Study plan

Name of study plan: Aplikovaná informatika

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Applied Informatics

Type of study: Bachelor full-time

Required credits: 0

Elective courses credits: 180 Sum of credits in the plan: 180

Note on the plan:

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 0

The role of the block: P

Code of the group: BSPAPIN1

Name of the group: BS P_APIN 1st year

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete at least 19 courses

Credits in the group: 0
Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
02DEF1	History of Physics 1 Igor Jex Igor Jex (Gar.)	Z	2	2+0	Z	Р
02FY1	Physics 1 Jaroslav Biel ík Jaroslav Biel ík (Gar.)	Z,ZK	4	2P+2C	Z	Р
02FY2	Physics 2 Jaroslav Biel ík Jaroslav Biel ík (Gar.)	Z,ZK	4	2P+2C	L	Р
01MATZ1	Mathematics, Examination 1 Radek Fu ik Radek Fu ik Radek Fu ik (Gar.)	ZK	2	-	Z	Р
01MATZ2	Mathematics, Examination 2 Radek Fu ík, Mat j Tušek Mat j Tušek Radek Fu ík (Gar.)	ZK	2	-	L	Р
01MAT1	Mathematics 1 Radek Fu ik Radek Fu ik Radek Fu ik (Gar.)	Z	4	3P+3C	Z	Р
01MAT2	Mathematics 2 Radek Fu ik Radek Fu ik Radek Fu ik (Gar.)	Z	4	3P+3C	L	Р
00PT	Preparatory Week Petr Ambrož, Milan Krbálek Petr Ambrož Petr Ambrož (Gar.)	Z	2	týden	Z	Р
04APKK	Course in Communication Skills - Examination Slav na Brownová, Nathaniel Patton, Beatriz Vadillo Gonzalo Jana Ková ová Nathaniel Patton (Gar.)	ZK	1		L	Р
04APK1	Course in Communication Skills 1 Jana Ková ová Nathaniel Patton (Gar.)	Z	2	28	Z	Р
04APK2	Course in Communication Skills 2 Jana Ková ová Nathaniel Patton (Gar.)	Z	2	28	L	Р
04APS1	Course in Language Structures 1 Jana Ková ová Nathaniel Patton (Gar.)	KZ	3	28	Z	Р
04APS2	Course in Language Structures 2 Nathaniel Patton Jana Ková ová Nathaniel Patton (Gar.)	KZ	3	2S	L	Р
04APUK	Introduction to English for Specific Purposes - Examination Nathaniel Patton Jana Ková ová Jana Ková ová (Gar.)	ZK	1		L	Р
04APU1	Introduction to English for Specific Purposes 1 Jana Ková ová Jana Ková ová (Gar.)	Z	2	2S	Z	Р
04APU2	Introduction to English for Specific Purposes 2 Jana Ková ová Jana Ková ová (Gar.)	Z	2	2S	L	Р
12UNXAP	Introduction to UNIX Milan Kucha ik Milan Kucha ik Milan Kucha ik (Gar.)	Z	2	1P+1C	L	Р

	Frantisek Gaspar, Zuzana Pet i kova viadimir Jary Mirosiav Virius (Gar.)					
18ZPRO	Basics of Programming Jan Tomsa, Petr Pauš, Vladimír Jarý, Miroslav Virius, Zuzana Pet í ková, Jan Vondruška, Jakub Klinkovský Miroslav Virius Miroslav Virius (Gar.)	Z	4	4C	Z	Р
Characteristics of	the courses of this group of Study Plan: Code=BSPAPIN1 Name=BS	P APIN 1	st vear			
02DEF1	History of Physics 1	/	or you.		Z	2
-	the system of sciences. The relationship of man and nature. Natural sciences in ancient Orienta	and Greece	Greek natur	 al philosoph	_	
	med. Arabic science, European science in Middle Ages. Renaissance - da Vinci, Giordano Brun					•
· ·	e. Newton and his work.		-,			
02FY1	Physics 1			7	Z,ZK	4
	applications of mechanics, waves and thermodynamics? basic level. The lecture is supplemente	ed with praction	cal investiga	1		•
physical phenomena.		· · · · · · · · · · · · · · · · · ·				
02FY2	Physics 2			7	z,ZK	4
-	ricity and magnetism, modern physics. The lecture is supplemented with practical investigation is	and demonst	ration of sel			
01MATZ1	Mathematics, Examination 1	and domonot			ZK	2
01MATZ2						2
	Mathematics, Examination 2				ZK	
01MAT1	Mathematics 1				Z	4
	to the study of the basics of calculus of one variable. It includes an introduction to differential and	d integral cald	culus, with p	articular em	phasis on	applications in
practical problems.					_	
01MAT2	Mathematics 2				Z	4
	e continuation of Mathematics 1, is devoted to the integration techniques, improper Riemann int	•	ection to para	ametric curv	es (especia	ally in polar
· · · · · · · · · · · · · · · · · · ·	s of sequences and infinite series, and finally to the Taylor and power series and their application	ns.				
00PT	Preparatory Week				Z	2
04APKK	Course in Communication Skills - Examination				ZK	1
The course content is the	he examination as given by the study plan. The examination tests how well student has mastere	ed vocabulary	and facts of	f courses 04	IAPK1 and	04APK2. The
examination consists of	two parts - written (duration 100 minutes), and oral (about 30 minutes).					
04APK1	Course in Communication Skills 1				Z	2
The course will develop	communication strategy and skills of student acquired at secondary school or elsewhere. Com	petence at B1	1 level of CE	FR is a pre	requisite fo	r registering fo
41	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
the course. It runs for 3	semesters, being a core course of the Applied Information Technology programme. It will develop	op student's o	communicat			form (e.g.,
	semesters, being a core course of the Applied Information Technology programme. It will develop on a topic). The list of topics is similar to that of the State Language Examination. Student will be stated as the control of the state of the state Language.	•		ion skills in	an integral	
listening and discussion and will master their col		develop their	vocabulary	ion skills in	an integral	
listening and discussion	n on a topic). The list of topics is similar to that of the State Language Examination. Student will	develop their	vocabulary	ion skills in	an integral	
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Basics of Algorithmization
Jan Tomsa, Petr Pauš, Vladimír Jarý, František Vold ich, Miroslav Virius,
František Gašpar, Zuzana Pet í ková Vladimír Jarý Miroslav Virius (Gar.)

Z,ZK

4

2+2

L

Code of the group: BSPAPIN2

Name of the group: BS P_APIN 2nd year

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete at least 20 courses

Credits in the group: 0

18ZALG

Note on the group:

Zápis do kurzu 04APO1 se důrazně doporučuje až po získání zápočtu z 04APS2.Zápis do kurzu 04APA je podmíněn složením zkoušky z předmětu 04APS3.

Name of the course / Name of the group of courses
(in case of groups of courses the list of codes of their

