in build-up (GNSS, DPZ, ...) Photogrammetry and laser scanning Thematic mapping and present state documentation Geodetic works in build-up State map series of CR and thematic maps for build-up Geographic information systems and spatial planning Cadastre of real estates Laws and decrees for geodesy and build-up in Czech Republic

Code of the group: BE20230300

Name of the group: Management a ekonomika ve stavebnictví, 3. 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:

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		
101MA3E	Mathematics 3 Iva Malechová, Milan Bo ík, Martin Soukenka, Jozef Bobok, Michal Beneš, Martin Hála <b>Michal Beneš</b> Michal Beneš (Gar.)	Z,ZK	6	2P+2C	Z,L	Z		
124PS1E	Building Structures 1 Ctislav Fiala, Petr Hájek Petr Hájek (Gar.)	Z	4	2P+2C	Z	Z		
132PRE	Strength of Materials Petr Kabele, Lenka Melzerová, Karel Pohl Lenka Melzerová Petr Kabele (Gar.)	Z,ZK	6	3P+2C	Z,L	Z		
135GM2I	Geomechanics 2I Ji í Koš ál, Jan Salák, Ivan Vaní ek, Martin Vaní ek Ivan Vaní ek Ivan Vaní ek (Gar.)	Z,ZK	5	2P+1C	Z	Z		
141HYA	Hydraulics Aleš Havlík, Tomáš Picek, Václav Matoušek, Petr Sklená, Martin Fencl, Anna Špa ková, Jakub Novotný, Vojt ch Bareš, Jan Krupi ka Václav Matoušek Václav Matoušek (Gar.)	Z,ZK	5	2P+2C	Z,L	Z		
142VIZP	Water and Environmental Engineering Aleš Havlík, Michal Sn hota, Petr Nowak, Tomáš Dostál, Martin Do kal, Martin Šanda, Pavel Fošumpaur, Bohumil Š astný, Ladislav Satrapa, Ladislav Satrapa (Gar.)	Z,ZK	4	3P+1C	Z,L	Z		

# Characteristics of the courses of this group of Study Plan: Code=BE20230300 Name=Management a ekonomika ve stavebnictví, 3. semestr

101MA3E	Mathematics 3	Z,ZK	6
https://mat.fsv.cvut	cz/vyuka/bakalari/eng/zs/	1 . 1	
124PS1E	Building Structures 1	Z	4
The concept of des	ign of building structures with a comprehensive consideration of the functional requirements imposed on individual elements. I	Requirements for buil	lding structures
structural system, i	nteraction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principl	es of the structural d	esign of walls,
columns), floor stru	ctures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, cera	mic concrete ceilings	s, steel and stee
concrete ceilings).	Expansion joints in load-bearing systems. Structural systems of single and multi-storey buildings, structural systems of long-sp	an structures.	
132PRE	Strength of Materials	Z,ZK	6
Fundamentals of th	e theory of elasticity: stress and strain of straight beams subjected to bending and free torsion, ultimate plastic capacity of a m	nember in bending, c	ritical loads and
buckling lengths of	straight compression members. Basic assumptions, quantities, and equations describing the stress and strain state in 3D cont	tinuum.	
135GM2I	Geomechanics 2I	Z,ZK	5
Formation of soils,	basic properties of soils, water in soil, strength and deformation properties of soils and their determination, improvement of so	il properties, applicat	ion tasks
141HYA	Hydraulics	Z,ZK	5
A course deals with	issues of hydrostatics and hydrodynamics with aiming at civil engineering applications. There are analysed tasks related to h	drostatic and hydroc	dynamic loading
of structures, pipel	ne flow, open channel flow and groundwater flow.		
142VIZP	Water and Environmental Engineering	Z,ZK	4
During the teaching	semester, students are introduced to the fields of water engineering, water management and environmental engineering. In p	articular, emphasis i	s placed on the
practical aspects o	water and environmental engineering in close relation to other branches of civil engineering. The course is taught in the form	of lectures and tutoria	als. The lecture
are divided themat	cally into 20 blocks according to the different branches of the discipline (13 times water engineering and 7 times environmenta	I engineering). In the	exercises,
	asic problems in the field of hydrology, water supply and water structures, especially dams, hydropower and flood issues. All 4	"water" departments	of K14x are
students work on b			

### Code of the group: BE20230400

Name of the group: Management a ekonomika ve stavebnictví, 4. 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
124PS2E	Building Structures 2 Ctislav Fiala, Petr Hájek, Veronika Ka ma íková, Ji í Pazderka, Jaroslav Vychytil Ji í Pazderka Ji í Pazderka (Gar.)	Z,ZK	4	2P+2C	L	Z
126EKMN	Economics and Management Eduard Hromada, Pavlína Pichová, Martin ásenský, Božena Kade ábková, Petr Kal ev, Pavlína Pichová Eduard Hromada Petr Kal ev (Gar.)	Z,ZK	7	4P+2C		Z
132SME3	Structural Mechanics 3 Lenka Melzerová, Karel Pohl Lenka Melzerová Petr Kabele (Gar.)	Z,ZK	5	2P+2C	L,Z	Z
133NNKB	Fundamentals of Structural Design - Concrete Martin Tipka, Radek Štefan, Jitka Vašková, Michal Števula Martin Tipka Martin Tipka (Gar.)	Z,ZK	4	2P+1C	L,Z	Z

134NNKO	Design of Supporting Structures I - Steel František Wald, Martina Eliášová Martina Eliášová (Gar.)	Z,ZK	3	2P+1C	L	Z
136DSUZ	Transport Structures and Urban Planning Ludvík Vébr, František Pospíšil, Ond ej Bret František Pospíšil Ludvík Vébr (Gar.)	Z,ZK	7	5P+1C	L,Z	Z

## Characteristics of the courses of this group of Study Plan: Code=BE20230400 Name=Management a ekonomika ve stavebnictví, 4. semestr

124PS2E	Building Structures 2	Z,ZK	4				
Staircases, sloping ramps, lift shafts - requirements, structural and material solutions, basics of typology, design principles, construction details, railing. Building foundations - foundation							
conditions, types of found	lations, requirements, building plinth area (construction details). Basement - solution of basement walls, requirements, prote	ction against wate	er, waterproofing				
systems. Structural expansion	nsion joints in buildings - principles of joints design in bearing structures, thermal expansion, compensation of differences ir	n settlement, cons	truction details.				
Roof truss systems.							
126EKMN	Economics and Management	Z,ZK	7				
The aim of the course is	to provide students with an introduction to economics and management in the construction industry and to familiarize them	with basic econo	mic terms and				
their practical application	s. Students will be prepared to solve basic construction-management problems in the construction industry. They will acquir	e basic information	on about the				
method of pricing constru	iction works and master the basic methods of managing a construction company. Emphasis is placed on understanding the	principle of econ	omic thinking in				
relation to the construction	n industry.						
132SME3	Structural Mechanics 3	Z,ZK	5				
Deformation and force m	ethod for the solution of reactions and internal forces on statically indeterminate beams, frames, and truss structures. Calcu	lation of displace	ments of beams,				
frames, and truss structu	res using the principle of virtual works.						
133NNKB	Fundamentals of Structural Design - Concrete	Z,ZK	4				
The content of the subject	t are the basics of load-bearing concrete structures design and the design methodology according to valid standards, inclu	ding the determin	ation of load				
effects. The properties of	concrete, the production and testing of concrete, the properties of concrete reinforcement and its interaction with concrete	are discussed. De	esign and				
reinforcement of concrete	e structures for basic types of loading (bending, shear, pressure) are the main part of this course. An introduction to service	ability limit states	is in the end of				
this course. The course for	ollows the introductory subject of Civil Engineering program (Structural Mechanics, Elasticity and Strength, Building Materia	lls, Building Struc	tures).				
134NNKO	Design of Supporting StructuresI - Steel	Z,ZK	3				
The basics of designing s	teel, steel-concrete and wooden load-bearing structures according to applicable standards, including the determination of lo	ad effects, desigr	differences due				
to the specific properties	of individual materials.						
136DSUZ	Transport Structures and Urban Planning	Z,ZK	7				
The course 136DSUZ is	composed of 3 issues, which build on each other and complement each other. These are the area of transport structures (roa	ads and rail transp	oort - scope 3+1)				
and the area of urban pla	nning and spatial planning (scope 2+0). Unlike the road construction and railroad construction sections, the urban planning	section does not	end with credit.				
Transport Structures - Ro	bads (R): Introduction to basic terminology in the part of roads, history. Road Act and related legislative and technical regula	tions, their impact	on road design.				
Design categories of road	ds and motorways, design speed, directional and elevation design of routes, cross-sectional layout of roads and motorways	, earthwork - dime	ensions, shapes,				
drainage. Urban roads, division and marking, definition of MK space, differences in design, operation and equipment. Carriageway, division, design principles. Safety equipment,							
junctions and crossings. Transport Structures - Rail transport (RT): Introduction to basic terminology, Issues of railway crossings from the point of view of security, design and operation.							
Tram transport - history, principles of tram track construction, interaction with the environment. Metro as a system of urban rail transport. Basic principles and parameters, metro lines.							
Railway constructions - an introduction to the design and construction of a railway track in the conditions of the Czech Republic, the basic elements of the railway superstructure. Spatial							
Planning (SP): Teaching	spatial planning and urban planning, spatial planning tools and procedures for their acquisition.						

