Study plan

Name of study plan: 13 80 85 00 BVES EKO 2012 P základ

Faculty/Institute/Others:
Department:
Branch of study guaranteed by the department: Welcome page
Garantor of the study branch:
Program of study: Manufacturing and Economy in Mechanical Engineering
Type of study: Bachelor full-time
Required credits: 182
Elective courses credits: -1
Sum of credits in the plan: 181
Note on the plan: první pokus

Name of the block: Compulsory courses in the program Minimal number of credits of the block: 171 The role of the block: P

Code of the group: 12B*P*P-TV Name of the group: 07 2012 bakalá ský t locvik Requirement credits in the group: In this group you have to gain 3 credits Requirement courses in the group: In this group you have to complete 3 courses Credits in the group: 3 Note on the group: Letní výcvikový kurz je předmět povinný. Student jej může vykonat kdykoliv v průběhu studia, avšak v souladu s příslušnými ustanoveními Ústavu tělesné výchovy a sportu ČVUT

Code of the group: 12B*P*P-ZT21

Name of the group: 04 2012 prezen ní ZT v po adí 21 Requirement credits in the group: In this group you have to gain 6 credits Requirement courses in the group: In this group you have to complete 2 courses

Credits in the group: 6

Note on the group:

	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
2333038	Fundamentals of Technology I.	Z	3	1P+1C	*	Р

Characteristics of the courses of this group of Study Plan: Code=12B*P*P-ZT21 Name=04 2012 prezen ní ZT v po adí 21

2333038Fundamentals of Technology I.Z3Production processes in engineering production. Technology of engineering production. Materials in engineering. Concepts of steel and cast iron, technical metals. Production of pigiron and steel. Casting: modeling devices, molding materials, molding and castings. Foundry alloys. Overview of basic casting technology. Forming technology. Hot and cold forging.Free and drop forging. Rolling. Production of pipes. Bulk and sheet metal forming. Welding technology. The characteristics of the various types of welding. Fusion welding: Flame welding and arc welding with coated electrodes. Thermal cutting.

Code of the group: 12B-KMEN* VES Name of the group: 01 2012 souhrn 12B**1P-KMEN a 12B**2P-KMEN Requirement credits in the group: In this group you have to gain 50 credits Requirement courses in the group: In this group you have to complete 11 courses Credits in the group: 50 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
2182019	Chemistry Radek Šulc, Martin Dostál, Vojt ch B lohlav, Stanislav Solna, Jan Sko ilas Radek Šulc Radek Šulc (Gar.)	KZ	3	2P+1C	1	Ρ
2021041	Physics I.	Z,ZK	7	4P+1L	*	Р
2011021	Constructive Geometry	Z,ZK	6	3P+2C	*	Р
2011056	Mathematics I Radka Keslerová, Marta Hlavová, Ji í Holman, Gejza Dohnal, Marta ertíková, Vladimír Hric, Nikola Pajerová, Petr Louda, Lukáš Hájek, Radka Keslerová Gejza Dohnal (Gar.)	Z,ZK	8	4P+4C	*	Ρ
2011062	Matematika II. Radka Keslerová	Z,ZK	8	4P+4C	*	Р
2322029	Materials Science I. Jana Sobotová	KZ	3	2P+1L	2	Р
2012037	Computer Graphics	KZ	3	1P+1C	*	Р
2372041	Computer Support for Study	KZ	3	1P+1C	*	Р
2132001	Engineering Design I.	KZ	2	1P+2C	1	Р
2131002	Engineering Design II	Z,ZK	4	2P+3C	2	Р
2131005	History of Technology	ZK	3	2P+0C	1	Р
oriented upon the material2021041PI	Il reactions, reaction engineering), the remaining 1/3 is devoted to organic chemistry (hyproperties measurement. hysics I.	ydrocarbons, poly	mers) and b		2. Laboratory pr	ractice is
Kinematics and dynamics of	f a particle motion. Principle of conservation of energy. System of particles, centre of ma	ass. Rigid body. Co	ontinuum, el		· .	-
waves. Fluid mechanics. Te	f a particle motion. Principle of conservation of energy. System of particles, centre of ma mperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, cu lagnetic materials. Laboratories - accuracy of measurements, systematic and random e	urrent, conductivit	y, resistance	astic proper e. Conductor	ties of bodies. rs, semiconduc	Oscillations ctors,
waves. Fluid mechanics. Te insulators. Magnetic field. M measurements of 11 variou	mperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, cu	urrent, conductivit	y, resistance	astic proper e. Conductor d indirect m	ties of bodies. rs, semiconduc	Oscillations ctors,
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Code of the group: 12BVP3P Name of the group: 08 2012 BVES 3.sem prezen ní povinné Requirement credits in the group: In this group you have to gain 31 credits Requirement courses in the group: In this group you have to complete 7 courses Credits in the group: 31 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
2021025	Physics II.	Z,ZK	4	1P+2L	3	Р
2011009	Mathematics III Radka Keslerová, Ji í Holman, Gejza Dohnal, Marta ertíková, Vladimír Hric, Jan Valášek, Lud k Beneš, Tomáš Bodnár, Tomáš Neustupa, Stanislav Kra mar Stanislav Kra mar (Gar.)	Z,ZK	5	2P+2C	*	Ρ
2311004	Mechanics for Technology	Z,ZK	7	4P+2C	*	Р
2321039	Materials Science II. Ji í Cejp, Jakub Horník, Jana Sobotová, Ladislav Cvr ek, Elena ižmárová, Eliška Gal íková, Pavlína Hájková, Jakub Horváth, Zde ka Jeníková, Jana Sobotová Jana Sobotová (Gar.)	Z,ZK	4	2P+2L	*	Ρ
2331068	Technology I.	Z,ZK	5	2P+2C	*	Р
2121023	Thermodynamics	Z,ZK	5	3P+2C	*	Р

2021025	Physics II.	Z,ZK	4
Faraday's law of ele	ectromagnetic induction. Maxwell's equations, electromagnetic waves. Light, wave optics, geometrical optics. Quantum properties	of electromagnetic wa	aves. Interaction
of radiation with m	atter. Photoelectric effect. Wave-particle mature of matter. Quantum-mechanical description of particle's motion. Hydrogen ator	n and periodic system	of elements.
Spectra, x-rays, ;la	ser. Band theory of solids, semiconductors. Nucleus, radioactivity, sources of nuclear energy. Laboratories - measurements of	6 experiments related	to the lectures.
2011009	Mathematics III	Z,ZK	5
An introductory co	urse in ordinary differential equation and infinite series.		
2311004	Mechanics for Technology	Z,ZK	7
2321039	Materials Science II.	Z,ZK	4
Fundamentals of n	netallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined chemical and therma	I and thermo-mechan	ical processing,
technical iron-carb	on alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials.		
2331068	Technology I.	Z,ZK	5
Foundry properties	of metals. Treatment. Pouring. Casting solidification. Moulding and core making. Thermal treatment. Plastic deformation. Division	of forming processes.	Semi-products,
heating-up. Cutting	. Cold and hot forming. Welds. Weldability. Weldment testing. Thermal cutting. Brazing. Surface treatments.		
2121023	Thermodynamics	Z,ZK	5
The course deal w	ith a basic engineering approach to classical thermodynamics, heat transfer and compressible flow through nozzles and diffuse	rs. Basic concepts an	d principles are
introduced, and the	y are applied mostly to systems behaving as ideal gases or typical vapours. Basic notions associated with ideal mixtures are studie	d with an emphasis on	psychometrics.
Heat transfer cove	rs fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application. Exercises	and labs are devoted	l to practical
	primental technique.		

Code of the group: 12BVP4P

Name of the group: 09 2012 BVES 4.sem prezen ní povinné

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

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

Credits in the group: 22

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
2381075	Enterprise Management and Economics	Z,ZK	5	2P+2C	4	Р
2383102	Personnel Management Jan Horejc	Z	2	2P+1C	*	Р
2342005	Quality Control	KZ	2	1P+1C+1L	*	Р
2341014	Technology II.	Z,ZK	5	2P+0C+2L	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BVP4P Name=09 2012 BVES 4.sem prezen ní povinné

2381075	Enterprise Management and Economics	Z,ZK	5			
2383102	Personnel Management	Z	2			
Personnel / human resource management is concerned with the effective management of people at work. Subject examines what can or should be done to make people both more						
productive and more sa	tisfied with their working life. Its goal is to help develop more effective managers and staff specialists who work directly with the l	human resources	of organizations.			
2342005	Quality Control	KZ	2			
Basic quality control ter	ms, where is quality created, who is responsible for a quality. Basic statistical terms and distributions. Statistical methods: sta	tistical process co	ontrol, statistical			
sampling. Tools and me	thods for a quality assurance during product lifetime cycle. Standards 9 000 and 14 000, certification of quality control system	ns.				
2341014	Technology II.	Z,ZK	5			
mechanics of chip formation, cutting processes, finishing operations, non-traditional machining processes. Production rates calculation, machining economics. Automation of processes,						
programming of manufa	acture. Engineering metrology. Assembly techniques. Introduction to process planing.					