Completion Credits So

Code	(in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
04APA	Tutors, authors and guarantors (gar.) Course in Applied English Usage	Z	1	28	L	P
04APAK	Jana Ková ová Nathaniel Patton (Gar.) Course in Applied English Usage - Examination	ZK	2		L	Р
01DIM1	Nathaniel Patton Jana Ková ová Nathaniel Patton (Gar.) Discrete Mathematics 1 Edita Pelantová, Zuzana Masáková, Lubomíra Dvo áková Lubomíra Dvo áková Zuzana Masáková (Gar.)	Z	2	2P+0C	Z	Р
01DIM2	Discrete Mathematics 2 Edita Pelantová, Zuzana Masáková Zuzana Masáková (Gar.)	Z	2	2P+0C	L	Р
04APR1	Life and Institutions of English-speaking Countries and the CR 1 Jana Ková ová Nathaniel Patton (Gar.)	Z	2	28	L	Р
01MAT3	Mathematics 3 Miroslav Kolá, David Krej i ík, Severin Pošta David Krej i ík David Krej i ík (Gar.)	Z,ZK	4	2+2	Z	Р
01MAT4	Mathematics 4 Mat j Tušek Mat j Tušek (Gar.)	Z,ZK	4	2+2	L	Р
12PAS	Computer Algebra Systems Milan Ši or Milan Ši or Milan Ši or (Gar.)	Z	2	1P+1C	Z	Р
04APO1	Text Analysis and Comprehension Jana Ková ová Jana Ková ová (Gar.)	Z	2	2S	Z	Р
04APOK	Text Analysis and Comprehension - Examination Jana Ková ová Jana Ková ová Jana Ková ová (Gar.)	ZK	1		L	Р
04APO2	Text Analysis and Comprehension 2 Jana Ková ová Jana Ková ová (Gar.)	Z	1	2S	L	Р
18PRC1	Programming in C++ 1 Vladimír Jarý, Miroslav Virius Miroslav Virius (Gar.)	Z	4	2+2	Z	Р
18PRC2	Programming in C++ 2 Vladimír Jarý, Miroslav Virius, Jakub Klinkovský Miroslav Virius Miroslav Virius (Gar.)	KZ	4	2+2	L	Р
18PJ	Programming in Java Miroslav Virius Miroslav Virius (Gar.)	Z,ZK	5	2P+2C	z	Р
04AP3KK	Course in Communication Skills - Final Examination Nathaniel Patton Jana Ková ová Nathaniel Patton (Gar.)	ZK	2		Z	Р
04APK3	Course in Communication Skills 3 Jana Ková ová Nathaniel Patton (Gar.)	Z	1	2S	Z	Р
04APSK	Course in Language Structures - Final Examination Nathaniel Patton Jana Ková ová Nathaniel Patton (Gar.)	ZK	2		Z	Р
04APS3	Course in Language Structures 3 Jana Ková ová Nathaniel Patton (Gar.)	Z	1	2S	Z	Р
18INTA	Development of internet applications Jakub Klinkovský, Dana Majerová Dana Majerová (Gar.)	KZ	4	2P+2C	L	Р
12UVP	Introduction to Scientific Computing Milan Ši or Milan Ši or (Gar.)	Z	2	1P+1C	L	Р
Characteristics of the	courses of this group of Study Plan: Code=BSPAPIN2 Name=	BS P APIN 2	nd year			
04APA Co	urse in Applied English Usage			,	Z	1
	dent will have passed final examination in Course in Language Structures (04APSK). T nd ESP language situations, laying stress on choice of exact and adequate language					
translations	ures in Applied English Hoogs - Evamination				ZK	2
The course content is the exa	urse in Applied English Usage - Examination amination as given by the study plan. Written and oral parts of the examination test sk	ills and knowledge	e acquired i	1		2 written part
-	crete Mathematics 1				Z	2
	ementary number theory and applications. In addition to the material discussed, it inclinates the Matter are at a 2	udes individual pr	oblem solvii	ng.	7	0
	ccrete Mathematics 2 currence relations. It includes individual problem solving.				Z	2

Characteristics of	the courses of this group of Study Plan: Code=BSPAPIN2 Name=BS P_APIN 2nd year		
04APA	Course in Applied English Usage	Z	1
To sign in for the course	, student will have passed final examination in Course in Language Structures (04APSK). The course concludes study of gran	nmar structures a	and applies them
to understanding everyo	day and ESP language situations, laying stress on choice of exact and adequate language and grammar structures in both Er	glish-Czech and	Czech-English
translations			
04APAK	Course in Applied English Usage - Examination	ZK	2
The course content is the	e examination as given by the study plan. Written and oral parts of the examination test skills and knowledge acquired in cou	rse 04APA. Dura	tion: written part
- 100 minutes, oral part	- ca 30 minutes.		
01DIM1	Discrete Mathematics 1	Z	2
The seminar is devoted	to elementary number theory and applications. In addition to the material discussed, it includes individual problem solving.		
01DIM2	Discrete Mathematics 2	Z	2
The seminar is devoted	to recurrence relations. It includes individual problem solving.		•
04APR1	Life and Institutions of English-speaking Countries and the CR 1	Z	2
The course is aimed at	preparing the student for the state language examination and is based on topics required for this examination. Great emphasi	s is placed on tra	aining oral
presentation of facts ab	out English speaking-countries in comparison with the Czech Republic. The course covers one third of topics for the state language	guage examinati	on.
01MAT3	Mathematics 3	Z,ZK	4
The subject summarise	s the most important notions and theorems related to the study of finite-dimensional vector spaces.		
01MAT4	Mathematics 4	Z,ZK	4
Linear and non-linear d	fferential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable calcu	ılus and its appli	cations.
12PAS	Computer Algebra Systems	Z	2
Practically oriented intro	duction to computer algebra systems (CAS): their main characteristics, ways and means of using them. Constituent part is re	alized in comput	er classrooms:
students acquire basic s	skills with CAS by solving relatively simple and basic tasks from mathematics and physics.		

04APO1	Text Analysis and Comprehension	Z	2
The course is a sequel	to the 04APU1 and 04APU2 courses and students will have successfully passed the 04APS2 course. It focuses on further wi	ritten functions spe	ecific to English
for Specific Purposes (I	ESP). Increasing attention is given to extending subtechnical vocabulary, text grammar and text comprehension. Students are t	aught how to use f	formal language
in written and oral com	munication.		
04APOK	Text Analysis and Comprehension - Examination	ZK	1
The course content is t	ne examination as given by the study plan. To be eligible to take the examination students will have successfully completed th	e 04APO1 and 04	IAPO2.courses
The examination consist	sts of two parts: written (duration 100 minutes) and oral (about 30 minutes). Students will prove they can use and apply the kn	owledge and skills	s acquired in
both courses.			
04APO2	Text Analysis and Comprehension 2	Z	1
The course is a sequel	to course 04APO1 and focuses on guided writing (e.g., note-taking, précis, abstract). It is intended as preparation for writing the	e bachelor's proje	ct by developing
text grammar practice a	and acquainting with basics of English punctuation.		
18PRC1	Programming in C++ 1	Z	4
This course covers mai	nly the C programming language and non-object oriented features of the C++ language.	,	
18PRC2	Programming in C++ 2	KZ	4
This course covers the	object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Template	∍ Library.	
18PJ	Programming in Java	Z,ZK	5
This course is devoted	to the Java platform and to the development of the basic types of applications for this platform.	, ,	
04AP3KK	Course in Communication Skills - Final Examination	ZK	2
	ı ı e examination as given by the study plan. Final examination 04AP3KK covers syllabi of all three courses in communication sl	kills. It is usually o	ral, but a written
	ed. Examination requirements are similar to those of state examination. Student will be able to engage in communication and	-	
appropriate vocabulary	and grammar structures.		
04APK3	Course in Communication Skills 3	Z	1
The last semester of co	, inversation course. Student will further develop his/her speaking skills to be able to use English competently, speak about top	ics covered by pre	evious courses
without making mistake	s and making use of appropriate vocabulary.		
04APSK	Course in Language Structures - Final Examination	ZK	2
The course content is t	ne examination as given by the study plan. To register for final examination 04APSK student will have passed a 3-semester p	rogramme compris	sing courses
04APS1, 04APS2, and	04APS3. It consists of two parts: written (duration 100 minutes) and oral (duration about 30 minutes). Student will demonstra	te he/she has mas	stered English
grammar and can relial	oly use it in practice as well as explain why a rule applies.		
04APS3	Course in Language Structures 3	Z	1
The course 04APS3 is	a sequel to course 04APS2. Its purpose is also to correctly use and revise further English grammar structures as acquired by	student, to develo	p them and use
in practice.			
18INTA	Development of internet applications	KZ	4
The lectures provide ar	overview of modern technologies for the development of web applications. Students will learn basic web languages and con	cepts (HTML, URI	L, etc.) and they
will also be introduced	to relational database systems. The tutorials are dedicated to practical examples of building web applications, from the simple	est to more advance	ced. The course
is oriented primarily tov	vards backend technologies and using the Python languages, but covers also frontend frameworks and JavaScript.		
12UVP	Introduction to Scientific Computing	Z	2
Practically oriented Intr	oduction to scientific computing. Constituent part of the course is realized in computer classroom. Students get acquinted with	n some basic tools	fort scientific
and technicval computi	ng data analysis, data visualisation and algorithm development		

