### Study plan

### Name of study plan: 19 86 90 00 BVES OBR 2012 K 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 combined

Required credits: 178
Elective courses credits: 0
Sum of credits in the plan: 178
Note on the plan: první pokus

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 167

The role of the block: P

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:

2182019

Chemistry

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
2182019	Tutors, authors and guarantors (gar.)  Chemistry Radek Šulc, Martin Dostál, Vojt ch B lohlav, Stanislav Solna, Jan Sko ilas Radek Šulc Radek Šulc (Gar.)	KZ	3	2P+1C	1	Р
2021041	Physics I.	Z,ZK	7	4P+1L	*	Р
2011021	Constructive Geometry Ivana Linkeová	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	*	Р
2011062	Matematika II. Radka Keslerová	Z,ZK	8	4P+4C	*	Р
2322029	Materials Science I. Jakub Horník, Jana Sobotová, Ji í Cejp, Eliška Gal íková, Elena ižmárová, Pavlína Hájková, Stanislav Krum, Jan Kr il, Vladimír Mára, Jana Sobotová Jana Sobotová (Gar.)	KZ	3	2P+1L	2	Р
2012037	Computer Graphics Marta Hlavová, Ji í Holman, Nikola Pajerová, Martin Hanek, Jan Karel, Ivana Linkeová, Jaroslav Cibulka Ivana Linkeová Ivana Linkeová (Gar.)	KZ	3	1P+1C	*	Р
2372041	Computer Support for Study	KZ	3	1P+1C	*	Р
2132001	Engineering Design I. Karel Petr	KZ	2	1P+2C	1	Р
2131002	Engineering Design II  Jan Flek, Jan Kanaval, Karel Petr, Martin Dub, Martin Havlí ek, Jan Hoidekr  Karel Petr Karel Petr (Gar.)	Z,ZK	4	2P+3C	2	Р
2131005	History of Technology	ZK	3	2P+0C	1	Р

### Characteristics of the courses of this group of Study Plan: Code=12B-KMEN\* VES Name=01 2012 souhrn 12B\*\*1P-KMEN a 12B\*\*2P-KMEN

ΚZ

General chemistry from the point of view of mechanical and process engineering. Physical chemistry forms 2/3 of the course (structure and properties of matter, thermodynamics, phase equilibrium, chemical reactions, reaction engineering), the remaining 1/3 is devoted to organic chemistry (hydrocarbons, polymers) and biochemistry. Laboratory practice is oriented upon the material properties measurement.

2021041	Physics I.	Z,ZK	7
Kinematics and dynam	ics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic	1 ' 1	es. Oscillations,
waves. Fluid mechanic	s. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Cc	nductors, semicon	ductors,
insulators. Magnetic fie	ld. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and in	direct measuremen	nts, regression,
measurements of 11 v	arious experiments related to the lectures.		
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, greater	imphasis is placed on the theoretical basis of the concepts discussed and on the derivation of basic relationships and connec	tions between con	cepts. Students
will also get to know the	procedures for solving problems with parametric input. In addition, students will gain extended knowledge in some thematic area	as: eigennumbers a	nd eigenvectors
of a matrix, Taylor poly	nomial, integral as a limit function, integration of some special functions.		
2011062	Matematika II.	Z,ZK	8
Open and closed set, I	oundary in E^k. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differentiability.	ential operators div	(divergence)
and curl (rotation). Fund	ction given implicitly. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=triple) integ	ral, Fubini theorem	.Transformation
of integrals to polar, cy	lindrical and spherical coordinates. A simple smooth curve and line integral of a scalar and vector function. Circulation and Gi	reen's theorem. A p	ootential vector
· ·	a line integral on the path. Simple smooth surface and surface integral of a scalar function and a vector function. Flow of a ve	ctor field through a	surface. The
Gauss-Ostrogradskij th			
2322029	Materials Science I.	KZ	3
	ate of materials engineering, overview of technical materials, internal structure of metals, crystal lattices and their defects, del	•	
fracture of materials, s	ructure and properties of materials and their testing, fundamentals of thermodynamics, phases and phase transformations, i	on-carbon phase o	diagram.
2012037	Computer Graphics	KZ	3
2372041	Computer Support for Study	KZ	3
The course introduces	students into creating technical and professional documents on computers or Web and into realizing technical computations w	ith the use of comp	outers. Students
gain practical skills by	creating an essay in a text editor, by realizing technical computations with a spreadsheet calculator, and by creating technical	-based WWW page	e.
2132001	Engineering Design I.	KZ	2
Basic of technical repr	esentation, dimensioning and tolerancing		
2131002	Engineering Design II	Z,ZK	4
Principles of ISO GPS	(Geometrical Products Specification). Students will get critical knowledge about ISO system of limits and fits, tolerancing, surf.	ace texture, geome	trical tolerance,
dimensional loops, tole	rancing of angles and cones, tolerancing of threads. Integral part of course is a project where students apply and practice the	eir knowledge from	lectures.
2131005	History of Technology	ZK	3
Developement of huma	an knowledge in the domain of science and technology in the retrospective of the developement of our civilization. Emphasis is	s given upon new l	branches of
technology with specia	I attention to the contribution of mining, iron metallurgy, power engineering, transportation and of the machine industry in the	narrower sense of	the word.

Code of the group: 12B\*K\*P-ZT12

Name of the group: 04 2012 kombinované ZT v po adí 12

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
K333038	Fundamentals of Technology I.	Z	3	8B	*	P

### Characteristics of the courses of this group of Study Plan: Code=12B\*K\*P-ZT12 Name=04 2012 kombinované ZT v po adí 12

K333038	Fundamentals of Technology I.	Z	3
Production processes in	n engineering production. Technology of engineering production. Materials in engineering. Concepts of steel and cast iron, tec	chnical metals. Pr	oduction of pig
the second second Constitution	and delice decides and discount side and discount continue. Foundary allows Oversions of basic continue to the class. Foundary to		al a a lal fa a ada a

Production processes in engineering production. Technology of engineering production. Materials in engineering. Concepts of steel and cast iron, technical metals. Production of pig iron 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: 12BVK3P

Name of the group: 08 2012 BVES 3.sem kombi povinné

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

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

Credits in the group: 30

Note on the group:

Note on the gro	<sup>4</sup> P.					
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	*	Р

2311004	Mechanics for Technology	Z,ZK	7	4P+2C	*	Р
2321039	Materials Science II. Jakub Horník, Jana Sobotová, Ji í Cejp, Eliška Gal íková, Elena ižmárová, Jan Walter, Pavlína Hájková, Stanislav Krum, Jan Kr il, Jana Sobotová Jana Sobotová (Gar.)	Z,ZK	4	2P+2L	*	Р
K331068	Technology I Bohumír Bedná	Z,ZK	5	16B	*	Р
2121023	Thermodynamics	Z,ZK	5	3P+2C	*	Р

2021025	Physics II.	Z,ZK	4
Faraday's law of ele	electromagnetic induction. Maxwell's equations, electromagnetic waves. Light, wave optics, geometrical optics. Qu	uantum properties of electromagnetic w	aves. Interaction
of radiation with m	matter. Photoelectric effect. Wave-particle mature of matter. Quantum-mechanical description of particle's motio	on. Hydrogen atom and periodic system	n of elements.
Spectra, x-rays, ;la	laser. Band theory of solids, semiconductors. Nucleus, radioactivity, sources of nuclear energy. Laboratories - m	neasurements of 6 experiments related	to the lectures
2011009	Mathematics III	Z,ZK	5
An introductory co	course in ordinary differential equation and infinite series.	·	
2311004	Mechanics for Technology	Z,ZK	7
2321039	Materials Science II.	Z,ZK	4
	materiale edicines in	2,21	•
	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher	'	nical processing
Fundamentals of n	l	mical and thermal and thermo-mechar	nical processing
Fundamentals of n	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher	mical and thermal and thermo-mechar	nical processing
Fundamentals of n technical iron-carb K331068	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher rbon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials	mical and thermal and thermo-mechans.	5
Fundamentals of n technical iron-carb K331068 Foundry properties	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher rbon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials   Technology	mical and thermal and thermo-mechans.	5
Fundamentals of n technical iron-carb K331068 Foundry properties	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher rbon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials   Technology   Technology	mical and thermal and thermo-mechans.	5
Fundamentals of n technical iron-carb K331068 Foundry properties heating-up. Cutting 2121023	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher roon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials    Technology	mical and thermal and thermo-mechans.  Z,ZK  prmation. Division of forming processes	5 . Semi-products
Fundamentals of n technical iron-carb K331068 Foundry properties heating-up. Cutting 2121023 The course deal w	metallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher roon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials Technology I es of metals. Treatment. Pouring. Casting solidification. Moulding and core making. Thermal treatment. Plastic defong. Cold and hot forming. Welds. Weldability. Weldment testing. Thermal cutting. Brasing. Surface treatment.  Thermodynamics	mical and thermal and thermo-mechans.  Z,ZK  prmation. Division of forming processes  Z,ZK  acceptable and diffusers. Basic concepts and diffusers.	5 . Semi-products 5 nd principles are
Fundamentals of n technical iron-carb K331068 Foundry properties heating-up. Cutting 2121023 The course deal w introduced, and the	imetallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined cher roon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of materials Technology I es of metals. Treatment. Pouring. Casting solidification. Moulding and core making. Thermal treatment. Plastic defong. Cold and hot forming. Welds. Weldability. Weldment testing. Thermal cutting. Brasing. Surface treatment.  Thermodynamics with a basic engineering approach to classical thermodynamics, heat transfer and compressible flow through no	mical and thermal and thermo-mechans.  Z,ZK  prmation. Division of forming processes  Z,ZK  pozzles and diffusers. Basic concepts an ixtures are studied with an emphasis or	5. Semi-products 5 nd principles are

Code of the group: 12BVK4P

Name of the group: 09 2012 BVES 4.sem kombi 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 Jan Podaný	KZ	2	1P+1C+1L	*	Р
K341014	Technology II. Pavel Novák	Z,ZK	5	8KP+8KC	*	Р

Characteristics of the courses of this group of Study Plan: Code=12BVK4P Name=09 2012 BVES 4.sem kombi povinné

2381075	Z,ZK	5				
2383102	Z	2				
Personnel / human reso	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 sat	isfied with their working life. Its goal is to help develop more effective managers and staff specialists who work directly with the l	numan resources	of organizations.			
2342005	Quality Control	KZ	2			
Basic quality control teri	ns, 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	sampling. Tools and methods for a quality assurance during product lifetime cycle. Standards 9 000 and 14 000, certification of quality control systems.					
K341014	Technology II.	Z,ZK	5			

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:

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 Jan Kanaval, Eliška Cézová, Zden k ešpíro, Martin Dub, Martin Havlí ek, František Lopot, Roman Uhlí, Ji í Houkal, Ond ej Što ek František Lopot František Lopot (Gar.)	Z,ZK	5	2P+3C	*	Р
2381068	Cost Accounting Theodor Beran, Ladislav Vaniš Theodor Beran Theodor Beran (Gar.)	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 presents an introduction to the problems of value management as the enterprise on the whole and its parts - centres - by means of budgeting (expected cost), so the individual achievements (intermediate products, products, services) - by means of preliminary costing (expected costs) and actual costing (actual costs). Emphasis is laid on the relation of costs on the whole - enterprise costs - to the costs of individual achievements and the understanding of the transformation from costs in the budgeting and accounting structure (individual cost items) into the costing structure (direct and overhead costs), and fixed and variable costs. There are taught conventional and also modern approaches in costing. The subject Cost Accounting is connected directly with the subject Accounting and represents an introduction to the problems of cost allocation to separate products, which are compared with the market price and finding out as their profitability, so their acceptability or unacceptability manufacturing program.