Code of the group: 12BV*5P Name of the group: 12 2012 BVES 5.sem povinné

Requirement credits in the group: In this group you have to gain 11 credits Requirement courses in the group: In this group you have to complete 3 courses Credits in the group: 11 Note on the group:

	3.000					
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
2131519	Machine Elements for Technology	Z,ZK	5	2P+3C	*	Р
2381068	Cost Accounting	Z,ZK	5	2P+2C	*	Р
2141204	Introduction to Electrical Engineering for Technology Jan Chyský, Lubomír Musálek, Martin Novák Lubomír Musálek Jan Chyský (Gar.)	Z,ZK	4	2P+0C+2L	*	Р
2383001	Fundamentals of Law	Z	2	1P+1C	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BV*5P Name=12 2012 BVES 5.sem povinné

2131519	Machine Elements for Technology	Z,ZK	5
2381068	Cost Accounting	Z,ZK	5
The subject presen	ts an introduction to the problems of value management as the enterprise on the whole and its parts - centres - by means of bud	geting (expected of	cost), so the
individual achievem	nents (intermediate products, products, services) - by means of preliminary costing (expected costs) and actual costing (actual cost	ts). Emphasis is la	id on the relatio
of costs on the who	le - enterprise costs - to the costs of individual achievements and the understanding of the transformation from costs in the budg	eting and account	ing structure
(individual cost iten	ns) into the costing structure (direct and overhead costs), and fixed and variable costs. There are taught conventional and also mo	odern approaches	in costing. The
subject Cost Accou	inting is connected directly with the subject Accounting and represents an introduction to the problems of cost allocation to separ-	ate products, whic	h are compare
with the market price	ee and finding out as their profitability, so their acceptability or unacceptability manufacturing program.		
2141204	Introduction to Electrical Engineering for Technology	Z,ZK	4
Elements of electric	cal circuits, analysis of electrical circuits as DC and AC. El. Power and Energy. Principle and typical parameters diodes, transistors	s, thyristors,opera	tion amplifiers.
Analogue and digita	al circuits. AC el. curcuits. Electrical power and energy. Calculation, measurement, power factor. Transformer. Induction machines.	Synchronous ma	chines.
DC-machines			
2383001	Fundamentals of Law	Z	2
Basic orientation in	legal system is a necessary part of professional equipment of each expert with university degree. The aim of this course is to pro	ovide a view into t	ne Czech Lega
Order, particular so	purces of law and system of law (branch of law), using tutorials, lectures, specialised literature and significant legal regulations. It i	is necessary for st	udents to know
our legal institution	s, that will be regularly in touch with, especially during their professional career and to learn how to work with the collection of law	vs. At the same tin	ne the course
•	s, that will be regularly in touch with, especially during their professional career and to learn how to work with the collection of law now some practical habits and processes while putting the law on, especially in domain of contracts and other important legal rela		

Code of the group: 12BV*5P-EKO

Name of the group: 14 2012 BVES 5.sem zam EKO povinné

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

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

Credits in the group: 18

Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
2381514	Project management	Z,ZK	4	2P+2C	*	Р
2381059	Industrial Marketing	Z,ZK	5	3P+1C	*	Р
2381504	Accounting	Z,ZK	4	2P+2C	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BV*5P-EKO Name=14 2012 BVES 5.sem zam EKO povinné

2381514	Project management	Z.ZK	4
2381059	Industrial Marketing	Z,ZK	5
2381504	Accounting	Z,ZK	4

The objective of the subject is to become acquainted with the significance of accounting for enterprise management, with the content and formal structure and realization of the stages and changes of the economic results during the accounting period; further with accounting as a system needful for tax declaration and not least as a resource to financial analysis. The stress is laid on understanding the dichotomy as the basis of the double entry accounting system, which distinguishes the terms assets (in the long term and short term) and liabilities (share-holders? equity, liabilities). Of great importance is the assessing of assets and their parts. Ac-counting relates to other information subsystems as budgeting, cost accounting, short term and long term planning. There are further some other subjects concerning enterprise manage-ment, connected with accounting, especially in the field of financial management. Accounting is one of the fundamental instrument of a business manager who understands the content and structure of the balance sheet, profit and loss account and the cash/flow statement. It is very possible that some of the students will exploit the knowledge of accounting in their future occupation as managers, financial directors, in consulting firms and auditing companies.

Code of the group: 12BV*6P

Name of the group: 15 2012 BVES 6.sem povinné

Requirement credits in the group: In this group you have to gain 9 credits Requirement courses in the group: In this group you have to complete 2 courses

Credits in the group: 9 Note on the aroup.

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
2331071	Automation of Production Processes	Z,ZK	5	3P+2C	*	Р
2381098	Enterprise Finance	Z,ZK	4	2P+2C	*	Р
2382048	Statistical and Decision Analysis	KZ	4	2P+1C	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BV*6P Name=15 2012 BVES 6.sem povinné

2331071 Automation of Production Processes

Enterprise Finance

Z,ZK

Automation of basic technological processes - casting, welding, forming and finishing. Facilities and equipment required to automate offices. Mechanization and automation in iron and steel foundries. Automation and robotics of die casting process, including other peripherals. Designing and programming of robotic welding centers. Designing and programming of robotic workstations for sheet metal forming. Design of automated forging cells. Design of automated finishing lines.

Z.ZK

5

4

The subject Financing of the Enterprise provides a broad-based introduction to financial management. Students have an opportunity to acquire an understanding of the main con-cepts and their practical application in decision-making. Students gain knowledge of financial management role within a business, financial ratios, nature and purpose of projected finan-cial statements and their role in the development of future plans for a business and in the assessing the impact of management decision on the performance and position of a busi-ness, factors which must be taken into account when managing the working capital of a business, various aspects of financing the business through external and internal sources of finance available to a business, ways how business can make decision and evaluation involv-ing investments in new technology, and various aspects of mergers and takeovers.

Statistical and Decision Analysis 2382048

ΚZ Statistical analysis is a good basis for a creation of decision-making models. The goal of this subject is to teach students to apply the selected statistical method, to apply models of decision analysis, to create models for the management of industrial enterprises.

Code of the group: 12BV*6P-EKO

Name of the group: 16 2012 BVES 6.sem zam EKO povinné

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

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

Credits in the group: 21

Note on the group:

2381098

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
2383993	Bachelor Thesis	Z	5	0P+6C	*	Р
2381712	Managerial Counting	Z,ZK	4	2P+2C	*	Р
2381174	Enterprise Information Systems Vladimír Brdek	Z,ZK	4	2P+2C	*	Р
2381107	Engineering Ergonomy	Z,ZK	4	2P+2C	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BV*6P-EKO Name=16 2012 BVES 6.sem zam EKO povinné

2383993	Bachelor Thesis	Z	5		
Work on specialized tas	sks related to the focus of a thesis.				
2381712	Managerial Counting	Z,ZK	4		
The course is oriented	o project management approach. During the course are solved cases that respond to practical situations. The cases are stre	ssed on cost-retu	rns calculations,		
on the solving interaction	ons among costs, capacity of resources and the price. And also on the calculation typical kinds of variations and their explana	ation and the selec	ction of the		
appropriate managerial	decision. The students are concerning on the right way of operational budget creation and assessment. The link on the intern	nal company acco	ounting is shown		
and explain. The compu	iterized models are used by explanation.				
2381174	Enterprise Information Systems	Z,ZK	4		
2381107	Engineering Ergonomy	Z,ZK	4		
The aim of the subject e	ngineering ergonomics is to become acquainted with the problems, constraints and the optimal solution of the fundamental ur	nit of an enterprise	or organization,		
i.e. with system - man -	technology (machine) - environment. The character of the subject is going out from the anthropocentric principle, i. e. that ev	ery system MTE a	as in the		
manufacturing, managi	ng, technological, designing so in other spheres it is important unambiguously to accommodate them to the possibilities, abili	ities and skills of t	he weakest link		
- that is to the given man. The students will learn not only to start from the man?s limitations during the designing of the MTE system, but also evaluate the existing economic level of					
the system and design rationalization measures for its optimization. The mission of the subject is that the students will be able in their work on all levels of economic spheres to ensu					
the optimal wellbeing for	r themselves and for the users of the designed systems as well as for their subordinates. The not-excludable output is also th	e health of man a	nd higher quality		
and productivity of labo	ur.				