Code of the group: BSPAPIN3

Name of the group: BS P_APIN 3rd year

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete at least 18 courses

Credits in the group: 0

Note on the group:

Předmět 04API je důrazně doporučeno zapsat až po splnění zkoušek 04APOK a 04APAK.) Předmět

04APJP lze zapsat až po splnění všech zápočtů a zkoušek pěti semestrů 1.-3. ročníku studia

	Name of the course / Name of the group of courses					
Code	(in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
01BPAI1	Bachelor's Degree Project 1 Pavel Strachota, Václav K s Pavel Strachota Pavel Strachota (Gar.)	Z	5	0+5		Р
01BPAI2	Bachelor's Degree Project 2 Pavel Strachota Pavel Strachota (Gar.)	Z	10	0+10		Р
01EIG	Elementary Introduction to Graph Theory Petr Ambrož, Francesco Dolce Petr Ambrož Edita Pelantová (Gar.)	ZK	3	2P+0C		Р
04JPBP	Language Support to Bachelor Project Darren Copeland, Nathaniel Tobias Patton Jana Ková ová Jana Ková ová (Gar.)	Z	3	28	L	Р
04APJP	Language Support to Bachelor Project Jana Ková ová	Z	5	5S	L	Р
04APRK	Life and Institutions of English-speaking Countries and the CR - Examination Nathaniel Patton Jana Ková ová Nathaniel Patton (Gar.)	ZK	3		Z	Р
04APR2	Life and Institutions of English-speaking Countries and the CR 2 Jana Ková ová Nathaniel Patton (Gar.)	Z	2	48	Z	Р
01PGR1	Computer Graphics 1 Pavel Strachota Pavel Strachota (Gar.)	Z,ZK	2	1P+1C		Р

	Commuter Cranking 2					
01PGR2	Computer Graphics 2 Pavel Strachota Pavel Strachota Pavel Strachota (Gar.)	Z,ZK	2	IP+1C		Р
01SITE1	Computer Networks 1 Miroslav Minárik Miroslav Minárik (Gar.)	Z	2	1+1	Z	Р
01SITE2	Computer Networks 2 Miroslav Minárik Miroslav Minárik (Gar.)	Z	2	1+1	L	Р
04API	Presentation Course Jana Ková ová Beatriz Vadillo Gonzalo (Gar.)	Z	2	2S	Z	Р
01PW	Windows Programming Zden k ulík Zden k ulík (Gar.)	Z	2	2+0	Z	Р
01BASE	Bachelor Seminar Pavel Strachota Pavel Strachota (Gar.)	Z	1 ()P+2S		Р
01UOP	Introduction to Object Programming Zden k ulík Zden k ulík Zden k ulík (Gar.)	ZK	2	0+2		Р
01UP1	Introduction to Probability 1 Jan Vybíral Jan Vybíral Jan Vybíral (Gar.)	Z,ZK	3	IP+1C		Р
01UP2	Introduction to Probability 2 Milan Krbálek, Michaela Krbálková Michaela Krbálková Milan Krbálek (Gar.)	Z,ZK	3	IP+1C		Р
01UTEI	Introduction to Theoretical Informatics Petr Ambrož Petr Ambrož Petr Ambrož (Gar.)	ZK	3 2	2P+0C		Р
01ZAOS	Introduction to Operating Systems Zden k ulík Zden k ulík Zden k ulík (Gar.)	Z,ZK	2	2+0	L	Р
Characteristics o	of the courses of this group of Study Plan: Code=BSPAPIN3 Name=	BS P_APIN :	Brd year			
01BPAI1	Bachelor's Degree Project 1 ject on the selected topic under the supervision. Supervision and regular checking of the ba		-		Z	5
01BPAI2	Bachelor's Degree Project 2	chalor project un	uei preparation	1.	Z	10
Bachelor's Degree pro	ject on the selected topic under the supervision. Supervision and regular checking of the ba Elementary Introduction to Graph Theory	chalor project un	der preparatior		ZK	3
The course provides a	n explanation of basics of graph theory, followed by a survey of common graph algorithms.			 		
04JPBP To sign in for the cours	Language Support to Bachelor Project e students will have passed all the English courses from the previous 5 semesters. The cours	e instructs studer	nts in the strate	av of writi	Z na submit	3 ting presenting
_	chelor Project in English. Their progress is continuously monitored and assessed. To finish th				•	0.1
04APJP	Language Support to Bachelor Project				Z	5
	e students will have passed all the English courses from the previous 5 semesters. The cours chelor Project in English. Their progress is continuously monitored and assessed. To finish th			•	•	0
04APRK	Life and Institutions of English-speaking Countries and the CR - Exan		эт ни дит и р	_	ZK	3
	the examination as given by the study plan. To be eligible to take the examination students w		ully completed			-
	ists of two parts: written (duration 100 minutes) and oral (about 30 minutes). Students will pr					
both courses.						
04APR2	Life and Institutions of English-speaking Countries and the CR 2				Z	2
_	e 04APR1 course is again aimed at preparing the student for the state language examination					
	ral presentation of facts about English speaking-countries in comparison with the Czech Rep	oublic. The course	e covers two re	maining t	nirds of top	oics for the state
language examination					777	
01PGR1	Computer Graphics 1 b-semester "Computer Graphics" course is devoted to the specifics of digital display devices a	spanning from his	story up to the		Z,ZK	2 ologies Further
· ·	al problems in 2D computer graphics is given together with their solutions. Focus is put on mathe	-				-
	ledge previously obtained in a variety of subjects available at FNSPE. The final part of the co	•		•		
the process of authorin	ng scientific documents and presentations.					
01PGR2	Computer Graphics 2			Z	,ZK	2
The second part of the	two-semester "Computer Graphics" course begins with a brief introduction to signal theory	in the context of	aliasing - a phe	enomenor	ubiquitou	s in computer
-	ell structured survey of fundamental problems in 3D computer graphics is given together with					
	t on mathematical description of problems and explanation of the corresponding algorithms u		=		-	-
_	nm implementation aspect such as data structures design etc. is also a matter of concern. In n-source 3D modeling and rendering software instrument.	the last lecture, a	a number of the	eoreticai d	oncepts at	e demonstrated
					7	
01SITE1	Computer Networks 1 tory and present network (LAN, WAN, use the principles and technologies). Architecture of re	oforonco model IS	CO/OSI Notwo	rk protoco	Z	2
_	ns. Internet services - mail, remote access, www. Secure communication, tunneling. Directory s			-	-	
	Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises					•
01SITE2	Computer Networks 2	n (n tooonamig to ti		1	7	2
	tory and present network (LAN, WAN, use the principles and technologies). Architecture of re	eference model IS	SO/OSI Netwo	 rk_protoco	le practic	_
-	iory and present network (LAN, WAN, use the principles and technologies). Architecture of re ns. Internet services - mail, remote access, www. Secure communication, tunneling. Directory s			-	-	
	Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises					•
04API	Presentation Course	,		1	Z	2
	e students for presenting issues in their field by mastering the strategies and techniques of or	ral presentation 1	The course incl	l udes disc	1	
	t, disagreement). Students will be able to respond to comments on their presentation and an	-			-	-
	efence of the Bachelor Project. Students will learn the basic structure of a Bachelor Project a	•				,
01PW	Windows Programming		2 1 1- 2		Z	2
_	rams for MS Windows. Basic editing controls. File input and output. User defined component	s, dynamic type i	dentification ar	d reflection		_
01BASE	Bachelor Seminar				Z	1
	eminar, students familiarize themselves with the general principles of publishing and present	ina scientific worl	k and the forms	ı Il reauiren	_	•
	The second part is designed as a practical training for the defense of the bachelors degree p					
			F			

the research results achieved during the work on their projects. Each presentation is followed by a discussion on scientific matters as well as on the possibilities of improving the students

performance.