2141204 Introduction to Electrical Engineering for Technology

7.7K

4

Elements of electrical circuits, analysis of electrical circuits as DC and AC. El. Power and Energy. Principle and typical parameters diodes, transistors, thyristors, operation amplifiers. Analogue and digital circuits. AC el. curcuits. Electrical power and energy. Calculation, measurement, power factor. Transformer. Induction machines. Synchronous machines. DC-machines

2383001 Fundamentals of Law

\_

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 provide a view into the Czech Legal Order, particular sources of law and system of law (branch of law), using tutorials, lectures, specialised literature and significant legal regulations. It is necessary for students to know our legal institutions, that will be regularly in touch with, especially during their professional career and to learn how to work with the collection of laws. At the same time the course leads students to know some practical habits and processes while putting the law on, especially in domain of contracts and other important legal relationships and to make them ready to prepare professional presentations and to understand basic structures between law and engineering

Code of the group: 12BV\*5P-OBR

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

Requirement credits in the group: In this group you have to gain 17 credits

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

Credits in the group: 17 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
2342032	Automation of machine tool programming Pavel Novák	KZ	3	1P+2C	*	Р
2341515	Manufacturing process planning Ji í Kyncl Pavel Novák Ji í Kyncl (Gar.)	Z,ZK	4	2P+2C	*	Р
2341001	Metrology Libor Beránek, Petr Mikeš Pavel Novák Libor Beránek (Gar.)	Z,ZK	5	2P+0C+2L	*	Р

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

2342032	Automation of machine tool programming	KZ	3					
Utilizations of computer	technique for preparation of NC programs for lathe and milling machinery. Utilizations of probes on CNC machine tool.							
2341515	Manufacturing process planning	Z,ZK	4					
Objective of the course	Objective of the course in terms of learning outcomes and competences. The aim of the course is to acquaint students with modern approaches and methodology of designing machinin							
processes with regard t	o minimization of material consumption and economic efficiency of the machining process. Next, introducing students to the	designing of asse	mbly processes					
with respect to technical	I and organizational conditions. Further, the aim of the subject is to explain the issue of standardization of work with regard t	the type of proc	ess and the type					
of performed activity.								
2341001	Metrology	Z,ZK	5					
Metrology, intergration in	to quality control, legal metrology, metrology system. Geometrical quantities metrology. Measurement uncertainty. Primary and s	econdary standa	rts. Measurement					
in 1, 2, end 3 coordinate	n 1, 2, end 3 coordinates. Laserinterferometres and their applications. Geometrical surface properties. Form - and position deviations. Surface structure - roughness, wawiness.							
Measurement automati	sation.							

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 group:

	- I-					
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  Jaroslav ervený, Aleš Herman, Ladislav Kola ík, Viktor Kreibich, Ji í Kucha,  Vít Novák, František Tatí ek Aleš Herman Aleš Herman (Gar.)	Z,ZK	5	3P+2C	*	Р
2381098	Enterprise Finance František Freiberg František Freiberg (Gar.)	Z,ZK	4	2P+2C	*	Р
2382048	Statistical and Decision Analysis Barbora Stieberová Barbora Stieberová (Gar.)	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

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.

2381098 Enterprise Finance Z,ZK 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 financial 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 business, 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.

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 statistical method, to apply models of decision analysis, to create models for the management of industrial enterprises.

Code of the group: 12BV\*6P-OBR

Name of the group: 16 2012 BVES 6.sem zam OBR 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
2343993	Bachelor thesis Pavel Novák Jan Podaný (Gar.)	Z	5	0P+6C	*	Р
2341002	Cutting tools Pavel Novák	Z,ZK	4	2P+1C	*	Р
2341068	Special machining technology  Jan Mádl	Z,ZK	5	3P+2C	*	Р
2381107	Engineering Ergonomy Ladislav Vaniš Jan Horejc (Gar.)	Z,ZK	4	2P+2C	*	Р

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

2343993 | Bachelor thesis

Sources of information in the field. Databases and corporate literature. Normalization. Search activity. News from the field of engineering technology. Principles of research and work in laboratories. The principles of work safety in technological devices. Work on specialized tasks related to the focus of a thesis.

2341002 Cutting tools Z.ZK 4

Cutting tools characteristics. Cutting materials including heat treatment and surface finish, application fields. Cutting tool geometry, determination and measurement. Cutting tools elements design. Cutting tools design including dimensioning. Cutting tools production. Basic tools groups description and their use (turning tools, milling tools, etc.). Special cutting tools. Grinding, use and maintenance of cutting tools.

2341068 Special machining technology Z,ZK 5

Development of cutting material, cutting speed development and consequences on the properties of surface finish. Hard and precision machining, engineering economics and ecology. Influence of surface layer and selecting methods of machining process parameters. New methods of abrasive machining, grinding of ceramics, grinding difficult-materials. Expert, adaptive and intelligent control systems, abrasive processes. Physical methods of machining, manufacturing methods and gear threading, finishing methods. Technology in the aerospace industries, automotive, energy and other areas.

2381107 | Engineering Ergonomy | Z,ZK | 4
The aim of the subject engineering ergonomics is to become acquainted with the problems, constraints and the optimal solution of the fundamental unit 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 every system MTE as in the manufacturing, managing, technological, designing so in other spheres it is important unambiguously to accommodate them to the possibilities, abilities and skills of the 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 ensure the optimal wellbeing for themselves and for the users of the designed systems as well as for their subordinates. The not-excludable output is also the health of man and higher quality and productivity of labour.

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 group:

Ze skupiny humanitních předmětů nutno j e d e n absolvovat

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 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 Z 2

2383009 Communication and Dealing with People Z 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 Z 2

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

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

to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.

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 Michele Le Blanc, Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová <b>Nina Procházková Ayyub</b>	Z,ZK	2	0P+2C	*	PV
2041063	French - Bachelor Exam /FME Michaela Schusová, Dušana Jirovská Eliška Vítková Eliška Vítková (Gar.)	Z,ZK	2	0P+2C	*	PV
2041062	German - Bachelor Exam / FME Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Jaroslava Kommová	Z,ZK	2	0P+2C	*	PV
2041065	Russian - Bachelor Exam / FME Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková Eliška Vítková	Z,ZK	2	0P+2C	*	PV
2041064	Spanish - Bachelor Exam / FME Michaela Schusová, Eliška Vítková, Jaime Andrés Villagómez Eliška Vítková	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 Commor	n European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take par	rt in discussions,
to write a summary, a r	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	n European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take par	rt in discussions,
to write a summary, a r	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	n European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take par	rt in discussions,
to write a summary, a r	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	n European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take par	rt in discussions,
to write a summary, a r	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 Commor	n European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater diff	iculties, to take par	rt in discussions,

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 Theodor Beran Theodor Beran (Gar.)	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 1povyol

Characteristics of the courses of this group of Study Flan. Code=12BV 44-2AN Name=10 2012 BVES 4.3em 2am 1povvoi								
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 subject								
describes applicability of	of 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 macroekon	omic circle, various economic theories. Consumption behaviour in microeconomics. Theory of production. Different markets a	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 4)

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 Jakub Horník, Jana Sobotová, Ji í Cejp, Elena ižmárová, Pavlína Hájková, Stanislav Krum, Jan Kr il, Vladimír Mára, Jakub Horváth, Jana Sobotová Jana Sobotová (Gar.)	KZ	2	0P+2C	*	PV
2382091	Specialization Project Ladislav Vaniš, Barbora Stieberová, Vladimír Brdek František Freiberg	KZ	2	0P+2C	*	PV
2332091	Project Jaroslav ervený, Aleš Herman, Ladislav Kola ík, Viktor Kreibich, Ji í Kucha, František Tatí ek, Bohumír Bedná, Barbora Bryksí Stunová, Jan ermák, Ladislav Kola ík Aleš Herman (Gar.)	KZ	2	0P+2C	*	PV
2342091	Project Ji í Kyncl, Tomáš Kellner, Martin Kyncl, Libor Beránek, Michal Koptiš, Petr Mikeš, Jan Šimota, Jan Urban, Vladislav Andronov, Pavel Novák Jan Podaný (Gar.)	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 1povvol oborové projekty

2322031	1 Toject	112	_					
On the basis of the preliminary submission of a bachelor thesis the students, under supervision of their supervisors, prepare a review summarizing and evaluating the studied literature								
with particular emphas	with particular emphasis on experimental technologies which can be applied in their bachelor theses. They can also mention a planned experiment or evaluate hitherto obtained							
knowledge or results.	knowledge or results.							
2382091	Specialization Project	KZ	2					

mionioago or rocanor			
2382091	Specialization Project	KZ	2
2332091	Project	KZ	2
2342091	Project	KZ	2
Work on specialized to	asks.		