Name of the block: Compulsory elective courses Minimal number of credits of the block: 11 The role of the block: PV

Code of the group: 12B**1Q-HUM Name of the group: 03 2012 bakalá ské povinn volitelné humanitární Requirement credits in the group: In this group you have to gain at least 2 credits (at most 6) Requirement courses in the group: In this group you have to complete at least 1 course (at most 3) Credits in the group: 2 Note on the aroun. Ze skupiny humanitních předmětů nutno i e d e n absolvovat

Note on the group		inclu nullo j	cucii	0030100	vai	
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
2383019	Philosophical Issues Of Individual and Science	Z	2	1P+1C	*	PV
2383009	Communication and Dealing with People Jan Horejc, Vladimír Brdek Jan Horejc Jan Horejc (Gar.)	Z	2	1P+1C	*	PV
2383008	Managerial Psychology	Z	2	1P+1C	*	PV

Characteristics of the courses of this group of Study Plan: Code=12B**1Q-HUM Name=03 2012 bakalá ské povinn volitelné humanitární 2383019 Philosophical Issues Of Individual and Science Ζ 2 2383009 Communication and Dealing with People Ζ 2 Human communication represents an irreplaceable phenomenon in human activity, as it is present in practically all of his activities. The same applies (with specific modifications) to the activities of managers. So you can't not communicate - you can only communicate badly, well and excellently. 2383008 Managerial Psychology Ζ 2

Code of the group: 12BV*4Q-BZJ VES

Name of the group: 11 2012 bakalá ské zkoušky z jazyk pro VES

Requirement credits in the group: In this group you have to gain at least 2 credits (at most 10) Requirement courses in the group: In this group you have to complete at least 1 course (at most 5) 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
2041061	English-Bachelor Exam Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová, Michele Le Blanc Ilona Šimice (Gar.)	Z,ZK	2	0P+2C	*	PV
2041063	French - Bachelor Exam /FME Dušana Jirovská Eliška Vítková Dušana Jirovská (Gar.)	Z,ZK	2	0P+2C	*	PV
2041062	German - Bachelor Exam / FME Jaroslava Kommová, Eliška Vítková, Petr Laurich Jaroslava Kommová Jaroslava Kommová (Gar.)	Z,ZK	2	0P+2C	*	PV
2041065	Russian - Bachelor Exam / FME Hana Volejníková, Dušana Jirovská Eliška Vítková Dušana Jirovská (Gar.)	Z,ZK	2	0P+2C	*	PV
2041064	Spanish - Bachelor Exam / FME Jaime Andrés Villagómez Eliška Vítková Jaime Andrés Villagómez (Gar.)	Z,ZK	2	0P+2C	*	PV

Characteristics of the courses of this group of Study Plan: Code=12BV*4Q-BZJ VES Name=11 2012 bakalá ské zkoušky z jazyk pro

VES								
2041061	English-Bachelor Exam	Z,ZK	2					
Mapped to the Common	Mapped to the Common European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficulties, to take part in discussions,							
to write a summary, a re	eport and an essay, to read technical texts, to master grammar at advanced level.							
2041063	French - Bachelor Exam /FME	Z,ZK	2					
Mapped to the Commor	European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take pa	rt in discussions,					
to write a summary, a re	eport and an essay, to read technical texts, to master grammar at advanced level.							
2041062	German - Bachelor Exam / FME	Z,ZK	2					
Mapped to the Commor	European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take pa	rt in discussions,					
to write a summary, a re	eport and an essay, to read technical texts, to master grammar at advanced level.							
2041065	Russian - Bachelor Exam / FME	Z,ZK	2					
Mapped to the Commor	European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take pa	rt in discussions,					
to write a summary, a re	eport and an essay, to read technical texts, to master grammar at advanced level.							
2041064	Spanish - Bachelor Exam / FME	Z,ZK	2					
Mapped to the Common	Mapped to the Common European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficulties, to take part in discussions,							
to write a summary, a re	to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.							

Code of the group: 12BV*4Q-ZAM

Name of the group: 10 2012 BVES 4.sem zam 1povvol

Requirement credits in the group: In this group you have to gain at least 5 credits (at most 10) Requirement courses in the group: In this group you have to complete at least 1 course (at most 2) Credits in the group: 5

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
2321067	Technical Application of Materials Stanislav Krum	Z,ZK	5	3P+1C	*	PV
2381002	Fundamentals of Economics	Z,ZK	5	2P+2C	*	PV

Characteristics of the courses of this group of Study Plan: Code=12BV*4Q-ZAM Name=10 2012 BVES 4.sem zam 1povvol

			1				
2321067	Technical Application of Materials	Z,ZK	5				
P edm t popisuje aplikovatelnost jednotlivých skupin inženýrských materiál a jejich odpovídající vlastnosti. Rovn ž se v nuje aktuálním vývojovým trend m t chto skupin. The sub							
describes applicability of	f specific engineering material types and their characteristics. It deals with the current development trends in these materials	s as well.					
2381002	Fundamentals of Economics Z,ZK 5						
The course is focused on the following subjects: basic economic relations and consequences. Economic aggregates and their consequences. Operating of the economics according							
to so called macroekonomic circle, various economic theories. Consumption behaviour in microeconomics. Theory of production. Different markets and competitions.							

Code of the group: 12BV*5Q-OP

Name of the group: 13 2012 BVES 5.sem 1povvol oborové projekty Requirement credits in the group: In this group you have to gain at least 2 credits (at most 8)

Requirement courses in the group: In this group you have to complete at least 1 course (at most 3) 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
2322091	Project Ji í Cejp, Jakub Horník, Jana Sobotová, Ladislav Cvr ek, Elena ižmárová, Pavlína Hájková, Jakub Horváth, Zde ka Jeníková, Jan Kr il, Jana Sobotová Jana Sobotová (Gar.)	KZ	2	0P+2C	*	PV
2382091	Specialization Project	KZ	2	0P+2C	*	PV
2332091	Project	KZ	2	0P+2C	*	PV
2342091	Project	KZ	2	0P+2C	*	PV

Characteristics	of the courses of this group of Study Plan: Code=12BV*5Q-OP Name=13 2012 BVES 5.sem 1	povvol obor	ové projekty
2322091	Project	KZ	2
On the basis of the pr	eliminary submission of a bachelor thesis the students, under supervision of their supervisors, prepare a review summarizing a	nd evaluating the	studied literature
with particular empha	sis on experimental technologies which can be applied in their bachelor theses. They can also mention a planned experiment	or evaluate hithert	o obtained
knowledge or results.			
2382091	Specialization Project	KZ	2
2332091	Project	KZ	2
2342091	Project	KZ	2
Work on specialized	asks.		

Name of the block: Elective courses Minimal number of credits of the block: 0 The role of the block: V

Code of the group: 12BV**V-ALFA Name of the group: 02 2012 ALFA volitelné pro VES Requirement credits in the group: Requirement courses in the group: 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
202A041	Physics I.	ZK	3	0P+0L	*	V
201A021	Constructive Geometry A	ZK	3	0P+0C	*	V
201A056	Mathematics I.A Radka Keslerová	ZK	4	0P+0C	*	V

Kinematics and dynamics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic properties of bodies. Oscillatic waves. Fluid mechanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Conductors, semiconductors, measurements of 11 various experiments related to the lectures. 201A021 Constructive Geometry A ZK 3 The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relations. ZK 4 201A026 Mathematics I.A ZK 4 Open and closed set, boundary in E^A. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differential operators div (divergence and cur (trotation, Function given implicity). Local and global (= absolute) verse and function of more variables. Double integral, robuin theorem. Transformation filtegrals topolac, cylindricial and spherical coordinates. A simple smooth surface and surface integral of a scalar and vector function. Flow of a vector field through a surface. The 3aase-Ostrogradskij theorem. Code of the group: 12B**1V-DOP SEMI Sequirement courses in the group: Pokud	201A062	Mathematics II.A Radka Keslerová	ZK	4	0P+0C	*	V
202A041 Physics I. ZK 3 Sinematics and dynamics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic properties of bodies. Oscillation waves. Fluid mechanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistence. Conductors, semiconductors, neulators. Magnetic field. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indirect measurements, regressic measurements of 11 various experiments related to the lectures. ZK 3 201A021 Constructive Geometry A ZK 4 201A026 Mathematics. I.A ZK 4 Page and closed set, boundary in Fe/k. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differential operators div (divergence and pale opheroid coordinates. A single smooth curve and line integral on bouble integral, volume (=triple) integral. Fubini theorem. A potential vector field through a surface and surface integral of a scalar function. Circulation and Green's theorem. A potential vector field through a surface. The Gauss-Ostrogradskij theorem. 20cde of the group: 05 2012 doporu ené seminá é Requirement courses in the group: 0 20cde of the group: 0 Pokud si chce student své dosud získané znalosti (například z matematiky, fyziky, cizích jazyků atd.) dopinit, může si zapsat některý z volitelných předmětů, které příslušné ústavy pro 1. seme (rimal por prisult). Doporučujeme zejména předmětu vytedné v této skupiné	haracteristics of	the courses of this group of Study Plan: Code=12BV**V-ALFA Na	me=02 2012 /	ALFA vol	itelné pr	o VES	
Grematics and dynamics of a particle motion. Principle of conservation of energy. System of particles, centre of mass, Rigid body. Continuum, elastic properties of bodies. Oscillatic waves. Fluid mechanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, urrent, conductivity, resistance. Conductivity. Electric field. Magnetic materials. Laboratories - accurves, surfaces and solids and their properties and mutual relations. ZK 3 201A021 Constructive Geometry A ZK 4 Resulpiet 16 locused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relations. ZK 4 201A026 Mathematics 11.A ZK 4 201A027 Neuroidary in Ervk. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differential operators div (divegencend and uri (rotation). Flow of a vector field through a surface. This assectory and site if the group: 12B**1V-DOP SEMI 20ace of the group: 12B**1V-DOP SEMI Sause-Ostrogradskij theorem. 20ace	202A041					ï	3
waves. Fluid mechanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Conductors, semiconductors, insulators. Magnetic field. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indirect measurements, regressic measurements of 11 various experiments related to the lectures. 201A021 Constructive Geometry A ZK 3 nesurements of 11 various experiments related to the lectures. ZK 4 201A026 Mathematics II.A ZK 4 Appen and closed set, boundary in E%. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differential operators div (divergence and curi (rotation). Function given implicity. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=tripie) integral. Fubini theorem. Transformal integral on the path. Simple smooth surface integral of a scalar function and a vector function. Flow of a vector field through a surface. The Sause-Ostrogradskij theorem. Code of the group: 05 2012 doporu ené seminá e Requirement credits in the group: Credits in the group: Credits in the group: Okuda si chce student své dosud získané znalosti (například z matematiky, fyziky, cizích jazyků atd.) doplnit,			ass. Rigid body. C	ontinuum, el	astic proper	ties of bodies.	-
nsulators. Magnetic field Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indirect measurements, regression measurements of 11 various experiments related to the lectures. 201A021 Constructive Geometry A The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relations. 201A026 Mathematics I.A Troduction to linear algebra, analytic geometry of straight lines and planes in E3, calculus of functions of one variable 201A026 Mathematics II.A 201A026 Mathematics II.A 201A026 Mathematics II.A 201A026 Mathematics II.A 201A026 Mathematics II.A 201A026 Mathematics II.A 201A027 Mathematics II.A 201A027 Mathematics II.A 201A028 Mathematics II.A 201A029 Mathematics II.A 201A029 Mathematics II.A 201A029 Mathematics II.A 201A020 Solutary in E ⁺ x. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differential operators div (divergence 201A027 Mathematics II.A 201A028 Solutary in E ⁺ x. Real function of k-variables. Partial derivatives and sufface integral of a scalar and vector function. Circulation and Green's theorem. A potential vector 201A029 of the group: 0.25 2012 doporu ené seminá e Requirement credits in the group: 20260 of the group: 0 20260 of the group: 0 20260 nthe group: 0 20260 nthe group: 0 20260 nthe group: 0 20260 Name of the course / Name of the group of courses 2027 (cirmit) vypisují. Doporučujeme zejména předměty uvedené v této skupině 2028 Name of the course / Name of the group of courses 2028 (in case of groups of courses the list of codes of their 2029 (202016 Physics - Seminar 2020 (202016 Physics			• •				
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2016007 Radka Keslerová, Hynek ezní ek, Olga Majlingová Radka Keslerová Gejza Z 2 0P+2C 1 V Dohnal (Gar.)							
	2016007	Radka Keslerová, Hynek ezní ek, Olga Majlingová Radka Keslerová Gejza	Z	2	0P+2C	1	V
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naracteristics of the courses of this group of Study Plan: Code=12B**1V-DOP SEMI Name=05 2012 doporul ene semina e							
	naracteristics of	the courses of this group of Study Plan: Code=12B**1V-DOP SEN	11 Name=05 2	:012 dopo	oru ené	seminá e	