01UOP	Introduction to Object Programming	ZK	2				
Object oriented pro	ogramming languages. Object oriented programming libraries for graphics, databases and distributed systems.						
01UP1	Introduction to Probability 1 Z,ZK						
1.Random trial witl	h finite set of possible results, classical probability, independent random events 2.Probability and combinatorics 3.Probability and	geometry, Bertran	nds paradox				
4.Conditional prob	ability, Bayes theorem, medical diagnosis, Simpsons paradox 5.Random variable with discrete state space, its distribution and me	ean value 6.Proble	ems involving the				
calculation of mea	n value 7.Probabilistic method in graph theory 8.Random algorithms, Morris algorithm and its variants						
01UP2	Introduction to Probability 2	Z,ZK	3				
1. One-dimensiona	al continuous random variable and its statistical description. 2. Distribution function and probability density. 3. Axiomatic introduction	on of probability ar	nd connection to				
measure theory. 4.	Numerical characteristics of continuous random variables. 5. Selected variants of continuous distributions and their characteristic	s. 6. Elementary r	nethods for poin				
estimations. 7. Ger	nerating pseudorandom numbers from the selected distribution.						
01UTEI	Introduction to Theoretical Informatics	ZK	3				
01ZAOS	Introduction to Operating Systems	Z,ZK	2				
Introduction to stru	acture of operating systems. Processes, thread, memory management. Synchronization of multi-threaded applications. Memory m	napped files.	•				

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 0

The role of the block: PV

Code of the group: BSSPOLVEDY

Name of the group: BS - Social Sciences

Requirement credits in the group:

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

Credits in the group: 0

Note on the group:

Only one of these courses is obligatory.

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
00EKOT	Economy in Technology Jana Ková ová	Z	1	2+0		PV
00ETV	Ethics of Science and Technology Jakub Hají ek Jana Ková ová Jakub Hají ek (Gar.)	Z	1	0+2	L	PV
00RET	Rhetoric Jana Ková ová Jana Ková ová Jana Ková ová (Gar.)	Z	1	0+2		PV
00UPRA	Introduction to Law Martin ech Jana Ková ová Martin ech (Gar.)	Z	1	0+2		PV
00UPSY	Introduction to Psychology Jakub Hají ek Jana Ková ová Jakub Hají ek (Gar.)	Z	1	0+2		PV

Characteristics of the courses of this group of Study Plan: Code=BSSPOLVEDY Name=BS - Social Sciences

onaracteristics of the courses of this group of otady Fiant. Code-Book Of the Box Name-Bo Cociai Ocicines								
00EKOT	Economy in Technology	Z	1					
The course introduces t	the basics of micro- and macroeconomics.		'					
00ETV	Ethics of Science and Technology	Z	1					
00RET	Rhetoric	Z	1					
The course is focused of	on the acquisition of speech and voice techniques and on the rules of correct pronounciation. The course is also devoted to the	ne composition of	public speech					
as well as to its nonvert	oal aspects. Stylistics exercises, strategies for coping with stage-fright and a short excursion into the history of rhetoric are ar	integral part of th	ne course.					
00UPRA	Introduction to Law	Z	1					
00UPSY	Introduction to Psychology	Z	1					

Code of the group: BSPJAZYKYZK-APIN Name of the group: BS P languages APIN

Requirement credits in the group:

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

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
04XCESMZK	Czech for Intermediate Students Examination Jana Ková ová Jana Ková ová Jana Ková ová (Gar.)	ZK	4		Z	PV
04XCESPZK	Czech for Foreign Students - Advanced Examination Jana Ková ová Jana Ková ová Jana Ková ová (Gar.)	ZK	4		Z	PV
04XFMZK	French for Intermediate Students Examination V ra Šlechtová V ra Šlechtová V ra Šlechtová (Gar.)	ZK	4		Z	PV

04XFPZK	French for Advanced Students Examination V ra Šlechtová V ra Šlechtová V ra Šlechtová (Gar.)	ZK	4	Z	PV
04XFZZK	French for Beginners Examination V ra Šlechtová V ra Šlechtová (Gar.)	ZK	3	L	PV
04XNMZK	German for Intermediate Students Examination Miloslava echová Miloslava echová (Gar.)	ZK	4	Z	PV
04XNPZK	German for Advanced Students Examination Miloslava echová Miloslava echová Miloslava echová (Gar.)	ZK	4	Z	PV
04XRMZK	Russian for Intermediate Students Examination Zhanna Isaeva Zhanna Isaeva (Gar.)	ZK	4	Z	PV
04XRPZK	Russian for Advanced Students Examination Zhanna Isaeva Zhanna Isaeva (Gar.)	ZK	4	Z	PV
04XRZZK	Russian for Beginners Examination Zhanna Isaeva Zhanna Isaeva Zhanna Isaeva (Gar.)	ZK	3	L	PV
04XSMZK	Spanish for Intermediate Students Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.) Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	ZK	4	Z	PV
04XSPZK	Spanish for Advanced Students Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.) Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	ZK	4	Z	PV
04XSZZK	Spanish for Beginners Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.) Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	ZK	3	L	PV

Characteristics of the courses of this group of Study Plan: Code=BSPJAZYKYZK-APIN Name=BS P languages APIN