Name of the block: Elective courses
Minimal number of credits of the block: 0

The role of the block: V

2222004

Code of the group: 12BV\*\*V-ALFA

Droinot

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  Ivana Linkeová	ZK	3	0P+0C	*	V
201A056	Mathematics I.A Radka Keslerová	ZK	4	0P+0C	*	V
201A062	Mathematics II.A Radka Keslerová	ZK	4	0P+0C	*	V

### Characteristics of the courses of this group of Study Plan: Code=12BV\*\*V-ALFA Name=02 2012 ALFA volitelné pro VES

202A041	Physics I.	_ ∠n	၂ ၁
Kinematics and dynami	es of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic	properties of boo	dies. Oscillations,
waves. Fluid mechanics	. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Co	nductors, semicor	nductors,
insulators. Magnetic fiel	d. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and inc	direct measureme	ents, regression,
measurements of 11 va	rious 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.		
201A056	Mathematics I.A	ZK	4
Introduction to linear al	gebra, analytic geometry of straight lines and planes in E3, calculus of functions of one variable		<u>'</u>
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. Differential operators div (divergence) and curl (rotation). Function given implicitly. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=triple) integral, Fubini theorem. Transformation of integrals to polar, cylindrical and spherical coordinates. A simple smooth curve and line integral of a scalar and vector function. Circulation and Green's theorem. A potential vector field, independence 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 field through a surface. The Gauss-Ostrogradskij theorem.

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

Name of the group: 05 2012 doporu ené seminá e

Requirement credits in the group: Requirement courses in the group:

Credits in the group: 0

Note on the group: Pokud si chce student své dosud získané znalosti (například z matematiky, fyziky, cizích jazyků

atd.) doplnit, může si zapsat některý z volitelných předmětů, které příslušné ústavy pro 1. semestr

(zimní) vypisují. Doporučujeme zejména předměty uvedené v této skupině

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
2026016	Physics - Seminar	Z	2	0P+2C	1	V
2016007	Mathematics I Seminar Radka Keslerová, Olga Majlingová Radka Keslerová Gejza Dohnal (Gar.)	Z	2	0P+2C	1	V

Characteristics of the courses of this group of Study Plan: Code=12B\*\*1V-DOP SEMI Name=05 2012 doporu ené seminá e

2026016	Physics - Seminar	Z	2
The subject is mainly n	neant 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	J.					
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 Michele Le Blanc, Ilona Šimice Ilona Šimice Michele Le Blanc (Gar.)	Z	2	0P+2C	*	V
2046156	English Conversation Michele Le Blanc, Ilona Šimice Nina Procházková Ayyub	Z	2	0P+2C	L	V
2046071	English - Lower Intermediate Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová	Z	2	0P+2C	L	V

2046070	English - Lower Intermediate Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová	Z	2	0P+2C	Z	V
	Michaela Schusová Ilona Šimice (Gar.)  English - Advanced			020		
2046074	Michele Le Blanc, Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová <b>Michaela Schusová</b> Ilona Šimice (Gar.)	Z	2	0P+2C	Z	V
2046075	English - Advanced Michele Le Blanc, Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová Ilona Šimice	Z	2	0P+2C	L	V
2046072	English - Upper Intermediate Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	Z	٧
2046073	English - Upper Intermediate Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová Ilona Šimice	Z	2	0P+2C	L	٧
2046068	English - Beginners Michaela Schusová, Ilona Šimice, Hana Volejníková, Veronika Kratochvílová Michaela Schusová Ilona Šimice (Gar.)	Z	2	0P+2C	Z	٧
2046069	English - Beginners Michaela Schusová, Ilona Šimice, Hana Volejníková, 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	Z	2	0P+2C	Z	V
2046087	Schusová (Gar.)  French - Lower Intermediate Course Michaela Schusová, Dušana Jirovská Dušana Jirovská	Z	2	0P+2C	L	V
2046091	French - Advanced	Z	2	0P+2C	L	V
2046090	Michaela Schusová, Dušana Jirovská <b>Dušana Jirovská</b> French - Advanced Michaela Schusová, Dušana Jirovská, Eliška Vítková Eliška Vítková Eliška	Z	2	0P+2C	Z	V
2046089	Vítková (Gar.)  French - Upper Intermediate  Michaela Saksaná Dušana limetá Pušana limetá	Z	2	0P+2C	L	V
2046088	Michaela Schusová, Dušana Jirovská <b>Dušana Jirovská</b> French - Upper Intermediate Michaela Schusová, Dušana Jirovská, Eliška Vítková <b>Michaela Schusová</b>	Z	2	0P+2C	Z	V
2046084	Michaela Schusová (Gar.)  French - Beginners  Michaela Schusová, Dušana Jirovská Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046085	French - Beginners´ Course Michaela Schusová, Dušana Jirovská Michaela Schusová Michaela Schusová (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, Eliška Vítková, Jaroslava Kommová, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046079	German - Lower Intermediate Course Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Eliška Vítková	Z	2	0P+2C	L	V
2046083	German - Advanced Course Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Jaroslava Kommová	Z	2	0P+2C	L	V
2046082	German - Advanced Course Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046081	German - Upper Intermediate Course Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Eliška Vítková	Z	2	0P+2C	L	V

2046080	German - Upper Intermediate Course Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046076	German - Beginners Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich <b>Michaela</b> <b>Schusová</b> Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046077	German - Beginners Michaela Schusová, Eliška Vítková, Jaroslava Kommová, Petr Laurich Eliška Vítková	Z	2	0P+2C	L	V
2046161	Presentations in English Michaela Schusová, Ilona Šimice, Eliška Vítková, Nina Procházková Ayyub Michaela Schusová Michaela Schusová (Gar.)	Z	2	0P+2C	*	V
2046166	Presentations in Czech Eliška Vítková, Jaroslava Kommová, Petr Laurich Jaroslava Kommová Petr Laurich (Gar.)	Z	2	0P+2C	*	V
2046162	Presentations in German  Eliška Vítková, Jaroslava Kommová, Petr Laurich Jaroslava Kommová  Eliška Vítková (Gar.)	Z	2	0P+2C	*	V
2046164	Presentations in Russian Dušana Jirovská, Eliška Vítková <b>Dušana Jirovská</b> Dušana Jirovská (Gar.)	Z	2	0P+2C	*	V
2046163	Presentations in French language Dušana Jirovská, Eliška Vítková <b>Dušana Jirovská</b> Dušana Jirovská (Gar.)	Z	2	0P+2C	*	V
2046165	Presentations in Spanish Eliška Vítková 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 Michaela Schusová, 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 Michaela Schusová, Hana Volejníková, Dušana Jirovská <b>Dušana Jirovská</b>	Z	2	0P+2C	L	V
2046140	Russian - Upper Intermediate Michaela Schusová, Hana Volejníková, Dušana Jirovská <b>Dušana Jirovská</b>	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 Michaela Schusová, Hana Volejníková, Dušana Jirovská <b>Dušana Jirovská</b>	Z	2	0P+2C	L	V
2046135	Russian - Beginners Michaela Schusová, Hana Volejníková, Dušana Jirovská, Eliška Vítková <b>Michaela Schusová</b> Michaela Schusová (Gar.)	Z	2	0P+2C	Z	V
2046099	Spanish - Lower Intermediate Michaela Schusová, Jaime Andrés Villagómez Eliška Vítková	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 Michaela Schusová, Jaime Andrés Villagómez Jaime Andrés Villagómez	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

kurzy a prezenta	ace		
2046155	English Conversation	Z	2
Improving communic	ative skills in speaking on general topics and general technical topics.		'
2046156	English Conversation	Z	2
Improving communic	ative skills in speaking on general topics and general technical topics.		<u>'</u>
2046071	English - Lower Intermediate	Z	2
Mapped to the Comm	non 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	and speaking about them. Writing in a simple way about familiar topics. reading and comprehension of simple texts. Improvem	ent of professiona	al language.
2046070	English - 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	m. Writing in a sir	nple way about
familiar topics. Readi	ng and comprehension of simple texts. Improvement of professional language. A1 - A2.		
2046074	English - Advanced	Z	2
The aim: comprehen:	sion of spoken English as well as lectures given in English without great difficulties and active participation in a discussion. Writ	ten and oral skills	on advanced
level. Ability to write a	a summary, a report, an essay. reading and comprehension of popular-scientific and scientific articles or texts from student's fie	ld of studies with	out difficulties.
Grammar structures	on advanced level. B1 - B2.		
2046075	English - Advanced	Z	2
Mapped to the Comm	non European Framework of Reference Level B1 - B2. The aim: comprehension of spoken English as well as lectures given in E	inglish without gre	eat difficulties
and active participati	on in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay reading and compre	hension of popula	r-scientific and

scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.