### Name of the block: Compulsory courses in the program Minimal number of credits of the block: 116 The role of the block: P

### Code of the group: BE20210500

Name of the group: Management a ekonomika ve stavebnictví, 5. 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 7 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
122TSEK	<b>Technology of Construction - E</b> Mária Párová, Václav Pospíchal, Rostislav Šulc <b>Rostislav Šulc</b> Mária Párová (Gar.)	Z,ZK	6	4P+2C	z	Р
126EKST	Economic Statistics Božena Kade ábková, Daniel Macek <b>Božena Kade ábková</b> Daniel Macek (Gar.)	Z,ZK	4	1P+2C	z	Р
126OCS1	Construction Pricing 1 Iveta St elcová, Lucie Brožová, Stanislav Vitásek Lucie Brožová Lucie Brožová (Gar.)	Z,ZK	5	2P+2C	Z	Р
126RSPR	Construction Project Management Zita Prost jovská, Jaroslava Tománková Zita Prost jovská Zita Prost jovská (Gar.)	Z,ZK	5	2P+2C	Z	Р
126SRPB	Facility Management and Operation Daniel Macek, Aleš Choutka Daniel Macek Daniel Macek (Gar.)	Z,ZK	4	1P+2C	Z	Р
126SLEG	Building Legislation Dana M š anová Dana M š anová Dana M š anová (Gar.)	Z	2	2P	Z	Р

135ZSE	Foundations E Josef Jettmar, Jan Kos, Jan Masopust <b>Jan Pruška</b> Jan Kos (Gar.)	Z,ZK	4	2P+2C	Z	Р

# Characteristics of the courses of this group of Study Plan: Code=BE20210500 Name=Management a ekonomika ve stavebnictví, 5. semestr

122TSEK	Technology of Construction - E	Z,ZK	6					
Earthwork, design of pit excavation and supporting's technologies. Design of formwork. Concrete mixer plant, concrete conveying, concreting. Brickwork's technologies, Roofing work,								
tin work.								
126EKST	Economic Statistics	Z,ZK	4					
The content of the subje	ect is applied economic statistics. Familiarization with statistical theory and subsequent application to solved examples.							
126OCS1	Construction Pricing 1	Z,ZK	5					
Costs are operation-rela	ted consumption of work and resources, valued and expressed in monetary units. The aim of the course is to teach the student to	o use basic calcul	ation techniques					
and procedures. Further	more, use the normative and data base, and adapt the normative base for new materials and technologies, or creating. Basic	c principles of cos	t calculation in					
the construction industr	y. Organization and standardization of work in the company, production process, time consumption. Standardization of labor c	consumption, met	hods of setting					
standards, examples, do	ocuments. Standardization of material consumption, examples, documents. Standardization of the need for machines - productiv	ity, capacity stand	ards, examples,					
documents. Salary costs	s - payroll system, job catalog, wage rate calculation. Costs - breakdown of costs, calculation methods and techniques, calculatio	on bases. Dynami	c and normative					
method of calculation, e	xamples, documents. Individual costing - costing formula, content of components, examples, documents. Methods of non-abs	sorption costing (A	ABC, method of					
variable costs), example	is. Influencing the amount of material costs, wages, machine operation, overhead. Cost modeling, break-even analysis, example	les. Managerial d	oncept of costs.					
126RSPR	Construction Project Management	Z,ZK	5					
The subject provides a	pasic overview of project management. It defines the life cycle of a construction project. Content of individual phases of the pr	oject life cycle. P	reparation and					
evaluation of the constru	uction project.							
126SRPB	Facility Management and Operation	Z,ZK	4					
The content of the subje	ct is the management and control of the operation of buildings using the support of modern technologies. Familiarization with	the issues of imp	ementation and					
operation of facility man	agement using the CAFM system. The focus of the software support will be both on the passportization of basic property data a	and, in particular,	on the planning,					
management and evaluation	ation of the most frequently used facility management processes.							
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 co	ontract, purchase contract, contract for work, Contents of the contract.							
135ZSE	Foundations E	Z,ZK	4					
Úvod do p edm tu, liter	atura, zásady navrhování, geotechnické kategorie Pevnostní a deforma ní charakteristiky základové p dy, plošné základy Me	zní stavy plošnýc	h základ ,					
výpo et únosnosti a sed	ání plošných základ – Hlubinné základy - typologie, pilotové základy, technologie vrtaných a ražených pilot Osová únosnost osa	am lých pilot, zat	žovací zkoušky					
pilot Stanovení únosnos	ti pín zatížených pilot, skupina pilot Mikropiloty, kotvy, technologie Injektáž klasická a trysková, podzemní st ny Stavební ján	ny, technologie pa	žení stavebních					
jam Zásady pro návrh a posouzení pažicích konstrukcí, zemní tlak, ú inek vody Výpo et pažicích konstrukcí, metody závislých tlak Odvod ování stavebních jam Ochrana základových								
konstrukcí p ed ú inky agresivního prost edí								

#### Code of the group: BE20230600

### Name of the group: Management a ekonomika ve stavebnictví, 6. 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 7 courses Credits in the group: 30

### 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
124KKT	<b>Completing Constructions</b> Malila Noori, Šárka Šilarová, Pavel Kopecký <b>Šárka Šilarová</b> Šárka Šilarová (Gar.)	Z,ZK	6	2P+3C	L	Ρ
126IMAB	Building Information Management (BIM) Josef Žák, Petr Mat jka Josef Žák Josef Žák (Gar.)	Z,ZK	5	1P+3C	L	Ρ
126OCS2	Construction Pricing 2 Renáta Schneiderová Heralová, Iveta St elcová, Lucie Brožová, Stanislav Vitásek Lucie Brožová Renáta Schneiderová Heralová (Gar.)	Z,ZK	7	2P+4C	L	Ρ
126PJMS	Marketing in construction - project Eduard Hromada, Kate ina Eklová Eduard Hromada Eduard Hromada (Gar.)	KZ	3	2C	L	Ρ
126SWPX	Software for Business Practice Petr Dlask Petr Dlask Petr Dlask (Gar.)	Z	2	2C	L	Ρ
126VEIN	Public Investment Construction Renáta Schneiderová Heralová, Zita Prost jovská Zita Prost jovská Renáta Schneiderová Heralová (Gar.)	Z,ZK	3	2P+1C	L	Ρ
133BZE	Concrete and Masonry Structures E Michaela Frantová Michaela Frantová (Gar.)	Z,ZK	4	2P+2C	L	Ρ

## Characteristics of the courses of this group of Study Plan: Code=BE20230600 Name=Management a ekonomika ve stavebnictví, 6. semestr

124KKT	Completing Constructions	Z,ZK	6
Construction principles	of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings in terms of requirements: building pl	nysical, waterproo	fing, operational,
static, fire, acoustic, bio	logical, chemical, lifetime and recycling. Principles of design of additional elements and details of roof coverings of flat, slopin	ng and steep roof	s based on the
stated requirements an	d given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design	principles and th	e principles of
solving individual group	s of elements from the area of assembly structures. This involves the creation of insulation systems, windows and doors, inte	rnal dividing walls	s, floors and floor
structures and their det	ails.		