maracter istics o			
04XCESMZK	Czech for Intermediate Students Examination	ZK	4
The course content is	the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the	e CESM1,2,3 course	s and can only
be taken after success	sful completion of the 3 courses. Detailed information is to be obtained from the teacher.		
04XCESPZK	Czech for Foreign Students - Advanced Examination	ZK	4
The course content is	the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the	CESP1,2,3 courses	and can only
be taken after success	sful completion of the 3 courses. Detailed information is to be obtained from the teacher.		
04XFMZK	French for Intermediate Students Examination	ZK	4
The content is the exa	mination as given by the study programme. The whole French programme is ended with an examination covering the conte	nts of FM1-FM3. The	examination
consists of a written ar	nd oral part and is organized according to Examination Instructions, a document available on the web.		
04XFPZK	French for Advanced Students Examination	ZK	4
The whole French pro-	gram is ended with an examination covering the contents of FP1-FP3. The examination consists of a written and/or an oral p	part and is organized	d according to
Examination Instructio	ns, a document available on the web. Assessment of the presentation is included into the examination grading.		
04XFZZK	French for Beginners Examination	ZK	3
The content is the exa	mination as given by the study plan. The course is terminated with an examination consisting of oral and written part. The e	xamination is ruled b	y the documer
Instruction for examina	ation. Its content covers the levels FZ1 - FZ5.		
04XNMZK	German for Intermediate Students Examination	ZK	4
The course content is	n The examination as given by the study plan. The whole German for Intermediate Students Course is completed by an examin		vo parts - writte
and oral, which cover	the courses NM1 - NM3. The oral part follows after passing the written part successfully and after obtaining the 04NM3 ass	essment. More detai	led information
is to be obtained from 04XNPZK		ZK	4
is to be obtained from 04XNPZK	the teacher.	1	•
is to be obtained from 04XNPZK The course content is	the teacher. German for Advanced Students Examination	ation consisting of tw	o parts - writter
s to be obtained from 04XNPZK The course content is and oral, which cover to	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examination	ation consisting of tw	o parts - writter
is to be obtained from 04XNPZK The course content is and oral, which cover to the obtained to be obtained to be obtained.	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinathe courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungra	ation consisting of tw	o parts - writter
s to be obtained from 04XNPZK The course content is and oral, which cover to information is to be ob 04XRMZK	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinathe courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratatined from the teacher.	ation consisting of twaded assessment. M	o parts - writter ore detailed 4
s to be obtained from 04XNPZK The course content is and oral, which cover to information is to be ob 04XRMZK The course content is	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinate the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratained from the teacher. Russian for Intermediate Students Examination	ation consisting of two aded assessment. M ZK nowledge and skills a	o parts - writter ore detailed 4 acquired in RM
is to be obtained from 04XNPZK The course content is and oral, which cover to information is to be ob 04XRMZK The course content is - RM3. Students are elements	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinat the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratained from the teacher. Russian for Intermediate Students Examination the examination as given by the study plan. The course is completed by taking a written and oral examination testing the kn	ation consisting of two aded assessment. M ZK nowledge and skills a	o parts - writter ore detailed 4 acquired in RM1
s to be obtained from 04XNPZK The course content is and oral, which cover to information is to be ob 04XRMZK The course content is RM3. Students are elected to the course content of the course	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinate the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratained from the teacher. Russian for Intermediate Students Examination the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowligible for the oral examination only after a prior pass in RM3 and a successful written examination. Students are given instru	ation consisting of two aded assessment. Moreover ZK nowledge and skills a uctions by the teach	o parts - writter ore detailed 4 acquired in RM* er. 4
s to be obtained from D4XNPZK The course content is and oral, which cover to information is to be ob D4XRMZK The course content is RM3. Students are el D4XRPZK The course content is	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinate the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratained from the teacher. Russian for Intermediate Students Examination the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowligible for the oral examination only after a prior pass in RM3 and a successful written examination. Students are given instructions are given instructions. Russian for Advanced Students Examination	ation consisting of two aded assessment. Moreover ZK nowledge and skills a uctions by the teach ZK nowledge and skills a	o parts - writter ore detailed 4 acquired in RM er. 4 acquired in RM
s to be obtained from 04XNPZK The course content is and oral, which cover to information is to be ob 04XRMZK The course content is remained and students are elementary of the course content is remained.	the teacher. German for Advanced Students Examination the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinate the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungratained from the teacher. Russian for Intermediate Students Examination the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knigible for the oral examination only after a prior pass in RM3 and a successful written examination. Students are given instructed by taking a written and oral examination testing the knigible for the oral examination only after a prior pass in RP3 and a successful written examination. Students are given instructed by the oral examination only after a prior pass in RP3 and a successful written examination. Students are given instructed by the oral examination only after a prior pass in RP3 and a successful written examination.	ation consisting of two aded assessment. Moreover ZK nowledge and skills a uctions by the teach ZK nowledge and skills a	o parts - writter ore detailed 4 acquired in RM er. 4 acquired in RM
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Name of the block: Elective courses Minimal number of credits of the block: 0

The role of the block: V

Code of the group: BSPAPINV

Name of the group: BS P_APIN Optional courses

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

Credits in the group: 0

Note on the group:

Státní jazykovou zkoušku z angličtiny lze absolvovat až po složení zkoušek ze všech

kurzů, jejichž obsah je součástí.

	kurzu, jejichz obsah je současti.					
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
04APSZK	English - State Examination Jana Ková ová	ZK	5	2S	L	V
12ANM	Applied Numerical Methods Pavel Váchal, Jan Pšikal, Alena Zavadilová Alena Zavadilová Jan Pšikal (Gar.)	KZ	4	2+2	L	V
01DEM	History of Mathematics Lubomíra Dvo áková Lubomíra Dvo áková (Gar.)	Z	1	0+2	L	V
18EKN	Econometrics Radek H ebík, Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	4	2P+2C	L	V
01JEPR	Simple Compilers Zden k ulík Zden k ulík Zden k ulík (Gar.)	Z	2	2	L	V
18MAK1	Macroeconomics 1 Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	4	2+2	L	V
18MAK2	Macroeconomics 2 Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	4	2+2	Z	V
00MAM1	Essentials of High School Course 1 David Be	Z	1	0+1		V
00MAM2	Essentials of High School Math Course 2 Lukáš Heriban Lukáš Heriban Lukáš Heriban (Gar.)	Z	1	0+1		V
18MIK	Microeconomics Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	4	2P+2C	Z	V
18PROP	Practical training in programming Jakub Klinkovský Jakub Klinkovský (Gar.)	KZ	3	2C	Z	V
01PERI	Programming of Peripherals Devices Zden k ulik Zden k ulik (Gar.)	Z	2	2+0	Z	V
18PMTL	Programming in MATLAB Quang Van Tran, Mat j Pokorný, Jaromír Kukal Quang Van Tran Jaromír Kukal (Gar.)	KZ	4	4C	Z	V
18PPY1	Programming in Python 1 Jakub Klinkovský, Matej Mojzeš Jakub Klinkovský Jakub Klinkovský (Gar.)	Z	2	2C	L	V
18PPY2	Programming in Python 2 Jakub Klinkovský Jakub Klinkovský (Gar.)	Z	2	2S	Z	V
18PPY3	Programming in Python 3 Rudolf Pecinovský Jakub Klinkovský Jakub Klinkovský (Gar.)	Z	2	2C	L	V
18PW	Web environment and markup languages Pavel Eichler Dana Majerová Dana Majerová (Gar.)	KZ	2	2C	Z	V
01PSL	LaTeX - Publication Instrument Petr Ambrož Petr Ambrož Petr Ambrož (Gar.)	Z	2	0+2	L	V
01SOS1	Software Seminar 1 Zden k ulík Zden k ulík Zden k ulík (Gar.)	Z	2	0+2	Z	V
01SOS2	Software Seminar 2 Zden k ulík Zden k ulík Zden k ulík (Gar.)	Z	2	0+2	L	V
TV-1	Physical Education	Z	1		Z	V
TV-2	Physical Education	Z	1		L	V
TV-3	Physical education	Z	1	0+2	Z	V
TV-4	Physical education	Z	1	0+2	L	V
12ZEL1	Basic Electronics 1 Jaroslav Pavel Jaroslav Pavel (Gar.)	Z,ZK	3	2+1	Z	V
12ZEL2	Basic Electronics 2 Jaroslav Pavel Jaroslav Pavel (Gar.)	Z,ZK	3	2+1	L	V
01ZPB1	Introduction to Computer Security 1 Petr Voká Petr Voká Petr Voká (Gar.)	Z	2	1+1		V

Characteristics of the courses of this group of Study Plan: Code=BSPAPINV Name=BS P_APIN Optional courses

04APSZK English - State Examination

The course content is the examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) only if he/she has passed all the respective courses and examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examination subjects. As required, examination conditions comply with respective rules and regulations for state language examinations.

12ANM Applied Numerical Methods KZ 4
For English version use code 12YNME1. There are explained the basic principles of numerical mathematics important for numerical solving of problems important for physics a

For English version use code 12YNME1. There are explained the basic principles of numerical mathematics important for numerical solving of problems important for physics and technology. Methods for solution of tasks very important for physicists (ordinary differential equations, random numbers) are included in addition to the basic numerical methods. Integrated computational environment MATLAB is used as a demonstration tool. The seminars are held in computer laboratory and PASCAL is used as a principle programming language and MATLAB is also used.