2046072			
2040072	English - Upper Intermediate	Z	2
	anguage skills taking into consideration professional English and common professional terminology. Comprehension of standa	rd English speech a	and conversation
<u> </u>	lay life - at school, at work, during free time, on intermediate level. Broadening grammar knowledge. A2 - B1.	_	
2046073	English - Upper Intermediate	Z	2
	on European Framework of Reference Level B1. The aim is to extend language skills taking into consideration professional E		
knowledge.	ension of standard English speech and conversation about topics of everyday life - at school, at work, during free time, on inter	mediate level. Broa	dening gramma
2046068	English - Beginners	Z	2
	English - Degitiners   of everyday life in a written and spoken form. Understanding and use of basic expressions of general scientific terminology (	1	
2046069	English - Beginners	7	2
	on European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understa	⊢ ∠ anding and use of b	
	rminology (professional language).		
2046126	Czech Lower Intermediate	Z	2
Aim: Understanding of	learly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the	nem. Writing in a sir	nple way about
familiar topics. Readi	g and comprehension of simple texts. Improvement of professional language.		
2046125	Czech Lower Intermediate	Z	2
Aim: Understanding of	early what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about the	nem. Writing in a sir	nple way about
familiar topics. Readi	g and comprehension of simple texts. Improvement of professional language.		
2046118	Czech -Advanced	Z	2
	f Common European Framework of Reference: B1- B2 The aim: comprehension of spoken Czech as well as lectures given in	_	
	a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehe	ension of popular-so	cientific and
	xts from student's field of studies without difficulties. Grammar structures on advanced level.	7	
2046117	Czech -Advanced	Z	2
	oken language as well as lectures in Czech on topics familiar to the student. Communication with native speakers, participation of write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and technical	· · · · · · · · · · · · · · · · · · ·	essing opinions
2046127	Czech - Upper Intermediate	Z	2
	ard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab	_	
<del>-</del>	one's opinions and plans. Reading and understanding general and technical texts.	y to docombo exp	
2046128	Czech - Upper Intermediate	7	2
	on European Framework of Reference Level A2-B1. The aim is to extend language skills taking into consideration profession	_	_
	ension of standard Czech speech and conversation about topics of everyday life - at school, at work, during free time, on inte		•
knowledge technical	anguage.		
2046119	Czech Language for Beginners I.	Z	2
Basic vocabulary of e	veryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (profe	essional language)	
2046120	Czech Language for Beginners II.	Z	2
	on European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understa	anding and use of b	asic expression
	rminology (professional language).	_	
2046086	French - Lower Intermediate Course	Z	2
	what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Womprehension of simple texts. Improvement of professional language.	mung in a simple w	ay about tamilla
2046087	French - Lower Intermediate Course	Z	2
	French - Lower Intermediate Course f Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations whic	1	
• • •	speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvemen		
2046091	French - Advanced	7	2
	f Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in French on t	opics familiar to the	
	native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading a	-	
currant issues and po	pular scientific and technical articles.		
2046090	French - Advanced	Z	2
	oken language as well as lectures in French on topics familiar to the student. Communication with native speakers, participat		Expressing
<u> </u>	s. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and	technical articles.	
2046089	French - Upper Intermediate	Z	2
	f Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students		
during free time, and	talking about these topics. Ability to describe experiences and events, explain one´s opinions and plans. Reading and unders	_	
-			2
2046088	French - Upper Intermediate	Z	
2046088 Understanding stand	ard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab	. –	eriences and
2046088 Understanding stand events, briefly explair	ard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab one's opinions and plans. Reading and understanding general and technical texts.	ility to describe exp	
2046088 Understanding stand events, briefly explair 2046084	ard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab one's opinions and plans. Reading and understanding general and technical texts.  French - Beginners	ility to describe exp	2
2046088 Understanding stand events, briefly explair 2046084 Understanding clearly	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.  French - Beginners what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	ility to describe exp	2
2046088  Jnderstanding stand events, briefly explair 2046084  Jnderstanding clearly opics. Reading and controls	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab one's opinions and plans. Reading and understanding general and technical texts.  French - Beginners  what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Woomprehension of simple texts. Improvement of professional language.	ility to describe exp	2 ay about familia
2046088 Understanding stand events, briefly explair 2046084 Understanding clearly topics. Reading and of 2046085	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.  French - Beginners what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	ility to describe exp	2 ay about familia 2
2046088 Understanding standevents, briefly explair 2046084 Understanding clearly topics. Reading and clearly topics to the level of the	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.  French - Beginners what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Womprehension of simple texts. Improvement of professional language.  French - Beginners' Course	ility to describe exp  Z /riting in a simple w  Z ch a student meets	2 ay about familia 2 at school or in
2046088 Understanding standevents, briefly explair 2046084 Understanding clearly topics. Reading and clearly topics. Reading and clearly topics. The level of the	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab one's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. We comprehension of simple texts. Improvement of professional language.    French - Beginners' Course   French - Beginners' Course   Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which	ility to describe exp  Z /riting in a simple w  Z ch a student meets	2 ay about familia 2 at school or in
2046088 Understanding standevents, briefly explair 2046084 Understanding clearly topics. Reading and clearly topics. Reading and clearly topics are to the level of this/her free time and clearly topics.	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ab one's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   French - Beginners	Z /riting in a simple w  Z ch a student meets t of professional lar	2 ay about familia 2 at school or in iguage.
2046088 Understanding stand events, briefly explair 2046084 Understanding clearly topics. Reading and complete to the level of this/her free time and 2146060 Basic of Indonesian L	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Womprehension of simple texts. Improvement of professional language.    French - Beginners' Course   French - Beginners' Cours	Z /riting in a simple w  Z ch a student meets t of professional lar	2 ay about familia 2 at school or in iguage.
2046088 Understanding stand events, briefly explain 2046084 Understanding clearly topics. Reading and 6 2046085 Mapped to the level of his/her free time and 2146060 Basic of Indonesian L	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Womprehension of simple texts. Improvement of professional language.    French - Beginners' Course   Formon European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement   Indonesian Language Course for Exchange   Indonesian Exchange Program to Indonesian   Indonesian Exchange   Indonesian Exchange   Indonesian   Indonesian Exchange   Indonesian   I	Z //riting in a simple w  Z  ch a student meets t of professional lar	2 ay about familia 2 at school or in aguage. 2
2046088 Understanding stand events, briefly explain 2046084 Understanding clearly topics. Reading and 6 2046085 Mapped to the level of his/her free time and 2146060 Basic of Indonesian L	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Womprehension of simple texts. Improvement of professional language.    French - Beginners' Course   Formon European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement   Indonesian Language Course for Exchange anguage for Student Exchange Program to Indonesia   Technical Indonesian - Course I.	Z //riting in a simple w  Z  ch a student meets t of professional lar	2 ay about familia 2 at school or in aguage. 2
2046088 Understanding stand events, briefly explair 2046084 Understanding clearly topics. Reading and of 2046085 Mapped to the level of his/her free time and 2146060 Basic of Indonesian L 2146061 Second part of Indon 2144062	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.    French - Beginners   What is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Whomprehension of simple texts. Improvement of professional language.    French - Beginners' Course   French - Beginners' Cour	Z //riting in a simple w  Z  ch a student meets t of professional lar	2 ay about familia 2 at school or in nguage. 2
2046088 Understanding stand events, briefly explair 2046084 Understanding clearly topics. Reading and of 2046085 Mapped to the level of his/her free time and 2146060 Basic of Indonesian L 2146061 Second part of Indon 2144062	and speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abone's opinions and plans. Reading and understanding general and technical texts.    French - Beginners	Z //riting in a simple w  Z  ch a student meets t of professional lar	2 ay about familia 2 at school or in nguage. 2