126IMAB	Building Information Management (BIM)	Z,ZK	5			
The subject deals with t	he issue of Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction r	projects. It focuse	s on advanced			
applications of informati	ion technology in construction and design companies. Software tools that are used for quality control, measurement, prepara	tion of measurem	ent statements,			
simulation of construction	simulation of construction progress, robotics in land and transport constructions and cybercrime, its risks and measures in construction projects. Part of the content of the subject is					
information on the contr	actual provision of digitization on construction projects.					
126OCS2	Construction Pricing 2	Z,ZK	7			
Price and its importance	e, 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 activit	ties pricing.			
126PJMS	Marketing in construction - project	KZ	3			
The course introduces s	students to basic concepts and techniques in the field of marketing, the links between marketing and other activities in the co	Instruction compa	ny, its role in the			
construction company a	and in society. Students should learn to find market opportunities, segment the market, evaluate market opportunities, build a	simple marketing	j mix, i.e. know			
and master promotion n	nethods, master pricing principles, correctly define the product and determine distribution channels.					
126SWPX	Software for Business Practice	Z	2			
Modern construction pra	actice requires the application of various supporting tools and methods. The course is focused on acquire practical skills in us	ser control not on	ly of office			
applications (especially	MS Excel). The aim is to improve their existing skills and acquire new ones to save time at work. The main goal is to focus or	n such skills that a	are applicable in			
continuing subjects and	practice. It includes the verification of knowledge when creating examples in the exercise.					
126VEIN	Public Investment Construction	Z,ZK	3			
Public sector investmen	t project. Evaluation of revenues and costs, income and expenses in individual phases of the life cycle of the construction pro	oject. Risk and un	certainty in			
investment decision-making.						
133BZE	Concrete and Masonry Structures E	Z,ZK	4			
The course lectures is for	he course lectures is focused on the design of one-way and two-way slabs, staircases, reinforcing walls, foundations, precast structures, halls and prestressed concrete. The course					
also covers masonry construction and an introduction to the design of civil engineering structures and bridges. The content of the practicum is the application of the knowledge and						

### Code of the group: BE20230700

Name of the group: Management a ekonomika ve stavebnictví, 7. 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 8 courses Credits in the group: 30 Note on the group:

skills acquired in lectures to a specific project that students also work with in other courses as part of their studies.

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
124PE1	<b>Structural design project E</b> Malila Noori, Šárka Šilarová, Lenka Hanzalová, B la Stib rková <b>Ji í Pazderka</b> Ji í Pazderka (Gar.)	КZ	4	4C	z	Ρ
125TBUE	Building Services Systems E Karel Kabele, Ilona Koubková, Zuzana Veverková Daniel Adamovský Ilona Koubková (Gar.)	Z,ZK	5	2P+2C	z	Ρ
126DUCE	Tax System and Accounting Jana Frková, Olga Heralová Olga Heralová Jana Frková (Gar.)	Z,ZK	4	2P+1C	L	Ρ
126PJOC	Construction Pricing Project Iveta St elcová, Dana ápová Iveta St elcová Iveta St elcová (Gar.)	КZ	4	4C	L	Ρ
126PRS	<b>Construction Planning and Management</b> Lucie Brožová, Jaroslava Tománková <b>Lucie Brožová</b> Jaroslava Tománková (Gar.)	Z,ZK	5	2P+3C	L	Ρ
126RPRO	Construction Process Management Michal Vondruška Michal Vondruška (Gar.)	Z,ZK	3	1P+1C	Z	Ρ
134ODKM	Steel and Timber Structures Anna Kuklíková, Michal Netušil Michal Netušil Anna Kuklíková (Gar.)	Z,ZK	5	2P+2C	Z,L	Р
1000DPR	Industrial Training (3 weeks) Petr Hájek, Jan R ži ka Michal Jandera Michal Jandera (Gar.)	Z	0	6C	Z,L	Ρ

## Characteristics of the courses of this group of Study Plan: Code=BE20230700 Name=Management a ekonomika ve stavebnictví, 7. semestr

semestr			
124PE1	Structural design project E	KZ	4
Converting an archit	ectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed desi	gn of a building stru	ucture based or
static analysis, intera	action of load-bearing and non-load-bearing elements and building physics. Focus on complex approach to practical design, anal	ysis and optimalizat	tion of a building
structures. Design of	variants of the load-bearing system, preliminary static analysis (calculation of load-bearing elements - slabs, columns, walls, etc	), calculation of four	ndations, desigr
of structures on the	building envelope with respect to thermal protection of buildings, building physics, fire protection of buildings and protection aga	ainst water and soil	moisture.
Elaboration of detail	ed drawings including floor plans, sections and details.		
125TBUE	Building Services Systems E	Z,ZK	5
Basic course in build	ling services systems - water supply, drainage, gas supply, heating and ventilation systems.		
126DUCE	Tax System and Accounting	Z,ZK	4
The subject is divide	d into lectures 1 hour per week and exercises 1 hour per week. Lectures take place according to the course outline listed below	v. In the exercise, s	tudents prepare
their own business p	lan for a selected business activity according to the specified syllabus. Firstly students will work in team with intention to under	stand connections a	among tax,
expenditure policy a	nd will suggest tax adjustments to reduce deficit. The will learn how to prepare Income tax return, Social security and Health In	surance return. Stu	dents will train
how to read and eva	luate Financial Statements and compute VAT.		

126PJOC	Construction Pricing Project	KZ	4			
The aim of this course i	s to introduce students to the budgeting and cost planning of building structures and construction works. Students will carry c	out their own proje	ects and draw up			
three budget plans usin	g the software KROS. The main task of students will be to create a bill of quantities according to the regulation 169/2016 and	to correctly use t	the URS CZ			
database. The students	will use the project documentation of real building structures (the estimate budget should be more than 15 million).					
126PRS	Construction Planning and Management	Z,ZK	5			
Construction project management, project life cycle, engineering, design phase, methods of time scheduling, cost management, procurement systems and contracts, contractor						
management. Safety, qu	uality and environmental management.					
126RPRO	Construction Process Management	Z,ZK	3			
The course will focus or	managerial and technical-economic planning during the basic technological processes of construction. The main focus will i	be on managerial	skills in the			
management and control	ol of building capacities and mechanization from the point of view of the contractor. Students will be acquainted with the princ	iples of practical	cost calculation			
of individual technologic	al processes of construction. Teaching topics will be explained in case studies.					
134ODKM	Steel and Timber Structures	Z,ZK	5			
Steel structures - pros a	nd contras, material properties, fabrication, connections, industrial steel buildings, cables, high strength steel, buildings in te	rms of water engi	neering - load,			
protection, utilization. Ti	mber - loadings, material propertie, limit states methodology, design, connections, bracings, protection of structural timber, tin	mber bridges.				
1000DPR	Industrial Training (3 weeks)	Z	0			
Professional practice is	Professional practice is an important part of academic education in undergraduate degree programmes. The student will gain a basic understanding of duties and professional					
responsibilities. The pro	fessional practice evaluates the sum of all knowledge acquired through previous theoretical studies and is a proof of their ac	quisition.				

### Code of the group: BE20240800

### Name of the group: Management a ekonomika ve stavebnictví, 8. semestr Requirement credits in the group: In this group you have to gain at least 14 credits Requirement courses in the group: In this group you have to complete at least 3 courses Credits in the group: 14

### 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
126FINK	Financing, Investing, Contracts Aleš Tomek	Z,ZK	5	2P+2C	L	Р
126OINS	Pricing of Civil Engineering Works Iveta St elcová	Z,ZK	4	2P+2C	L	Р
126PJRS	Construction Preparation and Management Project Lucie Brožová, Jaroslava Tománková, Dana ápová Lucie Brožová	KZ	5	4C	L	Р

### Characteristics of the courses of this group of Study Plan: Code=BE20240800 Name=Management a ekonomika ve stavebnictví, 8. semestr

Jennesti					
126FINK	Financing, Investing, Contracts	Z,ZK	5		
1260INS	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 – requiremer	nts and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structu	es – EU, SFDI, PI	PP projects Cost		
analysis of transportati	on structures – real projects and cost categories Engineering constructions from the perspective of contracting authority – leg	gal norms and and	other legislature		
Engineering construction	ons from the perspective of contractor – managing of a contract within the construction company Life cycle costs of engineering	constructions Eco	nomic efficiency		
of transportation struct	ures Introduction to estimating software for transportation structures Building information modelling (BIM) and estimating – re	quirements, schee	dule of works		
International methods of planning, estimating and predicting transportation structure costs					
126PJRS	Construction Preparation and Management Project	KZ	5		
Complex project of construction preparation, planning, technical preparation and simulation of building execution on the basis of individual assignment for each student.					

### Code of the group: BE20210800\_2

Name of the group: Management a ekonomika ve stavebnictví, bakalá ská práce 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 1 course 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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
126BAPE	Bachelor Thesis Jan Pruška Daniel Macek (Gar.)	Z	12	10C	L,Z	Р

## Characteristics of the courses of this group of Study Plan: Code=BE20210800\_2 Name=Management a ekonomika ve stavebnictví, bakalá ská práce

126BAPE	Bachelor Thesis	Z	12		
The bachelor thesis finit	shes the bachelor study. A student proves that he/she is able to apply the knowledge acquired in the study on the real projec	t. The bachelor th	esis connects to		
the chosen subjects of the study curricula. The partial results are further evaluated and appropriate conclusions are drawn. Min. 4 continuous consultations with the head of bachelor					
study, where the student submits bachelor study in progress. For students of branch E.					