01DEM	History of Mathematics	Z	1
	n of regular seminars where the members of the department of mathematics, but also invited speakers - specialists in the field	- give their talks	on varoius topics
from the history of math		7.71/	4
18EKN	Econometrics on economic theory and the relations between economic quantities are expressed by mathematical tools and observed data	Z,ZK	ality The course
	s of econometric analysis as the basic econometric model, the generalized model, the system of simultaneous equations and i		=
verification.			
01JEPR	Simple Compilers	Z	2
Lexical and syntax anal	ysis, code generation, simple optimizations, development environments, reflection.		!
18MAK1	Macroeconomics 1	Z,ZK	4
· ·	ides students with a fundamental theoretical basis for understanding how an economy works. It introduces main macroecono		=
1	rium theory, fundamentals of open economy theory, inflation, unemployment, economic growth, economic fluctuations, basic		
·	tions for economic policies. The learning outcomes of the course is to equip students with ability to analyze macroeconomic pher e them under the conditions of modern economic life.	nomena and their	interconnections
18MAK2	Macroeconomics 2	Z,ZK	4
	ends theoretical knowledge acquired from Macroeconomics I of its students with the latest knowledge of contemporary macro		
	cially those with an emphasis on the role of human capital and technological progress. Furthermore, it introduces students to	-	
modeling, i.e., macroeco	onomic models derived from microeconomic behavior of subjects and economics and their rational expectations. It also provides	s students with mo	odern knowledge
of labor market modeling			
00MAM1	Essentials of High School Course 1	Z	1
	d to mathematical concepts and methods used in the introductory physics course.		
00MAM2	Essentials of High School Math Course 2	Z	1
	the fundamental areas of mathematics essential for university studies and practical applications. It covers sets, logic, proofs, i binatorics, and probability, with emphasis on understanding principles, rigor, and problem solving.	unctions, derivati	ves, integrals,
18MIK	Microeconomics	Z,ZK	4
	t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Mi		· ·
	ese processes and makes more clear behaviour of the economic agents. Lectures and seminars are designed so that the expla		•
does not require knowle	edge of calculus.		
18PROP	Practical training in programming	KZ	3
_	is to understand advanced topics related to programming, code design and software project development. Students will practically		•
1 '	eal-world examples. Emphasis is put on the review of freely available software tools that can improve the programmers work	efficiency and en	sure high quality
of the final source code			
01PERI	Programming of Peripherals Devices put and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of periphera	Z	2
18PMTL	Programming in MATLAB	KZ	4
	ronment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic an		
and geometric represer		,	3
18PPY1	Programming in Python 1	Z	2
This course introduces s	students to advanced features of the Python language and common scientific packages. The course covers both object-oriented	as well as function	nal programming
	g part of the course describes the use of Python in the fields of scientific and technical computing (NumPy and SciPy packages),		
18PPY2	Programming in Python 2	Z	2
	students to practical applications of the Python language in scientific as well as commercial fields. The course is a seminar w	here each preser	nted topic is
18PPY3	t demo of a real-world application in the specific field. Programming in Python 3	Z	2
-	Frogramming in Fythom 3 s intended for students who have basic experience with programming in Python and using its libraries. It introduces students to		l
language and modules		aava	p.o o. a.o. , j.a.o
18PW	Web environment and markup languages	KZ	2
The course introduces	students to fundamental principles and best practices for web design with respect to technical functionality, informational values	e, readability and	usability.
01PSL	LaTeX - Publication Instrument	Z	2
The course is devoted t	o the basics and facilities of computer typography, particularly to the system LaTeX		
01SOS1	Software Seminar 1	Z	2
	embly language programming for microprocessors Intel 80x86		
01SOS2	Software Seminar 2	Z	2
	+ and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix liability to Microsoft Windows.	ke operating syst	ems, especially
TV-1	Physical Education	Z	1
TV-2	Physical Education	Z	1
TV-3	Physical education	Z	1
TV-4	Physical education	Z	1
12ZEL1	Basic Electronics 1	Z,ZK	3
	Dasic Electronics imary knowledge of circuit theory concerning principles of electronic circuits in both stationary and harmonic stable state. Cir		_
1	c and complex method are explained. Proper circuit analysis is also lectured. The subject's final part deals with transient effect	=	
12ZEL2	Basic Electronics 2	Z,ZK	3
	with the Basic Electronics 1. Semiconductor elements basic properties are explained. Thecourse's final part deals with basic		_
01ZPB1	Introduction to Computer Security 1	Z	2
1. Designing secure sys	stems 2. Secure programming techniques, static code analysis 3. Buffer overflow 4. Securing operation systems 5. Running u	ntrusted code (sa	indboxing)

Code of the group: BSPJAZYKYZAP Name of the group: BS P jazyky zap 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
04XAM1	English for Intermediate Students M1 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XAM2	English for Intermediate Students M2 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	L	V
04XAM3	English for Intermediate Students M3 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XAP1	English for Advanced Students P1 Jana Ková ová Darren Copeland (Gar.)	Z	2	0+2	Z	V
04XAP2	English for Advanced Students P2 Jana Ková ová Darren Copeland (Gar.)	Z	2	0+2	L	V
04XAP3	English for Advanced Students P3 Jana Ková ová Darren Copeland (Gar.)	Z	2	0+2	Z	V
04XCESZ1	Czech for Foreigners - Beginners 1 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XCESZ2	Czech for Foreigners - Beginners 2 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	L	V
04XCESZ3	Czech for Foreigners - Beginners 3 Jana Ková ová Jana Ková ová (Gar.)	Z	2	28	Z	V
04XCESM1	Czech for Foreigners - Intermediate 1 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XCESM2	Czech for Foreigners - Intermediate 2 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	L	V
04XCESM3	Czech for Foreigners - Intermediate 3 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XCESP1	Czech for Foreign Students - Advanced 1 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	Z	V
04XCESP2	Czech for Foreigners - Advanced 2 Jana Ková ová Jana Ková ová (Gar.)	Z	2	0+2	L	V
04XCESP3	Czech for Foreigners - Advanced 3	Z	2	0+2	Z	V
04XFM1	Jana Ková ová Jana Ková ová (Gar.) French for Intermediate Students M1	Z	2	0+2	Z	V
04XFM2	V ra Šlechtová V ra Šlechtová (Gar.) French for Intermediate Students M2	Z	2	0+2	L	V
04XFM3	V ra Šlechtová V ra Šlechtová (Gar.) French for Intermediate Students M3	Z	2	0+2	Z	V
04XFP1	V ra Šlechtová V ra Šlechtová (Gar.) French for Advanced Students P1	Z	2	0+2	Z	V
04XFP2	V ra Šlechtová V ra Šlechtová (Gar.) French for Advanced Students P2	Z	2	0+2	L	V
04XFP3	V ra Šlechtová V ra Šlechtová (Gar.) French for Advanded Students P3	Z	2	0+2	Z	V
04XFZ1	V ra Šlechtová V ra Šlechtová (Gar.) French for Beginners Z1	Z	2	0+4	L	V
04XFZ2	V ra Šlechtová V ra Šlechtová (Gar.) French for Beginners Z2	Z	2	0+4	Z	V
04XFZ3	V ra Šlechtová V ra Šlechtová (Gar.) French for Beginners Z3	Z	2	0+4	L	V
04XFZ4	V ra Šlechtová V ra Šlechtová (Gar.) French for Beginners Z4	Z	2	0+4	Z	V
04XFZ5	V ra Šlechtová V ra Šlechtová (Gar.) French for Beginners Z5	Z	2	0+4	L	V
04XNM2	V ra Šlechtová V ra Šlechtová (Gar.) German for Intermediate Students M2	Z	2	0+2	L	V
04XNM1	Miloslava echová Miloslava echová (Gar.) German for Intermediate Students M1	Z	2	0+2	Z	V
04XNM3	Miloslava echová Miloslava echová (Gar.) German for Intermediate Students M3	Z	2	0+2	Z	
04XNP1	Miloslava echová Miloslava echová (Gar.) German for Advanced Students P1	Z	2	0+2	Z	
04XNP2	Miloslava echová Miloslava echová (Gar.) German for Advanced Students P2	Z	2	0+2	L	
04XNP3	Miloslava echová Miloslava echová (Gar.) German for Advanced Students P3	Z	2	0+2	Z	V V
04XRM1	Miloslava echová Miloslava echová (Gar.) Russian for Intermediate Students M1	Z	2			
U4AKIVI I	Zhanna Isaeva Zhanna Isaeva (Gar.)			0+2	Z	V