2026016	Physics - Seminar	Z	2
The subject is mainly m	eant for high-school students for repetition of high-school physics.		
2016007	Mathematics I Seminar	Z	2

Code of the group: 12B**1V-DOP ZJK

Name of the group: 06 2012 doporu ené základní jazykové kurzy a prezentace

Requirement credits in the group:

Requirement courses in the group:

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
2046155	English Conversation Ilona Šimice, Michele Le Blanc Ilona Šimice Michele Le Blanc (Gar.)	Z	2	0P+2C	*	V
2046156	English Conversation Michele Le Blanc	Z	2	0P+2C	L	V
2046071	English - Lower Intermediate Veronika Kratochvílová	Z	2	0P+2C	L	V
2046070	English - Lower Intermediate Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	z	V
2046074	English - Advanced Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová, Michele Le Blanc Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	z	V
2046075	English - Advanced Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová, Michele Le Blanc Ilona Šimice Ilona Šimice (Gar.)	z	2	0P+2C	L	V

00.40070	English - Upper Intermediate					
2046072	Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	Z	V
2046073	English - Upper Intermediate Ilona Šimice Ilona Šimice Ilona Šimice (Gar.)	Z	2	0P+2C	L	V
2046068	English - Beginners Ilona Šimice, Michaela Schusová, Hana Volejníková, Veronika Kratochvílová Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	Z	v
2046069	English - Beginners Veronika Kratochvílová Ilona Šimice	Z	2	0P+2C	L	v
2046126	Czech Lower Intermediate Jaroslava Kommová	Z	2	0P+2C	L	v
2046125	Czech Lower Intermediate Jaroslava Kommová	Z	2	0P+2C	Z	v
2046118	Czech -Advanced Jaroslava Kommová	Z	2	0P+2C	L	v
2046117	Czech - Advanced Jaroslava Kommová	Z	2	0P+2C	Z	v
2046127	Czech - Upper Intermediate Jaroslava Kommová	Z	2	0P+2C	Z	V
2046128	Czech - Upper Intermediate Jaroslava Kommová	Z	2	0P+2C	L	v
2046119	Czech Language for Beginners I. Jaroslava Kommová	Z	2	0P+2C	Z	v
2046120	Czech Language for Beginners II. Jaroslava Kommová	Z	2	0P+2C	L	v
2046086	French - Lower Intermediate Course Michaela Schusová, Dušana Jirovská Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046087	French - Lower Intermediate Course Dušana Jirovská Dušana Jirovská Dušana Jirovská (Gar.)	Z	2	0P+2C	L	v
2046091	French - Advanced Dušana Jirovská Dušana Jirovská (Gar.)	Z	2	0P+2C	L	v
2046090	French - Advanced Michaela Schusová, Dušana Jirovská, Eliška Vítková Eliška Vítková Eliška Vítková (Gar.)	Z	2	0P+2C	Z	v
2046089	French - Upper Intermediate Dušana Jirovská Dušana Jirovská (Gar.)	Z	2	0P+2C	L	v
2046088	French - Upper Intermediate Michaela Schusová, Dušana Jirovská Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046084	French - Beginners Michaela Schusová, Dušana Jirovská Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046085	French - Beginners´ Course Dušana Jirovská Michaela Schusová Dušana Jirovská (Gar.)	Z	2	0P+2C	L	V
2146060	Indonesian Language Course for Exchange	Z	2	0P+2C	*	V
2146061	Technical Indonesian - Course I.	Z	2	0P+2C	Z	V
2144062	Technical Indonesian - Course II.	Z,ZK	3	1P+2C	L	V
2046078	German - Lower Intermediate Course Michaela Schusová, Jaroslava Kommová, Eliška Vítková, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046079	German - Lower Intermediate Course Jaroslava Kommová, Eliška Vítková, Petr Laurich Eliška Vítková Jaroslava Kommová (Gar.)	Z	2	0P+2C	L	v
2046083	German - Advanced Course Jaroslava Kommová, Eliška Vítková, Petr Laurich Jaroslava Kommová Jaroslava Kommová (Gar.)	Z	2	0P+2C	L	v
2046082	German - Advanced Course Michaela Schusová, Jaroslava Kommová, Eliška Vítková, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046081	German - Upper Intermediate Course Jaroslava Kommová, Eliška Vítková, Petr Laurich Eliška Vítková Jaroslava Kommová (Gar.)	Z	2	0P+2C	L	v
2046080	German - Upper Intermediate Course Michaela Schusová, Jaroslava Kommová, Eliška Vítková, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046076	German - Beginners Michaela Schusová, Jaroslava Kommová, Eliška Vítková, Petr Laurich Michaela Schusová Petr Laurich (Gar.)	Z	2	0P+2C	Z	v
2046077	German - Beginners Jaroslava Kommová, Petr Laurich Eliška Vítková Jaroslava Kommová (Gar.)	Z	2	0P+2C	L	v
2046161	Presentations in English Michaela Schusová	Z	2	0P+2C	*	v
2046166	Presentations in Czech		t	+		<u> </u>

2046162	Presentations in German Jaroslava Kommová, Eliška Vítková, Petr Laurich Jaroslava Kommová Jaroslava Kommová (Gar.)	Z	2	0P+2C	*	v
2046164	Presentations in Russian Dušana Jirovská	Z	2	0P+2C	*	V
2046163	Presentations in French language Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	*	V
2046165	Presentations in Spanish Eliška Vítková	Z	2	0P+2C	*	V
2046137	Russian - Lower Intermediate Course Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046138	Russian - Lower Intermediate Course Hana Volejníková, Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	L	V
2046141	Russian - Advanced Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046142	Russian - Advanced Hana Volejníková, Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	L	V
2046140	Russian - Upper Intermediate Hana Volejníková, Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	L	V
2046139	Russian - Upper Intermediate Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046136	Russian - Beginners Hana Volejníková, Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	L	V
2046135	Russian - Beginners Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	v
2046099	Spanish - Lower Intermediate Jaime Andrés Villagómez Eliška Vítková Jaime Andrés Villagómez (Gar.)	Z	2	0P+2C	L	V
2046098	Spanish - Lower Intermediate Michaela Schusová, Eliška Vítková, Jaime Andrés Villagómez Eliška Vítková Eliška Vítková (Gar.)	Z	2	0P+2C	Z	v
2046096	Spanish - Beginners Michaela Schusová, Eliška Vítková, Jaime Andrés Villagómez Eliška Vítková Eliška Vítková (Gar.)	Z	2	0P+2C	Z	v
2046097	Spanish - Beginners Jaime Andrés Villagómez Jaime Andrés Villagómez Jaime Andrés Villagómez (Gar.)	Z	2	0P+2C	L	v

Characteristics of the courses of this group of Study Plan: Code=12B**1V-DOP ZJK Name=06 2012 doporu ené základní jazykové kurzy a prezentace