2046079 Mapped to the level of	German - Lower Intermediate Course		
Mapped to the level of		Z	2
or in his/her free time	Common European Framework of Reference A2 Aim: Understanding clearly spoken language about everyday situations whic and speaking about them. Writing in a simple way about familiar topics. reading and comprehesion of simple texts. Improveme		
2046083	German - Advanced Course	Z	2
	Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in	. – .	· <del>-</del>
and active participation	n in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and compre	ehension of popula	r-scientific and
scientific articles or tex	ts from student's field of studies without difficulties. Grammar structures on advanced level.		
2046082	German - Advanced Course	Z	2
Comprehension of spo	ken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participat	ion 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 te	echnical articles.	
2046081	German - Upper Intermediate Course	Z	2
	Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students of		
_	alking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understand	anding general and	
2046080	German - Upper Intermediate Course  rd speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abil		2 prionees and
_	one's opinions and plans. Reading and understanding general and technical texts.	ity to describe expe	enences and
2046076	German - Beginners	7	2
	eryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (profes	. – .	2
2046077	German - Beginners	7	2
	pommon European Framework of Reference A1 Basic vocabulary of everyday life in a written and spoken form. Understanding	and use of basic e	
	nology (professional language).		
2046161	Presentations in English	Z	2
Preparing students to	present in English on technical topics, with a possible co-operation with specialized departments.	'	
2046166	Presentations in Czech	Z	2
Preparing students to	give presentations in English on technical topics, with a possible co-operation with specialized departments.		
2046162	Presentations in German	Z	2
Preparation for presen	ting technical topics in German, possibly in cooperation with specialized departments.		
2046164	Presentations in Russian	Z	2
	ting technical topics in Russian, possibly in cooperation with specialized departments.		
2046163	Presentations in French language	Z	2
	ting technical topics in French, possibly in cooperation with specialized departments.		
2046165	Presentations in Spanish	Z	2
	ting technical topics in Spanish, possibly in cooperation with specialized departments.		
2046137	Russian - Lower Intermediate Course	Z	2
	what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Wr Imprehension of simple texts. Improvement of professional language.	iung in a simple wa	iy about iamilia
topico. Itodaning and ot	imprononolori di dimpio toxto: improvoment di proloccionali anguago:		
2046138	Russian - Lower Intermediate Course	7	2
2046138 Mapped to the level of	Russian - Lower Intermediate Course Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a str	Z udent meets at sch	2 ool or in his/he
Mapped to the level of	Russian - Lower Intermediate Course Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a str about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe	udent meets at sch	<del>-</del>
Mapped to the level of	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a str	udent meets at sch	<del>-</del>
Mapped to the level of free time and speaking 2046141	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stuabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe	udent meets at sch ssional language.	ool or in his/he
Mapped to the level of free time and speaking 2046141 Comprehension of spo	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a str about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced	udent meets at sch ssional language.  Z ion in discussions.	ool or in his/he
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced	udent meets at sch ssional language.  Z ion in discussions. echnical articles.	ool or in his/he  2  Expressing
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the student is spoken language.	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z opics familiar to the	ool or in his/he  2  Expressing  2 e student.
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on tative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z opics familiar to the	2 Expressing 2 e student.
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and pop	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stig about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on tative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an under scientific and technical articles.	dent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the dunderstanding t	2 Expressing  2 e student. exts concerning
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and por 2046140	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced sken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on to active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an outer scientific and technical articles.  Russian - Upper Intermediate	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t	2 Expressing  2 e student. exts concernin
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and pop 2046140 Mapped to the level of	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professiven language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and to Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on to active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and the strength of the strength	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t  Z meets at work, at s	2 Expressing  2 e student. exts concerning
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with no currant issues and pop 2046140 Mapped to the level of free time, and talking a	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professive Russian - Advanced sken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textice and the Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student relabout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding the standard speech about familiar matters that a student relabout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding the standard speech about familiar matters that a student relabout these topics.	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the dunderstanding t	2 Expressing  2 e student. exts concernin  2 chool, during technical texts
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professive Russian - Advanced sken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textice and the Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding standard speech about familiar matters that a student of Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student of the standard speech about familiar matters that a student of Russian - Upper Intermediate  Russian - Upper Intermediate	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t  Z meets at work, at s anding general and Z	2 Expressing  2 e student. exts concernin  2 chool, during technical texts
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professive Russian - Advanced sken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textice and the Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student relabout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding the standard speech about familiar matters that a student relabout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding the standard speech about familiar matters that a student relabout these topics.	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t  Z meets at work, at s anding general and Z	2 Expressing  2 e student. exts concerning  2 chool, during technical texts
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with n currant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignation and simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professive Russian - Advanced sken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participated Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textive speakers, participation 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 textive speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding standard speech about familiar matters that a student relation these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student relation these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics.	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t  Z meets at work, at s anding general and Z	2 Expressing  2 e student. exts concernin  2 chool, during technical texts
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with noturrant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profession in Russian - Advanced  Russian - Advanced  Russian - Advanced  Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textiles are provided as lectures in Russian on the Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the relative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an evaluar scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student relative these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding speech about familiar matters that a student matters that a student matter that	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the nd understanding t  Z meets at work, at s anding general and Z ity to describe expe	2 Expressing  2 e student. exts concerning technical texts 2 eriences and
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136 Mapped to the level of mapped to the level of the lev	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profession in Russian - Advanced siken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participate. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textiles are provided in the second common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the street of the speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding standard speech about familiar matters that a student response topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student response topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to go pinions and plans. Reading and understanding general and technical texts.    Russian - Beginners   Russian - Beginner	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the nd understanding t  Z meets at work, at s anding general and Z ity to describe expe	2 Expressing  2 e student. exts concernin  2 chool, during technical texts  2 eriences and
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136 Mapped to the level of mapped to the level of the lev	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profession - Advanced Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on to active speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding standard speech about familiar matters that a student relation these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding speech about familiar matters that a student respect to a speech about familiar matters that a student respect to a speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters that a student matter of speech about familiar matters of Russian - Beginners  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form.	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the nd understanding t  Z meets at work, at s anding general and Z ity to describe expe	2 Expressing  2 e student. exts concerning technical texts 2 eriences and
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136 Mapped to the level of of general scientific ter 2046135	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced iken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participate. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textile is a speaker of popular scientific and textile speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an expect speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an expect speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an expect speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an expect speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an expect speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and essay or a report. Reading as well as lectures and popular scientific and text. Reading as well as lectures in Russian o	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the nd understanding t  Z meets at work, at s anding general and Z ity to describe experi	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and pop 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136 Mapped to the level of of general scientific ter 2046135 Basic vocabulary of explain 2046099	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strage about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced liken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and texts are also as a security of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the strive speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an ular scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student resource these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability one's opinions and plans. Reading and understanding general and technical texts.  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  eryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professional). Spanish - Lower Intermediate	udent meets at sch ssional language.  Z ion in discussions. echnical articles.  Z opics familiar to the nd understanding t  Z meets at work, at s anding general and Z ity to describe experi	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions  2
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standal events, briefly explain 2046136 Mapped to the level of of general scientific televal of 2046135 Basic vocabulary of explain 2046099 Mapped to the level of of general scientific televal of the level o	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a stignation and simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profesional them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profesional texts are simple topically about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profesional reading as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participate Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textures in Russian on the stress peakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and understanding stentific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student report in these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding appears and plans. Reading and understanding general and technical texts.  Russian - Upper Intermediate  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  eryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professional Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a student on the stress of Reference A2 Understanding clearly what is spoken about everyday situations which a student report of Reference A2 Understanding clearly what is spoken about everyday situations which a student report of Reference A2 Understanding clearly wha	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z opics familiar to the ond understanding to the ond understanding to the ond understanding to the ond understanding general and the one of the one	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standa events, briefly explain 2046136 Mapped to the level of of general scientific ter 2046135 Basic vocabulary of explain 2046099 Mapped to the level of free time and speaking	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and textice an	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z opics familiar to the discussion of th	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions  2 color in his/he
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific telescope 2046135 Basic vocabulary of even 2046099 Mapped to the level of free time and speaking 2046098	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and texts.  Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the ative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an ular scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student related to these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability to speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability speech about fa	udent meets at schessional language.  Z ion in discussions. schnical articles.  Z opics familiar to the did understanding to the language and language.  Z meets at work, at sunding general and language.  Z issional language.  Z ident meets at schessional language.  Z	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions  2 color in his/he 2
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific telescope 2046135 Basic vocabulary of even 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and tea Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the ative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an adular scientific and technical articles.  Russian - Upper Intermediate Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student rebout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understand these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding seneral and technical texts.  Russian - Upper Intermediate  Russian - Beginners Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a stu, about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe  Spanish - Lower Intermediate  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 profe	udent meets at schessional language.  Z ion in discussions. schnical articles.  Z opics familiar to the did understanding to the language and language.  Z meets at work, at sunding general and language.  Z issional language.  Z ident meets at schessional language.  Z	2 Expressing  2 e student. exts concernin  2 chool, during technical texts 2 eriences and  2 c expressions  2 color in his/he
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific teles 2046135 Basic vocabulary of every 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly topics. Reading and compared to the level of free time and speaking 2046098 Understanding clearly topics. Reading and compared to the level of free time and speaking 2046098	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and tea Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the stive speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an explain scientific and technical articles.  Russian - Upper Intermediate Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student rebout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abil one's opinions and plans. Reading and understanding general and technical texts.  Russian - Beginners Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a stulation them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profesional language.	Judent meets at schessional language.  Z Joni in discussions. Sechnical articles.  Z Jonics familiar to the did understanding to the did understanding to the did understanding to the did understanding general and general and general and general and general and general and gener	2 Expressing  2 e student. exts concernin  2 chool, during technical texts  2 eriences and  2 c expressions  2 and
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific teles 2046135 Basic vocabulary of explain 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly topics. Reading and control 2046096	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and text. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and text. Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the stress participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and under steed to scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student restricted to the topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understated speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability of special plans. Reading and understanding general and technical texts.  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  eryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professional Pramework of Reference A2 Understanding clearly what is spoken about everyday situations which a stuabout them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  Spanish - Beginners	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the discussion of t	2 Expressing  2 e student. exts concernin  2 chool, during technical texts  2 eriences and  2 c expressions  2 pol or in his/he  2 ay about familia
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific teles 2046135 Basic vocabulary of every 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly topics. Reading and colored a col	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and tea Russian - Advanced Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on the stive speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an explain scientific and technical articles.  Russian - Upper Intermediate Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student rebout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abil one's opinions and plans. Reading and understanding general and technical texts.  Russian - Beginners Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a stulation them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profesional language.	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the discussion of t	2 e student. exts concerning technical texts 2 eriences and 2 c expressions 2 do or in his/her 2 ay about familia
Mapped to the level of free time and speaking 2046141 Comprehension of spoopinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standard events, briefly explain 2046136 Mapped to the level of of general scientific teles 2046135 Basic vocabulary of every 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly topics. Reading and colored a col	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a strip about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced  Russian - Advanced as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and te Russian - Advanced  Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on tative speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an autical scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student rebout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding standard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abil one's opinions and plans. Reading and understanding general and technical texts.  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  eryday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (professionals - Lower Intermediate  Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a stuant them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  Spanish - Lower Intermediate  Spanish - Beginners  and what is spoken about everyday situations which a student meets	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the discussion of t	2 Expressing  2 e student. exts concernin  2 chool, during technical texts  2 eriences and  2 c expressions  2 pol or in his/he  2 ay about familia
Mapped to the level of free time and speaking 2046141 Comprehension of spo opinions. Written skills 2046142 Mapped to the level of Communication with nourrant issues and poper 2046140 Mapped to the level of free time, and talking a 2046139 Understanding standate events, briefly explain 2046136 Mapped to the level of of general scientific teles 2046135 Basic vocabulary of event in the level of free time and speaking 2046099 Mapped to the level of free time and speaking 2046098 Understanding clearly topics. Reading and control 2046096 Aim: Understanding clearly topics. Reading and control 2046096 Aim: Understanding clearly topics. Reading and control 2046097	Common European Framework of Reference: A2 Understanding clearly what is spoken about everyday situations which a still about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of profe Russian - Advanced ken language as well as lectures in Russian on topics familiar to the student. Communication with native speakers, participat Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and texts are speakers, participation 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 texts speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading an adular scientific and technical articles.  Russian - Upper Intermediate  Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student rebout these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understanding es expensions and plans. Reading and understanding seneral and technical texts.  Russian - Upper Intermediate  d speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Abil one's opinions and plans. Reading and understanding general and technical texts.  Russian - Beginners  Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understand minology (professional language)  Russian - Beginners  Spanish - Lower Intermediate  Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writting in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  Spanish	udent meets at schessional language.  Z ion in discussions. echnical articles.  Z oppics familiar to the did understanding to the did understanding to the did understanding to the did understanding general and use of basic sional language.  Z indent meets at schessional language.  Z itting in a simple was general and use of basic sional language.  Z m. Writing in a simple was general and use of basic sional language.	2 Expressing  2 e student. exts concerning technical texts 2 eriences and 2 c expressions 2 pol or in his/her 2 ple way about 2 ple way about 2

## List of courses of this pass:

Code	Name of the course	Completion	Credits
2011009	Mathematics III  An introductory course in ordinary differential equation and infinite series.	Z,ZK	5
2011021	Constructive Geometry  The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relati	Z,ZK	6
2011056	Mathematics I	Z,ZK	8
	ter emphasis is placed on the theoretical basis of the concepts discussed and on the derivation of basic relationships and connection		_
=	the procedures for solving problems with parametric input. In addition, students will gain extended knowledge in some thematic areas:	-	
	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. Differen 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 Gree se 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 Gauss-Ostrogradskij theorem.		
2012037	Computer Graphics	KZ	3
2016007	Mathematics I Seminar	Z	2
201A021	Constructive Geometry A  The subject is focused on geometric objects in the space - curves, surfaces and solids and their properties and mutual relati	ZK	3
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		1
201A062	Mathematics II.A	ZK	4
	set, boundary in E^k. Real function of k-variables. Partial derivatives and differentiability. Gradient and directional derivative. Differen	ial operators div (c	livergence)
and curl (rotation). F	Function given implicitly. Local and global (= absolute) extremes of a function of more variables. Double integral, volume (=triple) integral,	Fubini theorem. Tra	ansformation
	r, cylindrical and spherical coordinates. A simple smooth curve and line integral of a scalar and vector function. Circulation and Gree be 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 Gauss-Ostrogradskij theorem.		
2021025	Physics II.	Z,ZK	4
Faraday's law of ele	ctromagnetic induction. Maxwell's equations, electromagnetic waves. Light, wave optics, geometrical optics. Quantum properties of ele	ctromagnetic waves	s. Interaction
of radiation with m	atter. Photoelectric effect. Wave-particle mature of matter. Quantum-mechanical description of particle's motion. Hydrogen atom and	l periodic system o	f elements.
Spectra, x-rays, ;las	ser. Band theory of solids, semiconductors. Nucleus, radioactivity, sources of nuclear energy. Laboratories - measurements of 6 expe	riments related to	the lectures.
2021041	Physics I.	Z,ZK	7
waves. Fluid me	namics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic prechanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Concept is called. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indirect measurements. It was not not not the lectures.	onductors, semicor	ductors,
2026016	Physics - Seminar	Z	2
2020010	The subject is mainly meant for high-school students for repetition of high-school physics.	_	_
202A041	Physics I.	ZK	3
	r Trysics 1. namics of a particle motion. Principle of conservation of energy. System of particles, centre of mass. Rigid body. Continuum, elastic pr		
	echanics. Temperature and heat transfer. Kinetic theory of gases. Thermodynamics. Electric field, current, conductivity, resistance. Co		
	c field. Magnetic materials. Laboratories - accuracy of measurements, systematic and random errors, uncertainty of direct and indirect measurements of 11 various experiments related to the lectures.		
2041061	English-Bachelor Exam	Z,ZK	2
	mon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficul	1 '	I
	to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	•	
2041062	German - 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 to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	1	discussions,
2041063	French - 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 to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	ties, to take part in	discussions,
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 '	I
	to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.		
2041065	Russian - Bachelor Exam / FME	Z,ZK	2
Mapped to the Com	mon European Framework Level B2. The aim is to understand spoken language and lectures on technical topics without greater difficul to write a summary, a report and an essay, to read technical texts, to master grammar at advanced level.	ties, to take part in	discussions,
2046068	English - Beginners	Z	2
Aim: Basic voc	abulary of everyday life in a written and spoken form. Understanding and use of basic expressions of general scientific terminology (	_	age). A1
2046069 Mapped to the Com	English - Beginners  mon European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understandin	∠ g and use of basic	expressions
	of general scientific terminology (professional language).		