Code of the group: BTV\_POV

Name of the group: Povinná t lesná výchova

Requirement credits in the group:

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

Credits in the group: 0

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
TV1	Physical Education	Z	0	0+2	Z	PT
TV2	Physical Education	Z	0	0+2	L	PT

#### Characteristics of the courses of this group of Study Plan: Code=BTV\_POV Name=Povinná t lesná výchova

TV1	Physical Education	Z	0
TV2	Physical Education	Z	0

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 4

The role of the block: S

Code of the group: BE20210800\_1

Name of the group: Management a ekonomika ve stavebnictví, PV p edm ty Requirement credits in the group: In this group you have to gain at least 4 credits Requirement courses in the group: In this group you have to complete at least 1 course Credits in the group: 4

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
126YIPD	Small Business Jana Frková, Olga Heralová Petr Kal ev Jana Frková (Gar.)	Z,ZK	4	2P+2C	L	S
126YSWO	Construction Estimation Software Lucie Brožová, Dana ápová Lucie Brožová	Z,ZK	4	2P+2C	L	S
126YTRO	Decision theory Eduard Hromada	Z,ZK	2	1P+1C	L	S
126ZIPN	Basics of innovative business Dana M š anová Dana M š anová Dana M š anová (Gar.)	Z,ZK	2	1P+1C	L	S
126YPER	Human resource management Eduard Hromada, Olga Heralová Michal Vondruška Olga Heralová (Gar.)	Z,ZK	2	1P+1C	L	S
126MCC	Management in Construction Company Aleš Tomek, Radan Tomek Aleš Tomek Aleš Tomek (Gar.)	Z,ZK	5	2P+2C	L	S

## Characteristics of the courses of this group of Study Plan: Code=BE20210800\_1 Name=Management a ekonomika ve stavebnictví, PV p edm tv

126YIPD	Small Business	Z,ZK	4
126YSWO	Construction Estimation Software	Z,ZK	4
The teaching is focus	d on familiarization with cost calculation SW for item preparation		
126YTRO	Decision theory	Z,ZK	2
126ZIPN	Basics of innovative business	Z,ZK	2
126YPER	Human resource management	Z,ZK	2
Main intention is to m	ake students familiar with practical HR management in construction company with focus on hiring, adaptation, motivation, lead	lership and remun	eration. Within
classes theory is com	bined with trainings (model situations).		
126MCC	Management in Construction Company	Z,ZK	5
Nature of Construction	Business Primary Causes of Business Failure, External and Internal Influences Business Strategies to Minimize the Risk of Busin	ess Failure Busine	ss Development,
Marketing and Bidding	Planning Strategies Plan Implementation/Control Strategies Financial Management Strategies Construction Risk Management Lea	adership Challenge	es Organizational
Behavior Corporate 8	amp; Employee Ethics Company Performance Checklist Managing Profitable Construction Business Lectures are based on th	e real practice exp	perience of all
course's lecturers and	I various case studies are studied and solved. Online Building Industry Game (BIG) will be played by all course participants throug	gh the whole seme	ester (a computer
simulation of a realist	ic business environment where participants play the role of contractors, competing in a market with variable demand for constr	uction work). In th	is online game,
developed and direct	y operated by the California Polytechnic State University, students act as contractors, managing both, their companies and pro	jects.	

### Code of the group: BF20190101\_I Name of the group: Povinn volitelný jazyk, 1. semestr Requirement credits in the group: In this group you have to gain at least 1 credit Requirement courses in the group: In this group you have to complete at least 1 course Credits in the group: 1

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
104YCA1	English 1 Hana Horká, Petra Martincová, Petra Florianová, Sandra Giormani, V ra ermáková, Svatava Boboková Bartíková, Elena Da eva, Jarmila Fu íková, Michaela Németh, Svatava Boboková Bartíková Sandra Giormani (Gar.)	Z	1	2C	Z,L	J
104YCN1	<b>German 1</b> Svatava Boboková Bartíková <b>Svatava Boboková Bartíková</b> Svatava Boboková Bartíková (Gar.)	Z	1	2C	Z,L	J

#### Characteristics of the courses of this group of Study Plan: Code=BF20190101\_I Name=Povinn voliteIný jazyk, 1. semestr

104YCA1 English 1

Z 1

The compulsory course - German Language for Civil Engineering is aimed at practising professional vocabulary within the scope of the construction industry, understanding professional texts, and learning the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A.Hanáková, J.Dressel: Deutsch im Bauwesen

### Code of the group: BF20190202\_I

Name of the group: Povinn volitelný jazyk, 2. semestr

Requirement credits in the group: In this group you have to gain at least 2 credits

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

### Credits in the group: 2

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
104YC2A	English 2 Hana Horká, Petra Martincová, Petra Florianová, Sandra Giormani, V ra ermáková, Svatava Boboková Bartíková, Elena Da eva, Jarmila Fu íková, Michaela Németh, Svatava Boboková Bartíková Sandra Giormani (Gar.)	Z,ZK	2	2C		J
104YC2N	German 2 Svatava Boboková Bartíková Sandra Giormani Svatava Boboková Bartíková (Gar.)	Z,ZK	2	2C		J

#### Characteristics of the courses of this group of Study Plan: Code=BF20190202\_I Name=Povinn volitelný jazyk, 2. semestr

s to enhance				
nal language				
be able to				
on. Literature:				
2				
The compulsory course - German Language for Civil Engineering is aimed at practising professional vocabulary within the scope of the construction industry, understanding professional				
texts, and learning the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A.Hanáková, J.Dressel:				
Deutsch im Bauwesen				
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### List of courses of this pass:

10000PR         Industrial Training (3 weeks)         Z         0           Professional practice exclustes the unit of all including exclustes the unin of all including exclustes the unit of all including	Code	Name of the course	Completion	Credits
Projectors and prioritive methods. Automatry Configure projection. Christoparate accomments (Distance and curvature. Helical surfaces. Quarters. Building industry.           101MAZ         Mathematics 1         CZK         6           101MAZ         Mathematics 1         CZK         6           101MAZ         Mathematics 2         CZK         6           101MAZ         Physics         CZK         6           102FV1         Physics         CZK         6           102FV2         Physics         CZK         6           102FV1         Physics         CZK         2           104YC2A         Physics         CZK         2           104YC2A         Engleterine diversion sints accounts of the diversion sints accou	Professional pra	actice is an important part of academic education in undergraduate degree programmes. The student will gain a basic understanding	of duties and prof	-
Intervent         Intervent calculation           101MA2E         Mathematics 2         Z.ZK         6           101MA3E         Mathematics 3         Z.ZK         6           101MA3E         Mathematics 3         Z.ZK         4           101MA3E         Physics         Z.ZK         4           101MA3E         English 2         Construction 1000000000000000000000000000000000000	Projections and p	rojective methods. Axonometry. Oblique projection. Orthogonal axonometry. Displaying prisms, cones, cylinders, pyramids, balls. Sim of solids and groupes of solids. Perspective projection. Curves, parametrisation. Frenet's trihedron, torsion and curvature. Helical sur	ple problems in ax	onometry.
Integrimative court.ex/yukabakatain/engzk/         ZZK         6           1021MA3E         Mathematics 3         ZZK         6           102FY1         Physics         ZZK         4           This is a basic physics curse for students of the study pogrammes (CVI Engineering, Managemart and Econencis in Constructions model or matchanics and basic homendy-mains: The following areas are covered in the course Mechanical curse is an endial point (particle). Mechanical is following areas are covered in the course Mechanics of matching and thermody-mains: The toruse follows. Durest and combines of thermody-mains: The following areas are covered in the course is coverable to the course also seaks to a theore how course of the interval endities of thermody-mains: Least nucleus to an endities of the coverable obsis. Dure device for easis and gammar within the cost or within the construction industry. The course also seaks to take the overall flocas is on protessional language to CNI Engineship (Linear and Andress) studies in general (Academic English / the overall flocas is on protessional language to CNI Engineship (Linear and Andress) studies in general (Linear and Andress) and the advector and a studies of the coveral blocas is on protessional language to CNI Engineering (Linear Andress) and the more theore and the coveral flocas is on protessional language to CNI Engineering (Linear Andress) and the more and the coveral to express the more theore and the coveral to express and and an examination. Literature A Handacok, J.Dresset 1           104YCCN         German 2         Z/ZK         1           104YCCN         English 1         English 1         English 1         Z/ZK         1           104YCCN<	101MA1E		Z,ZK	6
Integritment for courte crystylaababalanilengized'         Z,K         4           This is a basic physics course for students of the study programmes CVI Engineering Management and Economics in Construction course forces on mechanics and basic betwordsprances. The following areas are covered in the course forces forces for anticipants field the charanical vibrations. Material deformation. Elastic waves. Accurates, Hydronechanics. Fundamentalian of the field the charanical vibrations. Material deformation. Elastic waves. Accurates, Hydronechanics. Fundamentalian of the mechanical on the gradient of the mechanical vibration of the mechanical on the strategies of the cover field of study and university studies in general (Academic English). The overal focus is on professional language (e.g., ESP: technical style) and communicative completerow within the construction industry. The cover also seeks to accurate and seaks to the mechanical libratic and the advect on the status in the score of the construction industry. The covers also seeks to accurate and seaks to a material participant of the cover also seeks to accurate and seaks to a material participant of the cover also seeks to accurate and seaks to a material participant of the cover also seeks to accurate and seaks to accurate and and an camination. Literature is a cell and an examination. Literature is a cell and an examination. Literature is a cell and an examination. Literature is a cell and and the cover and the advector and accurate and participant of the cover and the cover and the advector and accurate the seaks to accurate seasonal industry industry and accurating professional tests, and learning the necessary presentation skills in order to present al relevant professional tests. The end-charce regulation for CVI English Cover and the season effect of study and university studies in general (Academic English).         Z_ZK         Z         1	101MA2E		Z,ZK	6
This is a basic physics course for students of the study programmes (Vii Engineering, Management and Economics in Construutes house to construutes model and study thermodynamics. The following reaso are covered in the course Mechanics and Mechanical vibrations. Material deformation, Eluster waves, Acoustics, Hydromechanics. Endatamettal of thermodynamics. Heat transfer.  1047C2A  1047C2A  English 2 English 2 2.Z.K 2 English 2 2.Z.K 2 English 2 2.Z.K 2 English 2 2.Z.K 2 2 English 2 2.Z.K 2 2 2 2.Z.K 2 2 2 2.Z.K 2 2 2 2.Z.K 2 2 2 2 2.Z.K 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	101MA3E		Z,ZK	6
themedynamics. The following areas are covered in the course: Mechanics of material points (particles) and deformable bodies. Discrete and continuous model of matter: Rimenatics and dynamics of a material point (particle). Mechanical fore fields. Gravitational field. Mechanical deformation: Einstex weres. Acoustics: Hydromechanics: Fourtamentatis of thermodynamics. Heat transfer.  104YC2A  2 English 2 Course code: 104YC2A Scope 0 + 2 (practical sessions) Number of credits: 1 Final sessesment: credit and examine and the compulsory Foglish course is to enhance the knowledge of deise and grammer within the scope of the chosen field of davidy and university studies in general (Cademic English): the overaft david as material beneral sessis in the field of davidy and university studies in general (Cademic English): the overaft and an examination. Literature:  104YC2M  1	-			-
English 2 course code: 104YC2A Scope: 0 + 2 (practical sessions) Number of credits: 1 Final assessment: credit and examine English, the vorvelf loca: as on professional language (i.e., ESP - technical skyle) and communicative competence within the construction industry. The course also seeks to teach valuement to be able to be oble to examination. Literature and to be able to econstruction industry. Understanding professional industry within the scope of the construction industry. Understanding professional and course requirements are a credit and an examination. Literature is and to be able to econstruction industry. Understanding professional issues. The individed of study. The and or course requirements are a credit and an examination. Literature is a dealt. Literature: A Hanková, J. Dresest: Deatsch in Backsen and earning the necessary presentation solits in order to present all relevant professional issues. The end-of-course requirements is a credit. Literature: A Hanková, J. Dresest: Deatsch in Backsen and earning the necessary presentation solits in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A Hanková, J. Dresest: Deatsch in Backsen and earning the necessary presentation solits in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A Hanková, J. Dresest: Deatsch in Backsen and econstruction industry. Indextrase and to be able to produce essential written discourse and to express themselves in writing on issues in their field of study. The end of course requirements are a credit. All and solits in correlation professional language (i.e., ESP - technical seles) and grammar within the scope of the construction industry. The course also seeks to teach within the scope of the compation y Chinks of Englineering is almose their field of study. The end of course requirements are credit. Literature: Hankova, J. Dresest: Deatsch in Backsen and Solits in order to present all relevant professional iss	thermodynamics. T	he following areas are covered in the course: Mechanics of material points (particles) and deformable bodies. Discrete and continuous of a material point (particle). Mechanical force fields. Gravitational field. Mechanical vibrations. Material deformation. Elastic waves. And	us model of matter.	Kinematics
The compulsary course - German Language for Civil Engineering is aimed at practising professional vocabulary within the scope of the construction industry, understanding professional isues. The enclot-course requirement is a credit. Literature: A Hanáková, J.Dressel: Deutsch im Bauwesen           104YCA1         Z         1           English 1         Z         1           Endits 2000 competione within the construction industry. The course also seeks to chachts to read technical literature and to be able to produce essential within discourse and to express themaelves in writing on issues in their field of study. The end of course requirements are credit. Literature: Horizature: A Hañáková, J.Dressionia texts, and learning the necessary presentation skills in order to present all relevant professional issues. The endot-course requirement is a credit. Literature: A Hañáková, J.Dressionia texts, and learning the necessary presentation skills in order to present all relevant professional issues. The encloyee dette set study for the construction industry, understanding professional issues. The encloyee dette set study for the construction industry. Understanding profesional t	English 2 Course of the knowledge of l (i.e., ESP - techn	ode: 104YC2A Scope: 0 + 2 (practical sessions) Number of credits: 1 Final assessment: credit and exam The aim of the compulsory exis and grammar within the scope of the chosen field of study and university studies in general (Academic English); the overall focu ical style) and communicative competence within the construction industry. The course also seeks to teach students to read technica written discourse and to express themselves in writing on issues in their field of study. The end of course requirements are a credit a	English course is s is on professiona al literature and to l nd an examination	to enhance I language be able to
texts, and learning the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A Hanåkovå, JDressel:           104YCA1         English 1         Z         1           English 1         Completing and the compulsory English course is to enhance the knowledge of elosis and grammar within the scope of the chosen field of study, and university studies in general (Academic English); the overall focus is on professional language (i.e., ESP - technical style) and communicative competence within the construction industry. The eaves also seeks to teach studies to read technical literature: And to be able to produce essential written discourse and to express the method study of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Industry. Understanding professional tocabulary within the scope of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Understanding professional tocabulary within the scope of the construction industry. Industry indus				
English 1 Course code: 104Y CA1 Scope: 0 + 2 (practical sessions) Number of credits <sup>-1</sup> Final assessment: credit Literature: Hork and provides in an interval of the scope of the chosen field of study and university studies in general (Academic English); the overal locus is on professional language (i.e., ESP - technical style) and communicative competence within the costruction industry. The oruse also seeks to teach students to read technical literature and to be able to produce essential victue discourse and to express themselves in writing on issues in their field of study. The end of ocurse requirements are a credit. Literature: Horká Hana, Giormani Sandra, Martincová utext, and learning the necessary presentation skills in order to present all relevant professional losses. The end-of-ocurse requirement is a credit. Literature: A hankková, J. Dressel: Deutsch im Bauwesen           122TEK         Technology of Construction - E         Z,ZK         6           Earnivork, design of pil excavation and supporting's technologies. Design of formwork. Concrete mixer plant, concrete conveying, concreting. Brickwork's technologies, Roofing work, tru work.         123CHE         Z,ZK         4           Introduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere, Chemistry of uniding materials - inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials - to analytical chemistry.         5           Building materials - basis course. Classification of the materials. Structure of materials. Mai properties of materials. Application of materials in building constructions on a study and proving of the design of roo coverings of fits, sloping and steep roofs based on the state of requirements and		the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Liter		
104YCN1         German 1         Z         1           The compulsory course - German Language for Civil Engineering is aimed at practising professional vocabulary within the scope of the construction industry, understanding professional texts, and learning the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A Hanàkovà, J.Dressel: Deutsch im Bauwesen           122TSEK         Technology of Construction - E         Z,ZK         6           Earthwork, design of pit excavation and supporting's technologies. Design of formwork. Concrete mixer plant, concrete conveying, concreting, Brickwork's technologies, Roofing work, tin work.         2,ZK         4           1troduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere. Chemistry of building materials - inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials and to analytical chemistry.         2,ZK         4           Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building construction. Immediate testing.         2,ZK         6           124KKT         Completing Constructions         Z,ZK         6           Construction principles of the design of roof coverings for flat, sloping and theep roofs. The design of root coverings of flat, sloping and steep roots based on the stated requirements: building physical, waterprofing, operational, state, fre, acoustic, bi	English 1 Course co of lexis and gram technical style) and	ode: 104Y CA1 Scope: 0 + 2 (practical sessions) Number of credits: 1 Final assessment: credit The aim of the compulsory English cours mar within the scope of the chosen field of study and university studies in general (Academic English); the overall focus is on profes communicative competence within the construction industry. The course also seeks to teach students to read technical literature and and to express themselves in writing on issues in their field of study. The end of course requirements are a credit. Literature: Horká Hana	se is to enhance the sional language (i. to be able to produ	e., ESP - ce essential
texts, and learning the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Literature: A Hanáková, J.Dressel:         Deutsch im Bauwesen         122TSEK       Technology of Construction - E       Z,ZK       6         Earthwork, design of pit excavation and supporting is technologies. Design of tornwork. Concrete mixer plant, concrete conveying, concreting. Brickwork's technologies, Roofing work, tin work.         123CHE       Chemistry       Z,ZK       4         Introduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of subiding materials and to analytical chemistry.       2,ZK       5         Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing.       Z,ZK       6         Construction principles of the design of root coverings for flat, sloping and steep roots. The design of root coverings of the design provides and the principles of solving in dividual groups of elements from the area of assembly structures based on the teories of design principles of solving individual groups of elements from the area of assembly structures and their details.       4         124PE1       Structural design project E       KZ       4         Converting an architectural study of a smaller or medium-sized building for housing, administration, education, education, subtras, sinteraction of building structures and their details.       4         Des	104YCN1		Z	1
Earthwork, design of pit excavation and supporting's technologies. Design of formwork. Concrete mixer plant, concrete conveying, concreting. Brickwork's technologies, Roofing work, tin work.           123CHE       Chemistry       Z,ZK       4         Introduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere. Chemistry of building materials - inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials and to analytical - themistry.         123SH01       Building Materials       Z,ZK       5         Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing.       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings of flat, sloping and steep roofs based on the stated requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design principles of the design of roof coverings of flat, sloping and steep roofs based on their details.       4         124KF1       Completing Constructions       Z,ZK       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs based on the theories of design principles and the principles of solving individual groups of elements from the area of assembly structures basen bly structures based on the theories of design, analysis and optimalization of a building and theore sof design on a dation and thei		the necessary presentation skills in order to present all relevant professional issues. The end-of-course requirement is a credit. Liter		
tin work.       Introduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere. Chemistry of building materials - inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials and to analytical chemistry.         123SH01       Building Materials       Z,ZK       5         Building materials - basis course. Clasification of the materials. Structure of materials morporties of materials. Application of materials in building constructions. Introduction to material testing.       2,ZK       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings of roof coverings of rat, sloping and steep roofs. The design of roof coverings of roof coverings of flat, sloping and steep roofs based on the stated requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design principles of the design of roof coverings of requirements and doors, internal dividing walls, floors and floor structures and their details.         124PE1       Structural design project E       KZ       4         Converting an architectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed design of a building structure based on structures. Design of variants of the load-bearing and non-load-bearing elements and ysis (calculation of buildings and protection against water and soil moisture. Elaboration of detailed drewings including floor plans, sections on details.         124PE1       Building Structures				-
Introduction to general chemistry - chemical bond, compounds, reactions, equilibrium. Chemistry of environment - water, atmosphere, pedosphere. Chemistry of building materials - inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials and to analytical chemistry.         123SH01       Building Materials       Z,ZK       5         Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing.       Z,ZK       6         124KKT       Completing Constructions       Z,ZK       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings of flat, sloping and steep roofs based on the stated requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design of roof structures. This involves the creation of insulation systems, windows and doors, internal dividing walls, floors and floor structures and their details.         124PE1       Structural design project E       KZ       4         Converting an architectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed design, analysis and optimalization of a building structures based on the building envelope with respect to thermal protection of building shycics. Focus on complex approach to practical design, analysis and optimalization of a building structures based on the using, administratin, education of load-bearing elements - slab		tin work.	-	
inorganic binders, glass, ceramic, metals, natural polymers, wood, synthetic polymers on C and Si basis. Introduction to degradation of building materials and to analytical chemistry.         123SH01       Building Materials       Z,ZK       5         Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing.       2,ZK       6         124KKT       Completing Constructions       Z,ZK       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings of flat, sloping and steep roofs based on the state requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design principles and the principles of solving individual groups of elements from the area of assembly structures. This involves the creation of insulation systems, windows and doors, internal dividing walls, floors and floor structures and their details.         124PE1       Structural design project E       KZ       4         Converting an architectural study of a smaller or medium-sized building physics. Focus on complex approach to practical design, analysis and optimalization of a building structure based on static analysis, interaction of load-bearing system, preliminary static analysis (calculation of load-bearing elements - slabs, columns, walls, etc), calculation of a building structures. Design of variants of the load-bearing system, preliminary static analysis, including floor plans, sections and details.       Z       4         124PE1		•		
Building materials - basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building constructions. Introduction to material testing.         124KKT       Completing Constructions       Z,ZK       6         Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings in terms of requirements: building physical, waterproofin, operational, static, fire, acoustic, biological, chemical, lifetime and recycling. Principles of design of additional elements and details of roof coverings of flat, sloping and steep roofs based on the stated requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design principles and the principles of solving individual groups of elements from the area of assembly structures. This involves the creation of insulation systems, windows and doors, internal dividing walls, floors and floor structures and their details.         124PE1       Structural design project E       KZ       4         Converting an architectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed design of a building structure based on static analysis, interaction of load-bearing and non-load-bearing elements and building physics. Focus on complex approach to practical design, analysis and optimalization of a building structures on the building envelope with respect to thermal protection of buildings, building floor plans, sections and details.       Z       4         124PE1       Building Structures 1       Z       4         Converting on of variants of the load-bear	-			
Construction principles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings in terms of requirements: building physical, waterproofing, operational, static, fire, acoustic, biological, chemical, lifetime and recycling. Principles of design of additional elements and details of roof coverings of flat, sloping and steep roofs based on the stated requirements and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design principles and the principles of solving individual groups of elements from the area of assembly structures. This involves the creation of insulation systems, windows and doors, internal dividing walls, floors and floor structures and their details.           124PE1       KZ       4         Converting an architectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed design of foundations, design of structures. Design of variants of the load-bearing system, preliminary static analysis (calculation of building physics, fire protection of buildings and protection against water and soil mostructure. Elaboration of detailed drawings including floor plans, sections and details.       2       4         124PS1E       Building Structures 1       Z       4         Converting an architectural study of a smaller or medium-sized building on buildings, building physics, Frocus on complex approach to practical design, analysis and optimalization of a building structures based on the using and protection of foundations, design of structures on the building envelope with respect to thermal protection of buildings physics, fire protection of buildings and protection against water and soil mostructure. Elaboration of detailed drawings including floor plans, sections and details. <td></td> <td>- basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building</td> <td></td> <td></td>		- basis course. Clasification of the materials. Structure of materials. Main properties of materials. Application of materials in building		
Converting an architectural study of a smaller or medium-sized building for housing, administration, education, culture or sports into a detailed design of a building structure based on static analysis, interaction of load-bearing and non-load-bearing elements and building physics. Focus on complex approach to practical design, analysis and optimalization of a building structures. Design of variants of the load-bearing system, preliminary static analysis (calculation of load-bearing elements - slabs, columns, walls, etc), calculation of foundations, design of structures on the building envelope with respect to thermal protection of buildings, building physics, fire protection of buildings and protection against water and soil moisture. Elaboration of detailed drawings including floor plans, sections and details.  124PS1E Building Structures 1 Z 4  The concept of design of building structures with a comprehensive consideration of the functional requirements imposed on individual elements. Requirements for building structures, structural system, interaction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, ceramic concrete ceilings, steel and steel	Construction princip static, fire, acousti stated requiremen solving individual g	bles of the design of roof coverings for flat, sloping and steep roofs. The design of roof coverings in terms of requirements: building physic, biological, chemical, lifetime and recycling. Principles of design of additional elements and details of roof coverings of flat, sloping ts and given boundary conditions. Designing and the ability to select suitable assembly structures based on the theories of design proups of elements from the area of assembly structures. This involves the creation of insulation systems, windows and doors, internal structures and their details.	cal, waterproofing, and steep roofs ba rinciples and the p I dividing walls, floc	operational, sed on the rinciples of ors and floor
static analysis, interaction of load-bearing and non-load-bearing elements and building physics. Focus on complex approach to practical design, analysis and optimalization of a building structures. Design of variants of the load-bearing system, preliminary static analysis (calculation of load-bearing elements - slabs, columns, walls, etc), calculation of foundations, design of structures on the building envelope with respect to thermal protection of buildings, building physics, fire protection of buildings and protection against water and soil moisture. Elaboration of detailed drawings including floor plans, sections and details.          124PS1E       Building Structures 1       Z       4         The concept of design of building structures with a comprehensive consideration of the functional requirements imposed on individual elements. Requirements for building structures, structural system, interaction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, ceramic concrete ceilings, steel and steel		5 T 7	1	
The concept of design of building structures with a comprehensive consideration of the functional requirements imposed on individual elements. Requirements for building structures, structural system, interaction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principles of the structural design of walls, columns), floor structures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, ceramic concrete ceilings, steel and steel	static analysis, inter structures. Design c	action of load-bearing and non-load-bearing elements and building physics. Focus on complex approach to practical design, analysis a of variants of the load-bearing system, preliminary static analysis (calculation of load-bearing elements - slabs, columns, walls, etc), cal the building envelope with respect to thermal protection of buildings, building physics, fire protection of buildings and protection again	and optimalization	of a building ions, design
structural system, interaction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principles of the structural design of walls, columns), floor structures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, ceramic concrete ceilings, steel and steel		-		
	structural system, columns), floor stru	interaction of elements, spatial effect of the structural system. Vertical load-bearing structures (functions, requirements, principles of ctures (functions, requirements, principles of the structural design of vaults, wooden ceilings, reinforced concrete ceilings, ceramic co	the structural design ncrete ceilings, ste	gn of walls, el and steel