2046155	English Conversation	Z	2
Improving communicativ	ve skills in speaking on general topics and general technical topics.		
2046156	English Conversation	Z	2
Improving communicativ	ve skills in speaking on general topics and general technical topics.		
2046071	English - Lower Intermediate	Z	2
Mapped to the Commor	European Framework of Reference Level A2 Aim: Understanding clearly spoken language about everyday situations which	a student meets	either at school
or at his/her free time ar	nd speaking about them. Writing in a simple way about familiar topics. reading and comprehension of simple texts. Improvement	ent of professiona	al language.
2046070	English - Lower Intermediate	Z	2
Aim: Understanding clea	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the	m. Writing in a sir	nple way about
familiar topics. Reading	and comprehension of simple texts. Improvement of professional language. A1 - A2.		
2046074	English - Advanced	Z	2
The aim: comprehension	n of spoken English as well as lectures given in English without great difficulties and active participation in a discussion. Writt	en and oral skills	on advanced
level. Ability to write a su	ummary, a report, an essay. reading and comprehension of popular-scientific and scientific articles or texts from student's fiel	d of studies with	out difficulties.
Grammar structures on	advanced level. B1 - B2.		
2046075	English - Advanced	Z	2
Mapped to the Commor	I European Framework of Reference Level B1 - B2. The aim: comprehension of spoken English as well as lectures given in E	nglish without gre	eat difficulties
and active participation	in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. reading and compret	nension of popula	r-scientific and
scientific articles or texts	s from student's field of studies without difficulties. Grammar structures on advanced level.		
2046072	English - Upper Intermediate	Z	2
The aim is to extend lan	guage skills taking into consideration professional English and common professional terminology. Comprehension of standard	English speech a	and conversation
about topics of everyday	/ life - at school, at work, during free time, on intermediate level. Broadening grammar knowledge. A2 - B1.		
2046073	English - Upper Intermediate	Z	2
Mapped to the Commor	European Framework of Reference Level B1. The aim is to extend language skills taking into consideration professional Eng	glish and commoi	n professional
terminology. Compreher	nsion of standard English speech and conversation about topics of everyday life - at school, at work, during free time, on interm	ediate level. Broa	dening grammar
knowledge.			
2046068	English - Beginners	Z	2
Aim: Basic vocabulary o	f everyday life in a written and spoken form. Understanding and use of basic expressions of general scientific terminology (pr	ofessional langua	age). A1
2046069	English - Beginners	Z	2
Mapped to the Common	European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understand	ding and use of b	asic expressions
of general scientific tern	ninology (professional language).		
2046126	Czech Lower Intermediate	Z	2
Aim: Understanding clea	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the	m. Writing in a sir	nple way about
familiar topics. Reading	and comprehension of simple texts. Improvement of professional language.		

	7	2
2046125 Czech Lower Intermediate	Z	2
Aim: Understanding clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the	em. Writing in a sir	nple way about
familiar topics. Reading and comprehension of simple texts. Improvement of professional language.		
2046118 Czech - Advanced	Z	2
Mapped to the level of common European Framework of Reference: B1- B2 The aim: comprehension of spoken Czech as well as lectures given in	Czech without area	at difficulties and
active participation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and compreher	-	
scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.		
	7	
2046117 Czech -Advanced	Z	2
Comprehension of spoken language as well as lectures in Czech on topics familiar to the student. Communication with native speakers, participation in		essing opinions.
Written skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and technical a	articles.	
2046127 Czech - Upper Intermediate	Z	2
Understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abi	litv to describe exp	eriences and
events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.	,	
	7	0
2046128 Czech - Upper Intermediate	Z	2
Mapped to the Common European Framework of Reference Level A2-B1. The aim is to extend language skills taking into consideration professional	al Czech and comm	non professional
terminology. Comprehension of standard Czech speech and conversation about topics of everyday life - at school, at work, during free time, on inte	rmediate level. Bro	adening the
knowledge technical language.		
2046119 Czech Language for Beginners I.	Z	2
Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (profe	1	-
2046120 Czech Language for Beginners II.	Z	2
Mapped to the Common European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understan	nding and use of ba	asic expressions
of general scientific terminology (professional language).		
2046086 French - Lower Intermediate Course	Z	2
Understanding clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. W		_
		ay about laminar
topics. Reading and comprehension of simple texts. Improvement of professional language.		
2046087 French - Lower Intermediate Course	Z	2
Mapped to the level of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which	n a student meets	at school or in
his/her free time and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement	of professional lan	guage.
2046091 French - Advanced	7	2
Mapped to the level of Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in French on to	. – .	
	•	
Communication with native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading a	ind understanding	texts concerning
currant issues and popular scientific and technical articles.		
2046090 French - Advanced	Z	2
Comprehension of spoken language as well as lectures in French on topics familiar to the student. Communication with native speakers, participation	on in discussions. I	Expressing
opinions. Written skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and t		
		2
2046089 French - Upper Intermediate	Z	_
Mapped to the level of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar topics, that a students of		
during free time, and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and underst	anding general and	d technical texts.
2046088 French - Upper Intermediate	Z	2
Understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abi	lity to describe exp	eriences and
events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.		
	-	
2046084 French - Beginners	Z	2
Understanding clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. W	riting in a simple w	ay about familiar
topics. Reading and comprehension of simple texts. Improvement of professional language.		
2046085 French - Beginners' Course	Z	2
Mapped to the level of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which		
his/her free time and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement		
2146060 Indonesian Language Course for Exchange	Z	2
Basic of Indonesian Language for Student Exchange Program to Indonesia		
2146061 Technical Indonesian - Course I.	Z	2
Second part of Indonesian Language for Student Exchange Program to Indonesia		-
	/	
2144062 Technical Indonesian - Course II.	Z,ZK	3
Basic of Indonesian Language for Student Exchange Program to Indonesia		
2046078 German - Lower Intermediate Course	Z	2
Aim: Understanding clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the		
familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	g	
	7	
2046079 German - Lower Intermediate Course	Z	2
Mapped to the level of Common European Framework of Reference A2 Aim: Understanding clearly spoken language about everyday situations which		
or in his/her free time and speaking about them. Writing in a simple way about familiar topics. reading and comprehesion of simple texts. Improvement	ent of professional	language.
2046083 German - Advanced Course	Z	2
Mapped to the level of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given i		
and active participation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of spoken German as well as rectires given in		-
	enension of popula	
scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.		
2046082 German - Advanced Course	Z	2
Comprehension of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participal	tion in discussions.	Expressing
opinions. Written skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and t		-
	Z	2
	·	
Mapped to the level of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students of		
during free time, and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and underst	anding general and	
2046080 German - Upper Intermediate Course	Z	2
Understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abi	lity to describe exp	eriences and
events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.		