04XRM3	Russian for Intermediate Students M3 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+2	Z	V
04XRP1	Russian for Advanced Students P1 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+2	Z	V
04XRP2	Russian for Advanced Students P2 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+2	L	V
04XRP3	Russian for Advanced Students P3 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+2	Z	V
04XRZ1	Russian for Beginners Z1 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+4	L	V
04XRZ2	Russian for Beginners Z2 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+4	Z	V
04XRZ3	Russian for Beginners Z3 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+4	L	V
04XRZ4	Russian for Beginners Z4 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+4	Z	V
04XRZ5	Russian for Beginners Z5 Zhanna Isaeva Zhanna Isaeva (Gar.)	Z	2	0+4	L	V
04XSM1	Spanish for Intermediate Students M1 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	Z	V
04XSM2	Spanish for Intermediate Students M3 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	L	V
04XSM3	Spanish for Intermediate Students M3 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	Z	V
04XSP1	Spanish for Advanced Students P1 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	Z	V
04XSP2	Spanish for Advanced Students P2 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	L	V
04XSP3	Spanish for Advanced Students P3 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+2	Z	V
04XSZ1	Spanish for Beginners Z1 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+4	L	V
04XSZ2	Spanish for Beginners Students Z2 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+4	Z	V
04XSZ3	Spanish for Beginners Z3 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+4	L	V
04XSZ4	Spanish for Beginners Z4 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+4	Z	V
04XSZ5	Spanish for Beginners Z5 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	2	0+4	L	V
Characteristics of the	courses of this group of Study Plan: Code=BSPJAZYKYZAF	P Name=BS P j	jazyky za	ıp		
04XAM1 En	glish for Intermediate Students M1				7	2
		10 0011r00 of lagge = 1	tha 12 lau-	l of the Co	_	_
	students who have successfully completed the full secondary school English language				•	
	(CEFR). It provides an introduction into English for Specific and Academic Purpose				-	
l ·	communication situations. Thus it covers topics related to the student's life and nee	ds as well as topics	of subtech	nical interest	. Attention is	also paid to
extending the knowledge of	grammar issues used in EAP.					
04XAM2 En	glish for Intermediate Students M2				Z	2
1	e student to have completed the AM1 course. It develops their skills for work with sub	otechnical texts, foc	using also n	nore on spec	cific grammar,	, functions,

Ζ

2

0+2

Russian for Intermediate Students M2

Zhanna Isaeva Zhanna Isaeva (Gar.)

04XRM2

The AM2 course expects the student to have completed the AM1 course. It develops their skills for work with subtechnical texts, focusing also more on specific grammar, functions, and lexical items typical of ESP and EAP (e.g., definition, existence and classification of phenomena, object descriptions). Part of the course is also guided writing. If necessary, grammar

revision is included.

O4XAM3 English for Intermediate Students M3

Z

2

The course develops the skills that enable students to cope with features typical of professional style. Increasing attention is paid to developing subtechnical vocabulary and independent understanding of professional texts. Great emphasis is placed on distinguishing different levels of formal and informal oral and written communication and their appropriate Czech equivalents. The course also includes studying abstracts and rules for writing them as well as basic rules for preparing and giving a short presentation on a chosen topic related to the

student's field.

Colored Students P1

English for Advanced Students P1

Z

2

The course is at the level of advanced English, designed for students who have successfully completed the full secondary school English language course (at least to the B1 level of the Common European Framework of Reference for Languages - CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), providing insights into the fundamentals of vocabulary, grammar, and the purpose and style which is typical of academic and professional oral and written communication situations concerning science, technology, engineering and mathematics (STEM) contexts. There is an emphasis on reading material and discussing ideas with colleagues prior to participating in plenary sessions. Full and active participation is a basic expectation.

04XAP2 English for Advanced Students P2 Z 2

The course is designed for students who have successfully completed AP1 and is a continuation of the Advanced English course. The AP2 course builds on content covered in AP1, thus extending the students skills for working with texts relating to science, technology, engineering and mathematics (STEM), and honing spoken and written communication in STEM contexts. The course extends the students academic vocabulary, through exposure to a wide variety of diverse texts and broadens knowledge of key aspects of grammar (referred to as Language Topics), pertinent to effective academic discourse and communication. There is a specific emphasis on responding to graphic data and the synthesizing of comprehensive and nuanced interpretations of such data. There is a focus on formal conventions in written communication including sentence and paragraph structure, discourse marking and cohesion. As in AP1, considerations of the purpose and concomitant style which is typical of academic and professional oral and written communication is explored through sample materials. And once again, students are expected to discuss ideas with colleagues prior to participating in plenary sessions. Full and active participation is a basic expectation.

04XAP3 English for Advanced Students P3	Z	2
The AP3 course is designed for students who have successfully completed AP2 and is a continuation of the Advanced English course leading to a záp The AP3 course builds on content covered in both AP1 and AP2, and in terms of the final examinations, provides a summative assessment of the	_	
the course of the three semesters. The AP3 course places greater emphasis on student participation, training oral communication skills, particular	•	•
agreement, and objections in formal discussions. There is also focus on professional written communication in the context of applying for work place		=
study. For most students this is their third year of studying for their bachelors degree and so there is a commitment to honing efficient and effective la		-
successful communication in English both in the academic context and in the wider world. Collaborating with colleagues to enable deeper understand	anding of complex i	ideas is a key
04XCESZ1 Czech for Foreigners - Beginners 1	Z	2
The course is designed for students of the English programme. Students will become acquainted with the main characteristics of Czech (phonetic	1	1
acquire basic language and speaking skills. The course focuses on pronunciation exercises, simple social phrases, and oral and written communic	-	· · ·
situations. The course covers roughly lessons 1-3 of eština Express (Czech Express) by L. Holá and P. Bo ilová.		
04XCESZ2 Czech for Foreigners - Beginners 2	Z	2
The language and communication competences acquired in CESZ1 are further developed. Students deepen their knowledge of the declension and	d conjugation syste	em and practise
basic communication topics. The course covers roughly lessons 3-5 in Czech Express by L. Holá and P. Bo ilová. 04XCESZ3	Z	2
The course further develops the language and communication competences acquired in the XCESZ1 and XCESZ2 courses. The teaching focuses	_	I
fixing correct pronunciation and deepening grammar, features through practice, as well as introducing the Czech culture. Students are asked to pro-		-
frequent types of dialogue. They also practise understanding texts in terms of main ideas or looking for specific details in texts. The course covers re	oughly lessons 5-7 i	n eština expres
1.		
04XCESM1 Czech for Foreigners - Intermediate 1	Z	2
The course is focused on correct pronunciation, important morphological phenomena, prepositional phrases, and verb forms as well as on extending social situations.	the student's voca	bulary for various
04XCESM2 Czech for Foreigners - Intermediate 2	Z	2
The course develops the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and respectively.	_	1
in understanding common abbreviations, abbreviated words, and mathematical terms and formulas.		
04XCESM3 Czech for Foreigners - Intermediate 3	Z	2
The last course revises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is esp	ecially focused on s	stylistics and
lexicology and on developing the student's writing skills.	-	
04XCESP1 Czech for Foreign Students - Advanced 1 The prerequisite of the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common	Z	ork of Reference
It is focused partly on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of	•	
basics of functional style of engineering and professional communication, both in spoken and written form. The topics include University Studies at		_
includes communication with teachers and faculty administrators.		
04XCESP2 Czech for Foreigners - Advanced 2	Z	2
This course extends the student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical	l and specialist text	s placing greater
emphasis on individual work. 04XCESP3	Z	2
The course develops the student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation and pres	_	
student's project. Writing skills necessary for professional communication are trained.	,,,, p.	
04XFM1 French for Intermediate Students M1	Z	2
French - intermediate FM The objective of this three-semester course is to improve and further develop communication in the French language in	ooth written and ora	al form. Students
will be able to communicate in social interaction and in academic, scientific and professional environment. They will be able to use the language to	-	
information and to solve problems. FM1 The course builds on and further develops linguistic competence acquired at secondary school. It revises, skills gained in previous study. The following topics are covered: University studies in our country and in France, writing of transactional letters, CV, processing the contraction of transaction of transac	•	
to an advert, French culture and geography, Paris. Topics of specialization: mathematics, physics. Reading technical and popular science texts, wo		-
04XFM2 French for Intermediate Students M2	Z	2
Course FM2 builds on FM1. Linguistic structures and competence acquired in previous study are systemized and expanded. Reading popular science	1	1
and scientific language (passives, nominalization, word formation). Topics: physics, power engineering, environment, Internet, success of French s	cience and technol	ogy, French
scientists, artists and architects. Description of an object, device, shapes, dimensions, material.	T -	
04XFM3 French for Intermediate Students M3	Z	2
The course is focused on improvement and further development of linguistic competence acquired during the follow-up courses. Syntactic structures participle structures, compound tenses). Text summaryStudents prepare a written paper which will be delivered in form of an oral presentation in	•	
field of students' future specialisation or to their interest and generally covers a technical /applied science topic. It is not a translation but a creative		
and one's own knowledge/experienceLonger monologues on topics /situations set for the examination are prepared. Text structure, cohesion and		
04XFP1 French for Advanced Students P1	Z	2
FP advanced course The objective of this three-semester course is to improve and further develop communication in the French language in both		
be able to communicate in social interaction and in academic, scientific and work environment. They will be able to use the language to transmit get to solve problems. EPA The course builds an and further develope linguistic competence acquired at secondary school. Difficult grammar topics are		
to solve problems. FP1 The course builds on and further develops linguistic competence acquired at secondary school. Difficult grammar topics are passé composé-imparfait, pronouns. The following specific topics are covered: University studies in our country and in France, writing of transaction		
request, answer to an advert, environmental issues, success of French science and technology, chosen topics from French regional culture, Paris. To	· · · · · · · · · · · · · · · · · · ·	
internet, physics, chemistry. Reading of technical and popular science texts, further work with these texts and interpretation.		
04XFP2 French for Advanced Students P2	Z	2
With the link to P1 contents, the course further develops language skills. Focus is put on reading popular science texts and on oral communication	on given topics. Fe	eatures typical of
technical and scientific communication are stressed (passive voice, nominalization, word formation).	7	
04XFP3 French for Advanded Students P3 The course is focused on systemization and improvement of acquired linguistic competence, skills and knowledge, and their use for communication	Z	ronment Special
skill - translation of shorter texts (both from and into the language). Writing of a paper and making oral presentation in-class. The paper generally of		
topic. It is a creative work compiled from 3 French sources. Preparation of several set topics for oral examination.	2 100.111100170	