			r
2046070	English - Lower Intermediate  g 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	2 way about
7 iiii. Oriderstaridii	familiar topics. Reading and comprehension of simple texts. Improvement of professional language. A1 - A2.	withing in a simple	, way about
2046071	English - Lower Intermediate	Z	2
Mapped to the Co	mmon European Framework of Reference Level A2 Aim: Understanding clearly spoken language about everyday situations which a s	student meets eithe	er at school
	time and speaking about them. Writing in a simple way about familiar topics, reading and comprehension of simple texts. Improveme		
2046072	English - Upper Intermediate	Z	2
	d language skills taking into consideration professional English and common professional terminology. Comprehension of standard En	_	l l
The diffice to exten	about topics of everyday life - at school, at work, during free time, on intermediate level. Broadening grammar knowledge. A2 -	- :	onvoroation
2046073	English - Upper Intermediate	Z	2
Mapped to the Co	ommon European Framework of Reference Level B1. The aim is to extend language skills taking into consideration professional Engli	sh and common pi	rofessional
terminology. Comp	rehension of standard English speech and conversation about topics of everyday life - at school, at work, during free time, on intermedi	ate level. Broadeni	ng grammar
	knowledge.		
2046074	English - Advanced	Z	2
	hension of spoken English as well as lectures given in English without great difficulties and active participation in a discussion. Writter	_	l l
· ·	ite 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.	or ordanoo murour	a
2046075		Z	2
	English - Advanced	_	l
	ommon European Framework of Reference Level B1 - B2. The aim: comprehension of spoken English as well as lectures given in		
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	nsion of popular-sc	entific and
	scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.		ı
2046076	German - Beginners	Z	2
Basic voca	abulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (p	rofessional langua	ge)
2046077	German - Beginners	Z	2
Mapped to the lev	rel Common European Framework of Reference A1 Basic vocabulary of everyday life in a written and spoken form. Understanding an	d use of basic exp	ressions of
	general scientific terminology (professional language).	·	
2046078	German - Lower Intermediate Course	7	2
	ng clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	_	
7 iiii. Oriacistariaii	familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	vviiting in a simple	way about
2040070		7	2
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		
	e time and speaking about them. Writing in a simple way about familiar topics. reading and comprehesion of simple texts. Improvement	nt of professional la	
2046080	German - Upper Intermediate Course	Z	2
Understanding st	andard 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	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.  German - Upper Intermediate Course	Z	2
		_	l
Mapped to the lev	German - Upper Intermediate Course	nes across at work,	at school,
Mapped to the lev	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com	nes across at work,	at school,
Mapped to the level during free time, are 2046082	German - Upper Intermediate Course 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  German - Advanced Course	nes across at work ng general and tec Z	, at school, hnical texts.
Mapped to the level during free time, are 2046082 Comprehension	German - Upper Intermediate Course 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  German - Advanced Course of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participation	nes across at work ng general and tec Z n in discussions. E	, at school, hnical texts. 2 xpressing
Mapped to the level during free time, are 2046082 Comprehension opinions.	German - Upper Intermediate Course yel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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	nes across at work ng general and tec Z n in discussions. E and technical articl	, at school, hnical texts. 2 xpressing es.
Mapped to the lev during free time, ar 2046082 Comprehension opinions.' 2046083	German - Upper Intermediate Course  vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  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 German - Advanced Course	nes across at working general and tec Z n in discussions. E and technical articl	, at school, hnical texts. 2 xpressing es. 2
Mapped to the level during free time, and 2046082 Comprehension opinions. 2046083 Mapped to the level	German - Upper Intermediate Course  vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participation with the skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific a German - Advanced Course  el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German.	nes across at working general and tec Z n in discussions. E and technical articl Z erman without grea	, at school, hnical texts.  2 xpressing es.  2 at difficulties
Mapped to the level during free time, and 2046082 Comprehension opinions. 2046083 Mapped to the level	German - Upper Intermediate Course  vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participation with the skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific a German - Advanced Course  el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration 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 and comprehension of	nes across at working general and tec Z n in discussions. E and technical articl Z erman without grea	, at school, hnical texts.  2 xpressing es.  2 at difficulties
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active particip	German - Upper Intermediate Course  vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common described talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding the German - Advanced Course of spoken language as well as lectures in German on topics familiar to the student. Communication with native speakers, participation with the skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific a German - Advanced Course of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German 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 structures on advanced level.	nes across at work, ng general and tec Z n in discussions. E and technical articl Z erman without greansion of popular-so	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common described experiences and events, explain one's opinions and plans. Reading and understanding about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion of texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners	nes across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084	German - Upper Intermediate Course  vel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common described experiences and events, explain one's opinions and plans. Reading and understanding about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  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 German - Advanced Course  el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion in this/her free time and speaking about them. Writing arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	nes across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and
Mapped to the level during free time, are 2046082 Comprehension opinions. Section 2046083 Mapped to the level and active participe 2046084 Understanding clean	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come at talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion of structures on advanced level.  French - Beginners arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way al	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level active participation of the level and active participation of the level active participat	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common dalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding  German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion of spoken derman as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level developed to the level developed of the leveloped of the level developed of the level developed of the leveloped	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common dalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  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 German - Advanced Course  el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  vel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 cchool or in
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level developed to the level developed of the leveloped of the level developed of the level developed of the leveloped	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common dalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding  German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion of spoken derman as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 cchool or in
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level developed to the level developed of the leveloped of the level developed of the level developed of the leveloped	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common dalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course  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 German - Advanced Course  el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  vel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 cchool or in
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level active participation of the level and active participation of the level active participat	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students common talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion of the student of studies without difficulties. Grammar structures on advanced level.  French - Beginners arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s of professional lar Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 chool or in inguage.  2
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level active participation of the level and active participation of the level active participat	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding  German - Advanced Course 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 as German - Advanced Course all of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a nee and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement French - Lower Intermediate Course	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s of professional lar Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 chool or in inguage.  2
Mapped to the level during free time, and 2046082 Comprehension opinions. Support of the level and active participation of the level active participation of the level and active participation of the level active participat	German - Upper Intermediate Course rel of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a neand speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z in a simple way at Z student meets at s of professional lar Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 bout familiar  2 chool or in inguage.  2
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a need and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z j in a simple way at Student meets at so of professional lar Z j in a simple way at Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 cchool or in aguage.  2 cout familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. Surprise 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level level his/her free time 2046086 Understanding clear 2046087 Mapped to the level le	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course all of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of student in the scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners  artly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course artly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  French - Lower Intermediate Course  French - Lower Intermediate Course	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without greansion of popular-so Z j in a simple way al Z student meets at s of professional lar Z j in a simple way al Z student meets at s student meets at s	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 cchool or in aguage.  2 cout familiar  2 cchool or in decouple and familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated and active participe 2046085 Mapped to the level his/her free time 2046086 Understanding cleated and active participe 2046086 Understanding cleated and active participe 2046086 Understanding cleated and active participe time 2046087 Mapped to the level his/her free time 2046087	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding  German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Getation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level.  French - Beginners arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 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 topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a early spoken about them. Writing in a simple way about familiar topics. Reading and comprehension of simple tex	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al z student meets at s of professional lar Z y in a simple way al Z student meets at s of professional lar Z y in a simple way al z student meets at s of professional lar Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 chool or in aguage.  2 chool or in inguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated by the level his/her free time 2046086 Understanding cleated by the level his/her free time 2046087 Mapped to the level his/her free time 2046088	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding  German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of stield of studies without difficulties. Grammar structures on advanced level.  French - Beginners arrly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course are lof Common European Framework of Reference: A1 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 topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course  are lof Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a neand speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement French - Upper Intermediate  French - Upper Intermediate	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way at the simple way	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 chool or in aguage.  2 chool or in inguage.  2 chool or in inguage.  2 chool or in inguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated by the level his/her free time 2046086 Understanding cleated by the level his/her free time 2046087 Mapped to the level his/her free time 2046088	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come detailing about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 at German - Advanced Course all of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German - Advanced Course ation 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.  French - Beginners arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 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 topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a neand speaking about them. Writing in a simple way about familiar topics. Reading	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way at the simple way	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 chool or in aguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046086 Understanding clear 2046086 Understanding clear 2046087 Mapped to the level and active participe 2046087 Understanding clear 2046087 Mapped to the level in scheme free time 2046088 Understanding st	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com de talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding German - Advanced Course 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 German - Advanced Course  of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Geration in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level.  French - Beginners  artly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a nee and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement French - Lower Intermediate Course  artly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a nee and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional	les across at work, ing general and tector of the company of the c	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 coout familiar  2 chool or in aguage.  2 cchool or in aguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087 Mapped to the level his/her free time 2046088 Understanding stee 2046088 Understanding stee 2046089	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com detalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehen scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about famili	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al z in a simple way al z in a simple way al z z in a simple	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046086 Mapped to the level his/her free time 2046087 Mapped to the level his/her free time 2046088 Understanding clear 2046088 Understanding stem 2046088 Understanding stem 2046089 Mapped to the level his/her free time 2046089 Mapped to the level his/her free time 2046089 Mapped to the level his/her free time 2046089	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com  d talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin  German - Advanced Course 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  German - Advanced Course  of Common European Framework of Reference: B1 - B2 The aim: comprehension of spoken German as well as lectures given in Ge  ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  rel of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about fam	les across at work, ng general and tector of professional lar of p	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  2 chool or in aguage.  2 cchool or in aguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087 Mapped to the level his/her free time 2046088 Understanding stee 2046088 Understanding stee 2046089 Mapped to the level during free time, are	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com datalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1-B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehe scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Upper Intermediate  andard speech about familiar matters that a student meets at work	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al in	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar  4 cout familiar  2 cout familiar  4 cout familiar  2 cout familiar  4 cout familiar  4 cout familiar  5 cout familiar  4 cout familiar  5 cout familiar  4 cout familiar  5 cout familiar  6 cout familiar  7 cout familiar  8 cout familiar  8 cout familiar  9 cout familiar  1 cout familiar  2 cout familiar  4 cout familiar  5 cout familiar  6 cout familiar  7 cout familiar  8 cout familiar  8 cout familiar  8 cout familiar  8 cout familiar  9 cout familiar  8 cout familiar  9 cout familiar  1 cout familiar  1 cout familiar  2 cout familiar  3 cout familiar  4 cout familiar  4 cout familiar  5 cout familiar  6 cout familiar  8 cout famili
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087 Mapped to the level his/her free time 2046088 Understanding stem 2046089 Mapped to the level during free time, are 2046090	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding 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 German - Advanced Course  If of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay, Reading and comprehension in a discussion. Written and oral skills on advanced level.  French - Beginners  arity what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  French - Lower Intermediate Course  arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  French - Upper Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehe	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al in a simple way al Z student meets at sof professional lar Z in a simple way al z to describe experiences across at work, ng general and tec Z	, at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087 Mapped to the level his/her free time 2046088 Understanding stem 2046089 Understanding stem 2046090 Comprehension	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com dt talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin  German - Advanced Course 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  German - Advanced Course el of Common European Framework of Reference: B1 - B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehen scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Upper Intermediate  French - Upper Intermediate  Of Common European Framework	les across at work, and general and tector of properation of professional lar of profe	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated by the level his/her free time 2046086 Understanding cleated by the level his/her free time 2046088 Understanding cleated by the level his/her free time 2046088 Understanding stem 2046089 Mapped to the level during free time, are 2046090 Comprehension opinions.	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students come and talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding 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 German - Advanced Course  If of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken German as well as lectures given in German in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay, Reading and comprehension in a discussion. Written and oral skills on advanced level.  French - Beginners  arity what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  French - Lower Intermediate Course  arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  French - Upper Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehe	les across at work, and general and tector of properation of professional lar of profe	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 coout familiar  2 chool or in aguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding clear 2046085 Mapped to the level his/her free time 2046086 Understanding clear 2046087 Mapped to the level his/her free time 2046088 Understanding stem 2046089 Understanding stem 2046090 Comprehension	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com dt talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin  German - Advanced Course 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  German - Advanced Course el of Common European Framework of Reference: B1 - B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehen scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course  rel of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course  arry what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Upper Intermediate  French - Upper Intermediate  Of Common European Framework	les across at work, and general and tector of properation of professional lar of profe	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 cout familiar
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated by the level in the l	German - Upper Intermediate Course rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com det talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understandin German - Advanced Course 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 German - Advanced Course el of Common European Framework of Reference: B1 - B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehen scientific articles or texts from student's field of studies without difficulties. Grammar structures on advanced level.  French - Beginners arty what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Beginners' Course el of Common European Framework of Reference: A1 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement  French - Lower Intermediate Course and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  French - Lower Intermediate Course  el of Common European Framework of Reference: A2 Aim: Understanding clearly what is spoken about everyday situations which a ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al z student meets at sof professional lar Z in a simple way al z student meets at sof professional lar Z in a simple way al z to describe experience across at work, ng general and technical article Z pics familiar to the	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 coout familiar  2 chool or in aguage.
Mapped to the level during free time, are 2046082 Comprehension opinions. 2046083 Mapped to the level and active participe 2046084 Understanding cleated by the level in the l	German - Upper Intermediate Course  rel of Common European Framework of Reference:A2 - B1 Understanding standard speech about familiar topics, that a students com de talking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding datalking about these topics. Ability to describe experiences and events, explain one's opinions and plans. Reading and understanding devices 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 German - Advanced Course  el of Common European Framework of Reference: B1 - B2 The aim: comprehension of spoken German as well as lectures given in Ge ation in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehension of studies without difficulties. Grammar structures on advanced level.  French - Beginners  ariy what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  ariy what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement in the student meets at school or in his/her free time and speaking about them. Writing topics. Reading and comprehension of simple texts. Improvement of professional language.  French - Lower Intermediate Course  and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement in the student m	les across at work, ng general and tec Z n in discussions. E and technical article Z erman without great in a simple way al z student meets at sof professional lar Z in a simple way al z student meets at sof professional lar Z in a simple way al z to describe experience across at work, ng general and technical article Z pics familiar to the	at school, hnical texts.  2 xpressing es.  2 at difficulties cientific and  2 coout familiar  2 chool or in aguage.