	German - Beginners	Z	2
Basic vocabulary c	of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pro	fessional language)	
2046077	German - Beginners	Z	2
Mapped to the leve	el Common European Framework of Reference A1 Basic vocabulary of everyday life in a written and spoken form. Understandi	ing and use of basic	expressions of
general scientific te	erminology (professional language).		
2046161	Presentations in English	Z	2
Preparing students	s to present in English on technical topics, with a possible co-operation with specialized departments.		
2046166	Presentations in Czech	Z	2
Preparing students	s to give presentations in English on technical topics, with a possible co-operation with specialized departments.	1	
2046162	Presentations in German	Z	2
	eserting technical topics in German, possibly in cooperation with specialized departments.	1 – 1	_
2046164	Presentations in Russian	Z	2
	esenting technical topics in Russian, possibly in cooperation with specialized departments.		2
2046163	Presentations in French language	Z	2
	esenting technical topics in French, possibly in cooperation with specialized departments.		2
		7	0
2046165	Presentations in Spanish	Z	2
	esenting technical topics in Spanish, possibly in cooperation with specialized departments.		-
2046137	Russian - Lower Intermediate Course	Z	2
0	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	Writing in a simple w	ay about familia
	nd comprehension of simple texts. Improvement of professional language.		
2046138	Russian - Lower Intermediate Course	Z	2
	el of Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a		nool or in his/he
-	aking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of pr		
2046141	Russian - Advanced	Z	2
-	f spoken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, particip		Expressing
opinions. Written s	kills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and	d technical articles.	
2046142	Russian - Advanced	Z	2
Mapped to the leve	el of Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian c	on topics familiar to th	e student.
Communication wi	ith native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading	والمحافظ والمحاجر والمحاد والمحاجر والمحاجر	
		g and understanding	texts concerning
currant issues and	I popular scientific and technical articles.	g and understanding	texts concerning
		Z	texts concerning
2046140	popular scientific and technical articles.	Z	2
2046140 Mapped to the leve	Russian - Upper Intermediate	Z nt meets at work, at s	2 school, during
2046140 Mapped to the leve	l popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studer	Z nt meets at work, at s	2 school, during
2046140 Mapped to the leve free time, and talki 2046139	I popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studer ing about these topics. Ability to describe experiences and events, briefly explain one s opinions and plans. Reading and under	Z nt meets at work, at s rstanding general and Z	2 school, during d technical texts 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studer ing about these topics. Ability to describe experiences and events, briefly explain one 's opinions and plans. Reading and under Russian - Upper Intermediate	Z nt meets at work, at s rstanding general and Z	2 school, during d technical texts 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl	I popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studen ing about these topics. Ability to describe experiences and events, briefly explain one 's opinions and plans. Reading and under Russian - Upper Intermediate indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A	Z nt meets at work, at s rstanding general and Z	2 school, during d technical texts 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136	I popular scientific and technical articles. Russian - Upper Intermediate of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studen ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate Indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts.	Z nt meets at work, at s standing general and Z sbility to describe exp	2 school, during d technical texts 2 eriences and 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve	Popular scientific and technical articles. Russian - Upper Intermediate of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners	Z nt meets at work, at s standing general and Z sbility to describe exp	2 school, during d technical texts 2 eriences and 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientific	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a studen ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate undard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understa terminology (professional language)	Z nt meets at work, at s standing general and Z sbility to describe exp	2 school, during d technical texts 2 eriences and 2 sic expressions
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientifie 2046135	Russian - Upper Intermediate Index and echnical articles. Russian - Upper Intermediate Index and experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate Index appendix a student meets at work, at school, during free time, and talking about these topics. A Russian - Beginners Index and experiences and events of everyday life in a spoken and written form. Understate Index appendix of experiences and events of everyday life in a spoken and written form. Understate Russian - Beginners Index appendix of everyday life in a spoken and written form. Understate Russian - Beginners	Z nt meets at work, at s rstanding general and Z bility to describe exp Z nding and use of bas	2 school, during d technical texts 2 eriences and 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientifie 2046135 Basic vocabulary of	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate undard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pro	Z Int meets at work, at s istanding general and Z bility to describe exp Z Inding and use of bas Z Inding and use of bas	2 school, during d technical texts 2 eriences and 2 sic expressions 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientifii 2046135 Basic vocabulary of 2046099	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student Russian - Upper Intermediate Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pro Spanish - Lower Intermediate	Z nt meets at work, at s rstanding general and Z bility to describe exp Z Inding and use of base Inding and use of base Ifessional language) Z	2 school, during d technical texts 2 eriences and 2 sic expressions 2 2 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientific 2046135 Basic vocabulary of 2046099 Mapped to the leve	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student Russian - Upper Intermediate Indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one 's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pro Spanish - Lower Intermediate el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a	Z nt meets at work, at s rstanding general and Z ,bility to describe exp Z ,anding and use of bas gfessional language) Z student meets at sch	2 school, during d technical texts 2 eriences and 2 sic expressions 2 2 2
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientifie 2046135 Basic vocabulary of 2046099 Mapped to the leve free time and spea	I popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student Ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professional language) Russian - Beginners of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professional language) Spanish - Lower Intermediate el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a aking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of provement of proveme	Z nt meets at work, at s standing general and Z bility to describe exp Z Inding and use of bas fessional language) Z student meets at sch ofessional language.	2 school, during 1 technical texts 2 eriences and 2 sic expressions 2 2 ool or in his/her
2046140 Mapped to the leve free time, and talki 2046139 Understanding sta events, briefly expl 2046136 Mapped to the leve of general scientific 2046135 Basic vocabulary of 2046099 Mapped to the leve free time and spea 2046098	Popular scientific and technical articles. Russian - Upper Intermediate el of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and under Russian - Upper Intermediate Indard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. A lain one's opinions and plans. Reading and understanding general and technical texts. Russian - Beginners el of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pro Spanish - Lower Intermediate el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a aking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of pr	Z nt meets at work, at s standing general and Z bility to describe exp Z inding and use of bas fessional language) Z student meets at sch ofessional language. Z	2 school, during 1 technical texts 2 eriences and 2 sic expressions 2 2 sool or in his/her 2
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List of courses of this pass:

Code	Name of the course	Completion	Credits			
2011009	Mathematics III	Z,ZK	5			
	An introductory course in ordinary differential equation and infinite series.					
2011021	Constructive Geometry	Z,ZK	6			
	The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relations.					
2011056	Mathematics I	Z,ZK	8			
In the course, great	In the course, greater emphasis is placed on the theoretical basis of the concepts discussed and on the derivation of basic relationships and connections between concepts. Students					
will also get to know	vill also get to know the procedures for solving problems with parametric input. In addition, students will gain extended knowledge in some thematic areas: eigennumbers and eigenvectors					
	of a matrix, Taylor polynomial, integral as a limit function, integration of some special functions.					

2011062	Matematika II.	Z,ZK	8
	set, boundary in E^k. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Different		
	Function given implicitly. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=triple) integral,		
, , , , , , , , , , , , , , , , , , ,	r, cylindrical and spherical coordinates. A simple smooth curve and line integral of a scalar and vector function. Circulation and Green		
field, independent	ce of a line integral on the path. Simple smooth surface and surface integral of a scalar function and a vector function. Flow of a vector	or field through a su	urface. The
0040007	Gauss-Ostrogradskij theorem.	1/7	•
2012037	Computer Graphics	KZ	3
2016007	Mathematics I Seminar	Z	2
201A021	Constructive Geometry A	ZK	3
	The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relation	ons.	
201A056	Mathematics I.A	ZK	4
	Introduction to linear algebra, analytic geometry of straight lines and planes in E3, calculus of functions of one variable		
201A062	Mathematics II.A	ZK	4
Open and closed	set, boundary in E^k. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Different	ial operators div (d	livergence)
and curl (rotation).	Function given implicitly. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=triple) integral,	Fubini theorem. Tra	Insformation
	r, cylindrical and spherical coordinates. A simple smooth curve and line integral of a scalar and vector function. Circulation and Green	-	
field, independen	ce of a line integral on the path. Simple smooth surface and surface integral of a scalar function and a vector function. Flow of a vector	or field through a su	urface. The
	Gauss-Ostrogradskij theorem.		
2021025	Physics II.	Z,ZK	4
-	ectromagnetic induction. Maxwell's equations, electromagnetic waves. Light, wave optics, geometrical optics. Quantum properties of electromagnetic waves.	-	
	natter. Photoelectric effect. Wave-particle mature of matter. Quantum-mechanical description of particle's motion. Hydrogen atom and		
- · · · · · · · · · · · · · · · · · · ·	ser. Band theory of solids, semiconductors. Nucleus, radioactivity, sources of nuclear energy. Laboratories - measurements of 6 expe		-
2021041	Physics I.	Z,ZK	7
	namics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic pro	•	
	echanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Co		
insulators. Magnet	ic field. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indire	ct measurements,	regression,
	measurements of 11 various experiments related to the lectures.		
2026016	Physics - Seminar	Z	2
	The subject is mainly meant for high-school students for repetition of high-school physics.		
202A041	Physics I.	ZK	3
-	namics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic pro		
	echanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Co		
Insulators. Magnet	ic field. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indire	ct measurements,	regression,
0044004	measurements of 11 various experiments related to the lectures.	7 71/	0
2041061	English-Bachelor Exam	Z,ZK	2
mapped to the Con	imon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficule to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	lies, to take part in o	discussions,
2044062		7 71/	2
2041062	German - Bachelor Exam / FME	Z,ZK	2
mapped to the Con	imon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficule to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	lies, to take part in o	discussions,
2041063	French - Bachelor Exam /FME	Z,ZK	2
		· ·	
Mapped to the Con	imon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficule to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	lies, to take part in t	uiscussions,
2041064	Spanish - Bachelor Exam / FME	Z,ZK	2
	mon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficul	1 1	
mapped to the Con	to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	lies, to take part in t	13503510115,
2041065	Russian - Bachelor Exam / FME	Z,ZK	2
2041065	mon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficul		
mapped to the Con	to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	lies, to take part int	013003310113,
2046068	English - Beginners	Z	2
	abulary of everyday life in a written and spoken form. Understanding and use of basic expressions of general scientific terminology (-	
			2
2046069	English - Beginners nmon European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understanding		
mapped to the Con	of general scientific terminology (professional language).	J and use of basic	expressions
2046070	English - Lower Intermediate	Z	2
	g clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	. –	
Ain. Onderstandi	familiar topics. Reading and comprehension of simple texts. Improvement of professional language. A1 - A2.	writing in a simple	way about
2046071		Z	2
	English - Lower Intermediate mmon European Framework of Reference Level A2 Aim: Understanding clearly spoken language about everyday situations which a s	1	
	time and speaking about them. Writing in a simple way about familiar topics, reading and comprehension of simple texts. Improvement		
2046072	English - Upper Intermediate	7	2
	d language skills taking into consideration professional English and common professional terminology. Comprehension of standard En		
	about topics of everyday life - at school, at work, during free time, on intermediate level. Broadening grammar knowledge. A2		onversation
2046073		Z	2
	English - Upper Intermediate mmon European Framework of Reference Level B1. The aim is to extend language skills taking into consideration professional Engli	-	
	rehension of standard English speech and conversation about topics of everyday life - at school, at work, during free time, on intermedi		
l sinning y. Comp	knowledge.	Storer. Droadelli	
2046074	English - Advanced	Z	2
	english - Auvanceu nension of spoken English as well as lectures given in English without great difficulties and active participation in a discussion. Writte	1	
	te a summary, a report, an essay reading and comprehension of popular-scientific and scientific articles or texts from student's field		
	Grammar structures on advanced level. B1 - B2.		
1			