124PS2E	Building Structures 2	Z,ZK	4			
Staircases, sloping	ramps, lift shafts - requirements, structural and material solutions, basics of typology, design principles, construction details, railing. Bu	ilding foundations	- foundation			
conditions, types of	foundations, requirements, building plinth area (construction details). Basement - solution of basement walls, requirements, protection	n against water, wa	aterproofing			
systems. Structural expansion joints in buildings - principles of joints design in bearing structures, thermal expansion, compensation of differences in settlement, construction details.						
	Roof truss systems.					
125TBUE	Building Services Systems E	Z,ZK	5			
	Basic course in building services systems - water supply, drainage, gas supply, heating and ventilation systems.		4.0			
126BAPE	Bachelor Thesis	Z	12			
	s finishes the bachelor study. A student proves that he/she is able to apply the knowledge acquired in the study on the real project. Th to of the study curricula. The partial results are further evaluated and appropriate conclusions are drawn. Min. 4 continuous consultati					
the chosen subject	study, where the student submits bachelor study in progress. For students of branch E.	ons with the nead of				
126BIM1	BIM	Z	1			
	s on teaching basic knowledge in the field of Building Information Management (BIM) in theoretical and practical areas, applicable ac	- 1	cialisations			
	e construction industry. Students will be introduced to data formats, data standards, intellectual property issues, working with digitized	-				
graphics, open data	sources in the Czech Republic, ICT and enterprise systems, information systems for the construction industry, but also the context of I	BIM in the current o	construction			
industry in relation	to the entire project life cycle and its specifics (delivery, expert focus, phases of construction projects, etc.) The theoretical knowledge	is complemented	by practical			
	exercises aimed at mastering and understanding the basic principles of object-oriented parametric modelling.					
126DOMT	Development, property valuation and real estate market	Z,ZK	5			
	s basic knowledge about the functioning of the commercial and residential real estate market, supplemented by examples from practice		-			
	rocess and its individual phases from acquisition, through planning, own construction and exit - practical examples. Compilation of the		· ·			
	ptions for development projects and existing investment properties, different aspects of individual types of investors in real estate proj ption of the considered development in the specified area, including a layout design, market analysis, financing proposal, budget and p	-				
	project (in the form of consultations during the entire semester)		evelopment			
126DUCE	Tax System and Accounting	Z.ZK	4			
	ed into lectures 1 hour per week and exercises 1 hour per week. Lectures take place according to the course outline listed below. In t	,				
-	ss plan for a selected business activity according to the specified syllabus. Firstly students will work in team with intention to understa					
expenditure policy	and will suggest tax adjustments to reduce deficit. The will learn how to prepare Income tax return, Social security and Health Insura	nce return. Studen	its will train			
	how to read and evaluate Financial Statements and compute VAT.					
126EKMN	Economics and Management	Z,ZK	7			
	urse is to provide students with an introduction to economics and management in the construction industry and to familiarize them with					
	plications. Students will be prepared to solve basic construction-management problems in the construction industry. They will acquire construction works and master the basic methods of managing a construction company. Emphasis is placed on understanding the pri					
method of photing c	relation to the construction industry.		, uninting in			
126EKST	Economic Statistics	Z,ZK	4			
12021101	The content of the subject is applied economic statistics. Familiarization with statistical theory and subsequent application to solved	· .				
126FINK	Financing, Investing, Contracts	Z,ZK	5			
126IMAB	Building Information Management (BIM)	Z,ZK	5			
The subject deals	with the issue of Building Information Modeling (BIM) as a modern tool for the design, construction and operation of construction pro	jects. It focuses on	advanced			
applications of info	rmation technology in construction and design companies. Software tools that are used for quality control, measurement, preparation	of measurement s	statements,			
simulation of cons	truction progress, robotics in land and transport constructions and cybercrime, its risks and measures in construction projects. Part o	f the content of the	e subject is			
1001100	information on the contractual provision of digitization on construction projects.					
126MCC	Management in Construction Company ion Business Primary Causes of Business Failure, External and Internal Influences Business Strategies to Minimize the Risk of Business I	Z,ZK	5			
	ng Planning Strategies Plan Implementation/Control Strategies Financial Management Strategies Construction Risk Management Leaders					
-	te & amp; Employee Ethics Company Performance Checklist Managing Profitable Construction Business Lectures are based on the r		-			
	nd various case studies are studied and solved. Online Building Industry Game (BIG) will be played by all course participants through th					
simulation of a rea	listic business environment where participants play the role of contractors, competing in a market with variable demand for constructi	on work). In this or	nline game,			
deve	loped and directly operated by the California Polytechnic State University, students act as contractors, managing both, their companie	es and projects.				
126OCS1	Construction Pricing 1	Z,ZK	5			
	-related consumption of work and resources, valued and expressed in monetary units. The aim of the course is to teach the student to us					
	urthermore, use the normative and data base, and adapt the normative base for new materials and technologies, or creating. Basic p					
	dustry. Organization and standardization of work in the company, production process, time consumption. Standardization of labor con s, documents. Standardization of material consumption, examples, documents. Standardization of the need for machines - productivity,	-	- 1			
	costs - payroll system, job catalog, wage rate calculation. Costs - breakdown of costs, calculation methods and techniques, calculation b		• • •			
	on, examples, documents. Individual costing - costing formula, content of components, examples, documents. Methods of non-absor	•				
variable costs), exa	mples. Influencing the amount of material costs, wages, machine operation, overhead. Cost modeling, break-even analysis, examples	. Managerial conce	ept of costs.			
126OCS2	Construction Pricing 2	Z,ZK	7			
	rtance, price factors, price strategies, types of contract, estimating at different stages of project, price setting data. Price creation - or					
-	hod of price creation. Methods of creating the bid price. Labor and equipment rates per hour. IT support for estimating. Engineering a					
1260INS	Pricing of Civil Engineering Works	Z,ZK	4			
	f transportation structures I – normative prices, aggregated items Cost database of transportation structures II – OTSKP catalogue S ments and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structures –					
	ments and sources Cost estimation of transportation structures – basic principles, techniques Financing of transportation structures – rtation structures – real projects and cost categories Engineering constructions from the perspective of contracting authority – legal r					
, ,	uctions from the perspective of contractor – managing of a contract within the construction company Life cycle costs of engineering con-		° .			
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					
126PJMS	Marketing in construction - project	KZ	3			
	ces students to basic concepts and techniques in the field of marketing, the links between marketing and other activities in the constr					
construction comp	any and in society. Students should learn to find market opportunities, segment the market, evaluate market opportunities, build a sir		k, i.e. know			
	and master promotion methods, master pricing principles, correctly define the product and determine distribution channels					