2046096	Spanish - Beginners	Z	2				
Aim: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.	Writing in a simple	way about				
familiar topics. Reading and comprehension of simple texts. Improvement of professional language.							
2046097	Spanish - Beginners	Z	2				
Mapped to the C	common European Framework of Reference Level A1. Aim: Understanding clearly what is spoken about everyday situations which a	student meets at so	hool or in				
his/her free tir	ne and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement	of professional lan					
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	g in a simple way at	oout familiar				
0040000	topics. Reading and comprehension of simple texts. Improvement of professional language.						
2046099	Spanish - Lower Intermediate el of Common European Framework of Reference A2 Understanding clearly what is spoken about everyday situations which a studer	Z Z	2 or in big/bor				
1 ' '	and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of						
2046117	Czech -Advanced	7	2				
	spoken language as well as lectures in Czech on topics familiar to the student. Communication with native speakers, participation in dis	cussions. Expressi					
I	en skills. Ability to write an essay or a report. Reading and understanding texts concerning currant issues and popular scientific and t	· ·	3 -1				
2046118	Czech -Advanced	Z	2				
Mapped to the leve	el of Common European Framework of Reference: B1- B2 The aim: comprehension of spoken Czech as well as lectures given in Czer	n ch without great diff	ficulties and				
active participat	ion in a discussion. Written and oral skills on advanced level. Ability to write a summary, a report, an essay. Reading and comprehens	ion of popular-scie	ntific and				
	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				
	abulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (p	rofessional langua					
2046120	Czech Language for Beginners II.	Z	2				
Mapped to the Co	mmon European Framework of Reference Level A1 Aim: Basic vocabulary of everyday life in a written and spoken form. Understanding	g and use of basic	expressions				
0040405	of general scientific terminology (professional language).	7					
2046125	Czech Lower Intermediate	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. familiar topics. Reading and comprehension of simple texts. Improvement of professional language.	writing in a simple	way about				
2046126	Czech Lower Intermediate	7	2				
	ng clearly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them.	. – .	_				
, ondorotana.	familiar topics. Reading and comprehension of simple texts. Improvement of professional language.		na, azea				
2046127	Czech - Upper Intermediate	Z	2				
	tandard speech about familiar matters that a student meets at work, at school, during free time, and talking about these topics. Ability	to describe experie	ences and				
	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.						
2046128	Czech - Upper Intermediate	Z	2				
	mmon European Framework of Reference Level A2-B1. The aim is to extend language skills taking into consideration professional Cz						
terminology. Cor	mprehension of standard Czech speech and conversation about topics of everyday life - at school, at work, during free time, on interm	nediate level. Broad	ening the				
0040405	knowledge technical language.						
2046135	Russian - Beginners abulary of everyday life in a spoken and written form. Understanding and use of basic expressions of general scientific terminology (p	rofossional langua	2				
2046136		7	2				
	Russian - Beginners rel of Common European Framework of Reference: A1 Basic vocabulary of everyday life in a spoken and written form. Understanding	. – .					
Wapped to the let	of general scientific terminology (professional language)	and doc or basic c	Ap103310113				
2046137	Russian - Lower Intermediate Course	Z	2				
	arly what is spoken about everyday situations which a student meets at school or in his/her free time and speaking about them. Writing	1 1					
	topics. Reading and comprehension of simple texts. Improvement of professional language.						
2046138	Russian - Lower Intermediate Course	Z	2				
Mapped to the leve	el 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/her				
free time a	and speaking about them. Writing in a simple way about familiar topics. Reading and comprehension of simple texts. Improvement of	orofessional langua	ige.				
2046139	Russian - 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 describe experie	ences and				
0040440	events, briefly explain one's opinions and plans. Reading and understanding general and technical texts.	7					
2046140	Russian - Upper Intermediate vel of Common European Framework of Reference: A2 - B1 Understanding standard speech about familiar matters that a student me	Z Z	2 not during				
1	ing about these topics. Ability to describe experiences and events, briefly explain one's opinions and plans. Reading and understandi		- 1				
2046141	Russian - Advanced	Z	2				
	of spoken language as well as lectures in Russian 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		1				
2046142	Russian - Advanced	Z	2				
	level of Common European Framework of reference: B1 - B2 Comprehension of spoken language as well as lectures in Russian on to	ppics familiar to the					
Communication w	th native speakers, participation in discussions. Expressing opinions. Written skills. Ability to write an essay or a report. Reading and u	inderstanding texts	concerning				
	currant issues and popular scientific and technical articles.						
2046155	English Conversation	Z	2				
00.10.75	Improving communicative skills in speaking on general topics and general technical topics.						
2046156	English Conversation	Z	2				
2040404	Improving communicative skills in speaking on general topics and general technical topics.	7					
2046161	Presentations in English  Preparing students to present in English on technical tonics with a possible co-operation with specialized departments.	Z	2				
2046162	Preparing students to present in English on technical topics, with a possible co-operation with specialized departments.  Presentations in German	Z	2				
/U4010/			/				
2010102	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 Preparation for presenting technical topics in Russian, possibly in cooperation with specialized departments.	Z	2
2046165	Presentations in Spanish Preparation for presenting technical topics in Spanish, possibly in cooperation with specialized departments.	Z	2
2046166	Presentations in Czech	Z	2
2121023	Preparing students to give presentations in English on technical topics, with a possible co-operation with specialized departm  Thermodynamics	Z.ZK	5
The course deal wi introduced, and the	th a basic engineering approach to classical thermodynamics, heat transfer and compressible flow through nozzles and diffusers. Basy are applied mostly to systems behaving as ideal gases or typical vapours. Basic notions associated with ideal mixtures are studied with eres fundamentals of conduction, convection and radiation. Heat exchangers are treated as an engineering application. Exercises and	sic concepts and p an emphasis on ps	rinciples are ychometrics.
2131002	problems and experimental technique.  Engineering Design II	Z,ZK	4
	PS (Geometrical Products Specification). Students will get critical knowledge about ISO system of limits and fits, tolerancing, surface		1 .
dimensional loo	ps, tolerancing of angles and cones, tolerancing of threads. Integral part of course is a project where students apply and practice the	ir knowledge from	lectures.
2131005	History of Technology	ZK	3
	human knowledge in the domain of science and technology in the retrospective of the developement of our civilization. Emphasis is		
	special attention to the contribution of mining, iron metallurgy, power engineering, transportation and of the machine industry in the r		1
2131519	Machine Elements for Technology	Z,ZK	5
2132001	Engineering Design I.  Basic of technical representation, dimensioning and tolerancing	KZ	2
2141204	Introduction to Electrical Engineering for Technology	Z,ZK	4
	rical circuits, analysis of electrical circuits as DC and AC. El. Power and Energy. Principle and typical parameters diodes, transistors, t		amplifiers.
Analogue and	digital circuits. AC el. curcuits. Electrical power and energy. Calculation, measurement, power factor. Transformer. Induction machines  DC-machines	s. Synchronous ma	achines.
2144062	Technical Indonesian - Course II.	Z,ZK	3
	Basic of Indonesian Language for Student Exchange Program to Indonesia	,	1
2146060	Indonesian Language Course for Exchange Basic of Indonesian Language for Student Exchange Program to Indonesia	Z	2
2146061	Technical Indonesian - Course I.	Z	2
2182019	Second part of Indonesian Language for Student Exchange Program to Indonesia	KZ	3
	Chemistry ry from the point of view of mechanical and process engineering. Physical chemistry forms 2/3 of the course (structure and properties	I	_
	n, chemical reactions, reaction engineering), the remaining 1/3 is devoted to organic chemistry (hydrocarbons, polymers) and bioche		-
,	oriented upon the material properties measurement.	, , , , , , , , , , , , , , , , , , , ,	
2311004	Mechanics for Technology	Z,ZK	7
2321039	Materials Science II.	Z,ZK	4
Fundamentals of m	retallurgy, iron-carbon alloys and influence of other elements, phase transformations, thermal, combined chemical and thermal and the technical iron-carbon alloys, non-ferrous metals and their alloys, plastics, structural ceramics, composites, selection of mater	nermo-mechanica	processing,
2321067	Technical Application of Materials	Z,ZK	5
P edm t popisuje a	aplikovatelnost 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	d m t chto skupin	.The subject
2322029	Materials Science I.	KZ	3
	ent state of materials engineering, overview of technical materials, internal structure of metals, crystal lattices and their defects, defor	I	1
	erials, structure and properties of materials and their testing, fundamentals of thermodynamics, phases and phase transformations, in		
2322091	Project	KZ	2
On the basis of the	preliminary submission of a bachelor thesis the students, under supervision of their supervisors, prepare a review summarizing and e	valuating the stud	ied literature
with particular e	mphasis on experimental technologies which can be applied in their bachelor theses. They can also mention a planned experiment of	r evaluate hitherto	obtained
	knowledge or results.		
2331071	Automation of Production Processes	Z,ZK	5
	c technological processes - casting, welding, forming and finishing. Facilities and equipment required to automate offices. Mechanizat utomation and robotics of die casting process, including other peripherals. Designing and programming of robotic welding centers. Designing and programming of robotic welding centers. Designing and programming of robotic welding centers. Designing of submated finishing lines.		
2222004	robotic workstations for sheet metal forming. Design of automated forging cells. Design of automated finishing lines.	V7	2
2332091	Project	KZ	2
2341001 Metrology intergrat	Metrology ion into quality control, legal metrology, metrology system. Geometrical quantities metrology. Measurement uncertainty. Primary and secc	Z,ZK	5 Jeasurement
	portinited quality control, legal metrology, metrology system. Geometrical qualities metrology, measurement uncertainty. Filmary and section ordinates. Laserinterferometres and their applications. Geometrical surface properties. Form - and position deviations. Surface struct Measurement automatisation.		
2341002	Cutting tools	Z,ZK	4
Cutting tools cha	racteristics. Cutting materials including heat treatment and surface finish, application fields. Cutting tool geometry, determination and Cutting tools design including dimensioning. Cutting tools production. Basic tools groups description and their use (turning tools, milli	measurement. Cu	utting tools
	tools. Grinding, use and maintenance of cutting tools.		
ecology.Influence	Special machining technology  f cutting material, cutting speed development and consequences on the properties of surface finish. Hard and precision machining, et of surface layer and selecting methods of machining process parameters. New methods of abrasive machining, grinding of ceramics and intelligent control systems, abrasive processes. Physical methods of machining, manufacturing methods and coar throughout finish.	s, grinding difficult	-materials.
Expert, adaptive	and intelligent control systems, abrasive processes. Physical methods of machining, manufacturing methods and gear threading, finis the aerospace industries, automotive, energy and other areas.	siiing memoas. 160	onnoiogy in