2046075	English - Advanced	Z	2
	ommon European Framework of Reference Level B1 - B2. The aim: comprehension of spoken English as well as lectures given in Eng		
and active particip	pation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. reading and comprehen	sion of popular-sc	ientific and
	scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.	_	
2046076	German - Beginners	Z	2
Basic voc	abulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (pr	ofessional langua	
2046077	German - Beginners	Z	2
Mapped to the level	vel Common European Framework of Reference A1 Basic vocabulary of everyday life in a written and spoken form. Understanding and	d use of basic exp	ressions of
	general scientific terminology (professional language).		
2046078	German - Lower Intermediate Course	Z	2
Aim: Understandi	ng clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	Writing in a simple	way about
	familiar topics. Reading and comprehension of simple texts. Improvement of professional language.		
2046079	German - Lower Intermediate Course	Z	2
	el of Common European Framework of Reference A2 Aim: Understanding clearly spoken language about everyday situations which a s		
	e time and speaking about them. Writing in a simple way about familiar topics. reading and comprehesion of simple texts. Improvemen	t of professional la	
2046080	German - Upper Intermediate Course	Z	2
Understanding s	tandard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability	to describe experi	ences and
	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.	_	
2046081	German - Upper Intermediate Course	Z	2
	vel of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar topics, that a students com		
-	nd talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin		
2046082	German - Advanced Course	Z	2
-	of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participation		
•	Written skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific a		
2046083	German - Advanced Course	Z	2
	el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Ge	•	
and active particip	pation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and compreher	sion of popular-so	cientific and
	scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.	_	
2046084	French - Beginners	Z	2
Understanding cle	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	in a simple way al	oout familia
	topics. Reading and comprehension of simple texts. Improvement of professional language.	_	
2046085	French - Beginners' Course	Z	2
	vel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a s		
	ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement		
2046086	French - Lower Intermediate Course	Z	2
Understanding cle	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	in a simple way al	pout familia
0010007	topics. Reading and comprehension of simple texts. Improvement of professional language.	_	
2046087	French - Lower Intermediate Course	Z	2
	vel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a s		
	ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement	-	
2046088	French - Upper Intermediate	Z	2
Understanding s	tandard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to	to describe experi-	ences and
	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.	_	-
2046089	French - Upper Intermediate	Z	2
	vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com		
-	nd talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin		1
2046090	French - Advanced	Z	2
	of spoken language as well as lectures in French on topics familiar to the student. Communication with native speakers, participation		
· · · · · · · · · · · · · · · · · · ·	Written skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific a		
2046091	French - Advanced	Z	2
	level of Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in French on top		
Communication wi	th native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and un	nderstanding texts	concernin
0040000	currant issues and popular scientific and technical articles.	7	0
2046096	Spanish - Beginners	Z	2
Alm.Understandir	ng clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. V familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	whung in a simple	way about
0040007		7	0
2046097	Spanish - Beginners	Z	2
	Common European Framework of Reference Level A1. Aim: Understanding clearly what is spoken about everyday situations which a since and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement		
	ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement		
2046098	Spanish - Lower Intermediate	Z	2
understanding cle	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	in a simple way al	oout familia
0040000	topics. Reading and comprehension of simple texts. Improvement of professional language.	7	~
2046099	Spanish - Lower Intermediate	Z	2
iviapped to the lev			nr in hie/ho
£	el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studen		
	el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studen and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of p	rofessional langua	ige.
2046117	el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studen and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of p Czech -Advanced	rofessional langua Z	ige. 2
2046117 Comprehension of	el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studen and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of p Czech -Advanced spoken language as well as lectures in Czech on topics familiar to the student. Communication with native speakers, participation in disc	rofessional langua Z sussions. Expressi	ige. 2
2046117 Comprehension of	el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studen and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of p Czech -Advanced	rofessional langua Z sussions. Expressi	ige. 2

2046118	Czech -Advanced	Z	2
	of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken Czech as well as lectures given in Cze n in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehens	-	
	scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.		
2046119	Czech Language for Beginners I.	Z	2
	bulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (p	-	1
2046120			2
	Czech Language for Beginners II. non European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understandin		
viapped to the Comm	of general scientific terminology (professional language).	y and use of basic	expression
2046425		7	2
2046125	Czech Lower Intermediate	Z	2
Aim: Understanding	clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	writing in a simple	e way abou
2040420	familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	7	
2046126	Czech Lower Intermediate		2
Aim: Understanding	clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	writing in a simple	e way abou
0040407	familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	-	0
2046127	Czech - Upper Intermediate	Z	2
Understanding stan	ndard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability	to describe exper	iences and
	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.		
2046128	Czech - Upper Intermediate	_ Z	2
	mon European Framework of Reference Level A2-B1. The aim is to extend language skills taking into consideration professional Cz		-
terminology. Comp	prehension of standard Czech speech and conversation about topics of everyday life - at school, at work, during free time, on interm	nediate level. Broad	dening the
	knowledge technical language.		-
2046135	Russian - Beginners	Z	2
	bulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (p	-	
2046136	Russian - Beginners	Z	2
Mapped to the level	of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding	and use of basic	expressior
	of general scientific terminology (professional language)		
2046137	Russian - Lower Intermediate Course	Z	2
nderstanding clearly	ly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	g in a simple way a	bout famil
	topics. Reading and comprehension of simple texts. Improvement of professional language.		
2046138	Russian - Lower Intermediate Course	Z	2
lapped to the level of	of Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stude	nt meets at school	or in his/h
free time and	d speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of I	professional langu	age.
2046139	Russian - Upper Intermediate	Z	2
Understanding stan	ndard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability	to describe exper	iences and
	events, briefly explain one 's opinions and plans. Reading and understanding general and technical texts.		
2046140	Russian - Upper Intermediate	Z	2
1	l of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student me	ets at work, at sch	nool, during
ree time, and talking	g about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understandi	ng general and teo	chnical tex
2046141	Russian - Advanced	Z	2
1	f spoken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participatio	n in discussions. E	xpressing
opinions. Wi	ritten skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific	and technical artic	les.
2046142	Russian - Advanced	Z	2
	vel of Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on to		1
	native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and u	-	
	currant issues and popular scientific and technical articles.		
2046155	English Conversation	Z	2
2040100	Improving communicative skills in speaking on general topics and general technical topics.		<u> </u>
2046456		Z	2
2046156	English Conversation Improving communicative skills in speaking on general topics and general technical topics.	2	2
2046464		7	0
2046161	Presentations in English	Z	2
	Preparing students to present in English on technical topics, with a possible co-operation with specialized departments.		
2046162	Presentations in German	Z	2
	Preparation for presenting technical topics in German, possibly in cooperation with specialized departments.		
2046163	Presentations in French language	Z	2
	Preparation for presenting technical topics in French, possibly in cooperation with specialized departments.		•
2046164	Presentations in Russian	Z	2
I	Preparation for presenting technical topics in Russian, possibly in cooperation with specialized departments.	1	1
2046165	Presentations in Spanish	Z	2
	Preparation for presenting technical topics in Spanish, possibly in cooperation with specialized departments.	. –	
2046166	Presentations in Czech	Z	2
2070100	Presentations in CZech Preparing students to give presentations in English on technical topics, with a possible co-operation with specialized departm	1	2
2121023			E
2121023	Thermodynamics	Z,ZK	5
1	a basic engineering approach to classical thermodynamics, heat transfer and compressible flow through nozzles and diffusers. Basic are applied mostly to systems behaving as ideal gases or typical vapours. Basic notions associated with ideal mixtures are studied with		-
he course deal with			-
he course deal with ntroduced, and they a		lobo ore devices !	IN DLACTICA
he course deal with ntroduced, and they a	rs fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application. Exercises and	labs are devoted	
he course deal with htroduced, and they a Heat transfer cover	rs fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application. Exercises and problems and experimental technique.		-
The course deal with the course deal with the course deal with the set transfer cover 2131002	rs fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application.Exercises and problems and experimental technique. Engineering Design II	Z,ZK	4
The course deal with ntroduced, and they a Heat transfer cover 2131002	rs fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application. Exercises and problems and experimental technique.	Z,ZK	