126PJOC	Construction Pricing Project	KZ	4
	irse is to introduce students to the budgeting and cost planning of building structures and construction works. Students will carry out i		
three budget pla	ns using the software KROS. The main task of students will be to create a bill of quantities according to the regulation 169/2016 and	-	URS CZ
4000 000	database. The students will use the project documentation of real building structures (the estimate budget should be more than 15		-
126PJRS	Construction Preparation and Management Project oject of construction preparation, planning, technical preparation and simulation of building execution on the basis of individual assign	KZ	5
126PRS	Construction Planning and Management	Z,ZK	5
	ject management, project life cycle, engineering, design phase, methods of time scheduling, cost management, procurement system		
	management. Safety, quality and environmental management.		
126RPRO	Construction Process Management	Z,ZK	3
The course will f	ocus on managerial and technical-economic planning during the basic technological processes of construction. The main focus will b		
management and	control of building capacities and mechanization from the point of view of the contractor. Students will be acquainted with the principle	es of practical cost	calculation
	of individual technological processes of construction. Teaching topics will be explained in case studies.		_
126RSPR	Construction Project Management	Z,ZK	5
The subject provid	des a basic overview of project management. It defines the life cycle of a construction project. Content of individual phases of the proj evaluation of the construction project.	ect life cycle. Prepa	aration and
126SLEG	Building Legislation	Z	2
	g and construction code law. Public procurement law. Definition of terms. Commercial contractual relationships. Main contract types in	I – I	
	conclusion of a future contract, purchase contract, contract for work, Contents of the contract.		
126SRPB	Facility Management and Operation	Z,ZK	4
The content of the	subject is the management and control of the operation of buildings using the support of modern technologies. Familiarization with the	issues of impleme	entation and
operation of facility	management using the CAFM system. The focus of the software support will be both on the passportization of basic property data and	I, in particular, on th	ne planning,
	management and evaluation of the most frequently used facility management processes.		
126SWPX	Software for Business Practice	Z	2
	cition practice requires the application of various supporting tools and methods. The course is focused on acquire practical skills in us cially MS Excel). The aim is to improve their existing skills and acquire new ones to save time at work. The main goal is to focus on su		
	continuing subjects and practice. It includes the verification of knowledge when creating examples in the exercise.		
126VEIN	Public Investment Construction	Z,ZK	3
	restment project. Evaluation of revenues and costs, income and expenses in individual phases of the life cycle of the construction pro		-
	investment decision-making.		
126YIPD	Small Business	Z,ZK	4
126YPER	Human resource management	Z,ZK	2
Main intention is t	o make students familiar with practical HR management in construction company with focus on hiring, adaptation, motivation, leaders	ship and remunerat	tion. Within
	classes theory is combined with trainings (model situations).		
126YSWO	Construction Estimation Software	Z,ZK	4
126YTRO	The teaching is focused on familiarization with cost calculation SW for item preparation	Z,ZK	0
12671RO	Decision theory Basics of innovative business	Z,ZK Z,ZK	2
132PRE		Z,ZK Z,ZK	6
	Strength of Materials he theory of elasticity: stress and strain of straight beams subjected to bending and free torsion, ultimate plastic capacity of a membe		-
	kling lengths of straight compression members. Basic assumptions, quantities, and equations describing the stress and strain state in	-	
132SME1	Structural Mechanics 1	Z,ZK	6
	force systems acting on rigid bodies in space/plane, moment of a force about a point and line. Supports of a rigid body, reaction force		dimensional
	structures. Trusses. Reaction forces applying the principle of virtual work.		
132SME2	Structural Mechanics 2	Z,ZK	6
	agrams of simple statically determinate plane structures and compound two-dimensional structures. Multiaxially loaded cantilever. De		tress and
	positions of its distribution in a cross section. Equivalence of internal forces. Geometry of mass and areas, centre of gravity and mor		
132SME3	Structural Mechanics 3	Z,ZK	5 of boomo
	prce method for the solution of reactions and internal forces on statically indeterminate beams, frames, and truss structures. Calculativ frames, and truss structures using the principle of virtual works.		S OI DEallis,
133BZE	Concrete and Masonry Structures E	Z,ZK	4
	is focused on the design of one-way and two-way slabs, staircases, reinforcing walls, foundations, precast structures, halls and pre		
also covers maso	nry construction and an introduction to the design of civil engineering structures and bridges. The content of the practicum is the app	lication of the know	ledge and
	skills acquired in lectures to a specific project that students also work with in other courses as part of their studies.		
133NNKB	Fundamentals of Structural Design - Concrete	Z,ZK	4
	e subject are the basics of load-bearing concrete structures design and the design methodology according to valid standards, includ		
	perties of concrete, the production and testing of concrete, the properties of concrete reinforcement and its interaction with concrete oncrete structures for basic types of loading (bending, shear, pressure) are the main part of this course. An introduction to serviceabi		-
	he course follows the introductory subject of Civil Engineering program (Structural Mechanics, Elasticity and Strength, Building Mater	-	
134NNKO	Design of Supporting StructuresI - Steel	Z,ZK	3
	gning steel, steel-concrete and wooden load-bearing structures according to applicable standards, including the determination of load	I ' I	-
	to the specific properties of individual materials.		
134ODKM	Steel and Timber Structures	Z,ZK	5
	pros and contras, material properties, fabrication, connections, industrial steel buildings, cables, high strength steel, buildings in term	-	-
	n, utilization. Timber - loadings, material propertie, limit states methodology, design, connections, bracings, protection of structural tin	iber, timber bridges	
135GM01	Geomechanics 1 s on the understanding of basic geological laws and principles in relation to architecture, civil engineering and urban planning. Empha		3
	ical processes, both endogenous and exogenous, on the rock environment and how the geological situation affects the design of struc	-	
	ent. At the same time, attention is paid to the technical properties of rocks with regard to their practical applications. The course also i		
	the regional geology of the Czech Republic.		