2341515	Manufacturing process planning	Z,ZK	4			
•	irse in terms of learning outcomes and competences. The aim of the course is to acquaint students with modern approaches and metho	٠, ٠	٠ .			
-	pard to minimization of material consumption and economic efficiency of the machining process. Next, introducing students to the des					
with respect to tech	nnical and organizational conditions. Further, the aim of the subject is to explain the issue of standardization of work with regard to the	e type of process a	and the type			
0040005	of performed activity.	1/7				
2342005	Quality Control	KZ	2			
	ol terms, where is quality created, who is responsible for a quality. Basic statistical terms and distributions. Statistical methods: statist npling. Tools and methods for a quality assurance during product lifetime cycle. Standards 9 000 and 14 000, certification of quality co	-	n, statisticai			
2342032		KZ	3			
2342032	Automation of machine tool programming Utilizations of computer technique for preparation of NC programs for lathe and milling machinery. Utilizations of probes on CNC ma		, s			
2342091	Project	KZ	2			
2342091	Work on specialized tasks.	NZ.	4			
2343993	Bachelor thesis	Z	5			
	Bacrieror triesis ation in the field. Databases and corporate literature. Normalization. Search activity. News from the field of engineering technology. Pr	_				
	in laboratories. The principles of work safety in technological devices. Work on specialized tasks related to the focus of a the	-	ir and work			
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 t					
	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			
	ised on the following subjects: basic economic relations and consequences. Economic aggregates and their consequences. Operatin	,	-			
to so called	d macroekonomic circle, various economic theories. Consumption behaviour in microeconomics. Theory of production. Different mark	ets and competition	ons.			
2381068	Cost Accounting	Z,ZK	5			
The subject pres	ents an introduction to the problems of value management as the enterprise on the whole and its parts - centres - by means of budge	eting (expected co	st), so the			
individual achievem	nents (intermediate products, products, services) - by means of preliminary costing (expected costs) and actual costing (actual costs). I	Emphasis is laid on	the relation			
of costs on the w	hole - enterprise costs - to the costs of individual achievements and the understanding of the transformation from costs in the budget	ing and accounting	g structure			
	ms) into the costing structure (direct and overhead costs), and fixed and variable costs. There are taught conventional and also mode		-			
subject Cost Accou	unting is connected directly with the subject Accounting and represents an introduction to the problems of cost allocation to separate	products, which ar	e compared			
	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			
2381098	Enterprise Finance	Z,ZK	4			
	ing of the Enterprise provides a broad-based introduction to financial management. Students have an opportunity to acquire an under	=	- 1			
•	application in decision-making. Students gain knowledge of financial management role within a business, financial ratios, nature and					
	eir role in the development of future plans for a business and in the assessing the impact of management decision on the performance	=				
	be taken into account when managing the working capital of a business, various aspects of financing the business through external as a business, ways how business can make decision and evaluation involv-ing investments in new technology, and various aspects of the state of the					
2381107	Engineering Ergonomy ect engineering ergonomics is to become acquainted with the problems, constraints and the optimal solution of the fundamental unit o	Z,ZK	4			
-	n - man - technology (machine) - environment. The character of the subject is going out from the anthropocentric principle, i. e. that ev	· · · · · · · · · · · · · · · · · · ·	-			
•	inaging, technological, designing so in other spheres it is important unambiguously to accommodate them to the possibilities, abilities					
_	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					
_	sign rationalization measures for its optimization. The mission of the subject is that the students will be able in their work on all levels of	-				
the optimal wellbeir	ng for themselves and for the users of the designed systems as well as for their subordinates. The not-excludable output is also the he	ealth of man and hi	igher quality			
	and productivity of labour.					
2382048	Statistical and Decision Analysis	KZ	4			
Statistical analysis	s 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	al method, to apply	models of			
	decision analysis, to create models for the management of industrial enterprises.					
2382091	Specialization Project	KZ	2			
2383001	Fundamentals of Law	Z	2			
	n legal system is a necessary part of professional equipment of each expert with university degree. The aim of this course is to provide		٠ ا			
	purces of law and system of law (branch of law), using tutorials, lectures, specialised literature and significant legal regulations. It is n	•				
•	ins, 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 ki	now some practical habits and processes while putting the law on, especially in domain of contracts and other important legal relation to prepare professional presentations and to understand basic structures between law and engineering	ынря апа то make	mem ready			
222222		Z				
2383008	Managerial Psychology		2			
2383009	Communication and Dealing with People	Z	2			
numan communic	cation represents an irreplaceable phenomenon in human activity, as it is present in practically all of his activities. The same applies ( the activities of managers. So you can't not communicate - you can only communicate badly, well and excellently.	with specific modif	ications) to			
2222040		7	2			
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 do The satisfied with their working life. Its goal is to help develop more effective managers and staff specialists who work directly with the hum					
·						
K331068	Technology I of metals. Treatment. Pouring. Casting solidification. Moulding and core making. Thermal treatment. Plastic deformation. Division of form	Z,ZK	5 mi-products			
i Juliuly properties	heating-up. Cutting. Cold and hot forming. Welds. Weldability. Weldment testing. Thermal cutting. Brasing. Surface treatmen		in-products,			
K333038	Fundamentals of Technology I.	Z	3			
	rundamentals of recliniology i. ses in engineering production. Technology of engineering production. Materials in engineering. Concepts of steel and cast iron, techn					
· · · · · · · · · · · · · · · · · · ·	sting: modeling devices, molding materials, molding and castings. Foundry alloys. Overview of basic casting technology. Forming tech					
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.	<u> </u>				
K341014	Technology II.	Z,ZK	5			
	· · · · · · · · · · · · · · · · · · ·	, ,				

For updated information see <a href="http://bilakniha.cvut.cz/en/FF.html">http://bilakniha.cvut.cz/en/FF.html</a> Generated: day 2024-07-27, time 16:51.