0404005		71/	
2131005	History of Technology human knowledge in the domain of science and technology in the retrospective of the developement of our civilization. Emphasis is		3
	special attention to the contribution of mining, iron metallurgy, power engineering, transportation and of the machine industry in the i		
2131519	Machine Elements for Technology	Z,ZK	5
2131319		KZ	2
2132001	Engineering Design I. Basic of technical representation, dimensioning and tolerancing		2
2141204	Introduction to Electrical Engineering for Technology	Z,ZK	4
	ical circuits, analysis of electrical circuits as DC and AC. El. Power and Energy. Principle and typical parameters diodes, transistors, t	1 '	-
	digital circuits. AC el. curcuits. Electrical power and energy. Calculation, measurement, power factor. Transformer. Induction machines		-
	DC-machines		
2144062	Technical Indonesian - Course II.	Z,ZK	3
	Basic of Indonesian Language for Student Exchange Program to Indonesia		
2146060	Indonesian Language Course for Exchange	Z	2
	Basic of Indonesian Language for Student Exchange Program to Indonesia		
2146061	Technical Indonesian - Course I.	Z	2
	Second part of Indonesian Language for Student Exchange Program to Indonesia		-
2182019	Chemistry	KZ	3
	y from the point of view of mechanical and process engineering. Physical chemistry forms 2/3 of the course (structure and properties		
phase equilibrium	n, chemical reactions, reaction engineering), the remaining 1/3 is devoted to organic chemistry (hydrocarbons, polymers) and bioche	mistry. Laboratory	practice is
	oriented upon the material properties measurement.		
2311004	Mechanics for Technology	Z,ZK	7
2321039	Materials Science II.	Z,ZK	4
Fundamentals of m	etallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined chemical and thermal and t		l processing
	technical iron-carbon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of mater		1
2321067	Technical Application of Materials	Z,ZK	5
	plikovatelnost jednotlivých skupin inženýrských materiál a jejich odpovídající vlastnosti. Rovn ž se v nuje aktuálním vývojovým tren		-
	bes applicability of specific engineering material types and their characteristics. It deals with the current development trends in these		
2322029	Materials Science I.	KZ	3
, ,	ent state of materials engineering, overview of technical materials, internal structure of metals, crystal lattices and their defects, defo		
	erials, structure and properties of materials and their testing, fundamentals of thermodynamics, phases and phase transformations, in		
2322091	Project	KZ	2
	preliminary submission of a bachelor thesis the students, under supervision of their supervisors, prepare a review summarizing and e	-	
with particular e	mphasis on experimental technologies which can be applied in their bachelor theses. They can also mention a planned experiment c knowledge or results.	or evaluate nitherto	obtained
0004000		7 71/	
2331068	Technology I. of metals. Treatment. Pouring. Casting solidification. Moulding and core making. Thermal treatment. Plastic deformation. Division of form	Z,ZK	5
-oundry properties	heating-up. Cutting. Cold and hot forming. Welds. Weldability. Weldment testing. Thermal cutting. Brazing. Surface treatment		emi-producis,
2331071	Automation of Production Processes	Z,ZK	5
	c technological processes - casting, welding, forming and finishing. Facilities and equipment required to automate offices. Mechanizat	1	-
	utomation and robotics of die casting process, including other peripherals. Designing and programming of robotic welding centers. D		
	robotic workstations for sheet metal forming. Design of automated forging cells. Design of automated finishing lines.	oolginiig alla prog	. anning or
2332091	Project	KZ	2
2333038	Fundamentals of Technology I.	Z	3
	ses in engineering production. Technology of engineering production. Materials in engineering. Concepts of steel and cast iron, tech	1	-
-	sting: modeling devices, molding materials, molding and castings. Foundry alloys. Overview of basic casting technology. Forming tech		
	rging. Rolling. Production of pipes. Bulk and sheet metal forming. Welding technology. The characteristics of the various types of well		
	welding and arc welding with coated electrodes. Thermal cutting.	g	
2341014	Technology II.	Z,ZK	5
	ormation, cutting processes, finishing operations, non-traditional machining processes. Production rates calculation, machining econo	1 '	-
·	programming of manufacture. Engineering metrology. Assembly techniques. Introduction to process planing.		
2342005	Quality Control	KZ	2
	bl terms, where is quality created, who is responsible for a quality. Basic statistical terms and distributions. Statistical methods: statist	1	
	npling. Tools and methods for a quality assurance during product lifetime cycle. Standards 9 000 and 14 000, certification of quality c	-	,
2342091	Project	KZ	2
2012001	Work on specialized tasks.		1 -
2372041	Computer Support for Study	KZ	3
	ces students into creating technical and professional documents on computers or Web and into realizing technical computations with	1	-
	al skills by creating an essay in a text editor, by realizing technical computations with a spreadsheet calculator, and by creating technical	-	
2381002	Fundamentals of Economics	Z,ZK	5
	sed on the following subjects: basic economic relations and consequences. Economic aggregates and their consequences. Operatin	1 '	
	d macroekonomic circle, various economic theories. Consumption behaviour in microeconomics. Theory of production. Different marl	-	-
2381059	Industrial Marketing	Z,ZK	5
2381068	Cost Accounting	Z,ZK	5
	ents an introduction to the problems of value management as the enterprise on the whole and its parts - centres - by means of budg		-
	ients (intermediate products, products, services) - by means of preliminary costing (expected costs) and actual costing (actual costs).	- · ·	-
	hole - enterprise costs - to the costs of individual achievements and the understanding of the transformation from costs in the budget	-	
	ns) into the costing structure (direct and overhead costs), and fixed and variable costs. There are taught conventional and also mode	-	-
	inting is connected directly with the subject Accounting and represents an introduction to the problems of cost allocation to separate		-
,	with the market price and finding out as their profitability, so their acceptability or unacceptability manufacturing program.	-	
2381075	Enterprise Management and Economics	Z,ZK	5
2001010		<u>۲۱</u>	

2381098	Enterprise Finance	Z,ZK	4
The subject Financi	ng of the Enterprise provides a broad-based introduction to financial management. Students have an opportunity to acquire an unders	tanding of the main	n con-cepts
and their practical a	pplication in decision-making. Students gain knowledge of financial management role within a business, financial ratios, nature and p	ourpose of projecte	ed finan-cial
statements and the	ir role in the development of future plans for a business and in the assessing the impact of management decision on the performance	e and position of a	busi-ness,
factors which must	be taken into account when managing the working capital of a business, various aspects of financing the business through external a	nd internal source	s of finance
available to a	a business, ways how business can make decision and evaluation involv-ing investments in new technology, and various aspects of n	nergers and takeo	vers.
2381107	Engineering Ergonomy	Z,ZK	4
The aim of the subje	ect engineering ergonomics is to become acquainted with the problems, constraints and the optimal solution of the fundamental unit of	an enterprise or of	rganization,
i.e. with system	- man - technology (machine) - environment. The character of the subject is going out from the anthropocentric principle, i. e. that ev	ery system MTE a	s in the
manufacturing, ma	naging, technological, designing so in other spheres it is important unambiguously to accommodate them to the possibilities, abilities	and skills of the w	eakest link
- that is to the giver	n man. The students will learn not only to start from the man?s limitations during the designing of the MTE system, but also evaluate	the existing econor	mic level of
	ign rationalization measures for its optimization. The mission of the subject is that the students will be able in their work on all levels o		
the optimal wellbeir	ig for themselves and for the users of the designed systems as well as for their subordinates. The not-excludable output is also the he	alth of man and high	gher quality
	and productivity of labour.	r	
2381174	Enterprise Information Systems	Z,ZK	4
2381504	Accounting	Z,ZK	4
The objective of the	subject is to become acquainted with the significance of accounting for enterprise management, with the content and formal structure	e and realization of	f the stages
and changes of the	economic results during the accounting period; further with accounting as a system needful for tax declaration and not least as a resc	urce to financial a	nalysis. The
stress is laid on und	Jerstanding the dichotomy as the basis of the double entry accounting system, which distinguishes the terms assets (in the long term	and short term) ar	nd liabilities
	uity, liabilities). Of great importance is the assessing of assets and their parts. Ac-counting relates to other information subsystems a		-
-	term planning. There are further some other subjects concerning enterprise manage-ment, connected with accounting, especially in the		-
e e	of the fundamental instrument of a business manager who understands the content and structure of the balance sheet, profit and los		
statement. It is ve	ery possible that some of the students will exploit the knowledge of accounting in their future occupation as managers, financial direct	ors, in consulting f	firms and
	auditing companies.	r	
2381514	Project management	Z,ZK	4
2381712	Managerial Counting	Z,ZK	4
	ted to project management approach. During the course are solved cases that respond to practical situations. The cases are stressed		
-	teractions among costs, capacity of resources and the price. And also on the calculation typical kinds of variations and their explanat		
appropriate manag	erial decision. The students are concerning on the right way of operational budget creation and assessment. The link on the internal of	company accountin	ng is snown
0000040	and explain. The computerized models are used by explanation.	1/7	4
2382048	Statistical and Decision Analysis	KZ	4
Statistical analysis	is a good basis for a creation of decision-making models. The goal of this subject is to teach students to apply the selected statistica	i method, to apply	models of
000004	decision analysis, to create models for the management of industrial enterprises.	1/7	
2382091	Specialization Project	KZ	2
2383001	Fundamentals of Law	Z	2
	legal system is a necessary part of professional equipment of each expert with university degree. The aim of this course is to provid		-
	purces of law and system of law (branch of law), using tutorials, lectures, specialised literature and significant legal regulations. It is ne	-	
e e	ns, that will be regularly in touch with, especially during their professional career and to learn how to work with the collection of laws.		
leads students to kr	now some practical habits and processes while putting the law on, especially in domain of contracts and other important legal relations to prepare professional presentations and to understand basic structures between law and engineering	ships and to make	them ready
2383008		Z	2
2383008	Managerial Psychology Communication and Dealing with People	Z	2
	ation represents an irreplaceable phenomenon in human activity, as it is present in practically all of his activities. The same applies (v	1	
	the activities of managers. So you can't not communicate - you can only communicate badly, well and excellently.		
2383019	Philosophical Issues Of Individual and Science	Z	2
2383102	Personnel Management	Z	2
	n resource management is concerned with the effective management of people at work. Subject examines what can or should be dor	1	
	e satisfied with their working life. Its goal is to help develop more effective managers and staff specialists who work directly with the hum		
2383993	Bachelor Thesis	Z	5
	Work on specialized tasks related to the focus of a thesis.	- 1	~
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