10-01101			_			
135GM2I	Geomechanics 2I	Z,ZK	5			
Formation of soils, basic properties of soils, water in soil, strength and deformation properties of soils and their determination, improvement of soil properties, application tasks						
135ZSE	Foundations E	Z,ZK	4			
Úvod do p edm	tu, literatura, zásady navrhování, geotechnické kategorie Pevnostní a deforma ní charakteristiky základové p dy, plošné základy Me	zní stavy plošných	základ ,			
výpo et únosnosti a	a sedání plošných základ Hlubinné základy - typologie, pilotové základy, technologie vrtaných a ražených pilot Osová únosnost osam	lých pilot, zat žov	ací zkoušky			
pilot Stanovení úno	snosti pín zatížených pilot, skupina pilot Mikropiloty, kotvy, technologie Injektáž klasická a trysková, podzemní st ny Stavební jámy,	technologie paženi	í stavebních			
jam Zásady pro náv	rh a posouzení pažicích konstrukcí, zemní tlak, ú inek vody Výpo et pažicích konstrukcí, metody závislých tlak Odvod ování staveb	ních jam Ochrana z	základových			
	konstrukcí p ed ú inky agresivního prost edí					
136DSUZ	Transport Structures and Urban Planning	Z,ZK	7			
The course 136DS	JZ is composed of 3 issues, which build on each other and complement each other. These are the area of transport structures (roads	and rail transport -	scope 3+1)			
and the area of urb	an planning and spatial planning (scope 2+0). Unlike the road construction and railroad construction sections, the urban planning se	ction does not end	with credit.			
Transport Structure	s - Roads (R): Introduction to basic terminology in the part of roads, history. Road Act and related legislative and technical regulation	s, their impact on r	oad design.			
Design categories	of roads and motorways, design speed, directional and elevation design of routes, cross-sectional layout of roads and motorways, ea	rthwork - dimensio	ons, shapes,			
drainage. Urban	roads, division and marking, definition of MK space, differences in design, operation and equipment. Carriageway, division, design p	rinciples. Safety eq	uipment,			
junctions and cross	ings. Transport Structures - Rail transport (RT): Introduction to basic terminology, Issues of railway crossings from the point of view of	security, design an	d operation.			
Tram transport - his	tory, principles of tram track construction, interaction with the environment. Metro as a system of urban rail transport. Basic principle:	s and parameters,	metro lines.			
Railway constructio	ns - an introduction to the design and construction of a railway track in the conditions of the Czech Republic, the basic elements of the	railway superstruc	ture. Spatial			
	Planning (SP): Teaching spatial planning and urban planning, spatial planning tools and procedures for their acquisition.					
141HYA	Hydraulics	Z,ZK	5			
A course deals with	n issues of hydrostatics and hydrodynamics with aiming at civil engineering applications. There are analysed tasks related to hydrosta	atic and hydrodyna	mic loading			
	of structures, pipeline flow, open channel flow and groundwater flow.					
142VIZP	Water and Environmental Engineering	Z,ZK	4			
During the teaching	g semester, students are introduced to the fields of water engineering, water management and environmental engineering. In particu	lar, emphasis is pla	aced on the			
practical aspects of	water and environmental engineering in close relation to other branches of civil engineering. The course is taught in the form of lectu	res and tutorials. T	The lectures			
are divided them	atically into 20 blocks according to the different branches of the discipline (13 times water engineering and 7 times environmental en	gineering). In the e	exercises,			
students work on	basic problems in the field of hydrology, water supply and water structures, especially dams, hydropower and flood issues. All 4 "wat	er" departments of	f K14x are			
involved in teaching the course.						
154SG01	Land Surveying in Civil Engineering	Z,ZK	6			
The shape and si	ze of the Earth, substitutive surfaces, cartographic projections Horizontal and vertical control, coordinate calculations Quality control,	deviations and tol	erations in			
build-up Angle and distance measurements Heighting measurements Other geodetic methods in build-up (GNSS, DPZ,) Photogrammetry and laser scanning Thematic mapping						
and present state documentation Geodetic works in build-up State map series of CR and thematic maps for build-up Geographic information systems and spatial planning Cadastre						
of real estates Laws and decrees for geodesy and build-up in Czech Republic						
TV1						
1 V I	Physical Education	Z	0			
TV2	Physical Education Physical Education	Z Z	0			

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