04XFZ1	French for Beginners Z1	Z	2
•	e objective of this 5-level course is to be able to communicate in French orally and in writing in situations of everyday life , in a ench for specific / technical communication and reading of popular science and scientific texts. FZ1 The objective is to be able		
level, actively using the	knowledge of chosen elementary language. The contents is roughly outlined by lessons 1 - 7 of the textbook Pravda - Pravdo	ová, French for be	ginners
	te ky). It is extended with situations of communication and functions from the textbook Espaces I, lessons 1-4: introductions ople instructions and questions. Special attention is paid to pronunciation. Spelling is explained in connection with pronunciat	•	
04XFZ2	French for Beginners Z2	Z	2
	with FZ1. Elementary linguistic knowledge and communication skills are expanded. The scope is given by lessons 8 - 13 of		
•	dditional topics and skills are filled in from the textbook Espaces I, lesson 1 - 5 (introductions, invitation, welcoming, agreem of France, food, expression of will, wish, order, prohibition, pleasure). Correct pronunciation is practiced. Stress on oral comm	•	
	work? A few expressions concerning the study. Name of University and Faculty.	unication. opcome	topics covered.
04XFZ3	French for Beginners Z3	Z	2
•	FZ2. Basic linguistic knowledge and skills are developed. The contents is given by lessons 14 - 18 of the textbook: Pravda - F uations are complemented from other materials. Stress is put on oral communication in dialogues and on reading, both for ir		-
· ·	Reading covers short adapted texts of general interest first, and later popular science texts.	iioimailon ana ioa	a ao part or
04XFZ4	French for Beginners Z4	Z	2
	FZ3. Basic linguistic knowledge and skills are further developed. Oral communication and reading skills are practiced. The cather the cather for Beginners, and is expanded with topics and functions from other materials. Reading is developed from the lea		
	ourse covers generals and specific topics: health- illness, sport, free time, environment, study, travelling in France, Paris, sho		٠ ١
	now to write CV, application, topics in mathematics, reading physics - mechanics, informatics, internet.		
04XFZ5	French for Beginners Z5 FZ4 are further developed, as well as technical language. Students prepare a paper on a chosen popular science topic. The	Z	n the class The
•	ered by lessons 24 - 26 of the textbook: Pravda-Pravdova, French for Beginners, and is complemented from other materials.		
	h science and technology, information about France. Grammar is systemized and complemented with syntax (subordinate classes)	auses, typical con	junctions,
subjunctive clauses, ger 04XNM2	und, passive. German for Intermediate Students M2	Z	2
,	ther more complex grammatical structures and their application in communication based on technical texts, such as the relation	= !	_
•	ng of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and	٠,	
	mation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systen or professional discourse (participles, relative clauses).	natically revises ot	her grammatical
04XNM1	German for Intermediate Students M1	Z	2
-	rse is to level off the students' skills in the German language. The course focuses on revision of more difficult phenomena and		_
· ·	es (e.g. importance of verb prefixes). In the lexical part, it covers topics referring to higher education in both the Czech Reput	' -	
	gether with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicist communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability.	is, and the fundan	ieritais or 11
04XNM3	German for Intermediate Students M3	Z	2
	ther more complex grammatical structures and their application in communication based on technical texts, such as the relation of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and		
•	mation and reading aloud, and appropriate language for various purposes in oral and written communication. The course system	•	
· · · · · ·	or professional discourse (participles, relative clauses).		
04XNP1	German for Advanced Students P1	Z	2
	od grammar knowledge, extended general vocabulary, and good communication skills acquired at secondary school to be le en focused on working with technical and scientific texts and practising reading techniques (skimming, scanning, reading for		
J	ructures necessary for understanding a subtechnical text (passive voice, participles, participle structures) and it also focuses on	practical everyday	communication,
i.e., telephoning.	Cormon for Advanced Students D2	7	2
04XNP2 The course develops the	German for Advanced Students P2 students' skills in working with professional scientific texts (understanding, summarising, note-taking, interpreting) while extend	Z ding their general a	2 and subtechnical
, ,	duces mathematical expressions and texts of nuclear power engineering. Increasing emphasis is placed on understanding and	I practising formal	communication,
	V, letter of application, interview, scholarship), and more complex grammatical structures (i.e., subjunctive, indirect speech).	7	2
04XNP3 The course consists of 3	German for Advanced Students P3 Brain parts (general communicative situations, grammar and technical topics). Students will develop their vocabulary in a variations.	Z ariety of less comr	
(traffic problems and car	accidents, accident report, filling in a form, complaints). Based on presentations and technical and subtechnical texts, the vertical accidents are considered as a constant of the constant o	ocabulary range ir	n fields such as
	ng, the environment, computer science, and car technology, will also be extended. Only authentic professional texts are used rocess information gained from their reading of complex and difficult texts and present it to the class in a simplified oral form. The	,	-
practice to and from Ger		ie course also irioi	uues translation
04XRM1	Russian for Intermediate Students M1	Z	2
-	for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphab		•
•	nmunication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask Imar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement		· /·
contents and scope of the	ne course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable.		
04XRM2	Russian for Intermediate Students M2	Z	2
04XRM3	the RM1 course, its contents and scope correspond roughly to RZ4, however, for half of the time allotted in the timetable. Russian for Intermediate Students M3	Z	2
	knowledge and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he		_
in the timetable.			
04XRP1 The entrance requireme	Russian for Advanced Students P1 In the course is to achieve the B1 CEFR level. The objective of the course is revision of standard language structures, presented in the course is revision of standard language structures, presented in the course is revision of standard language structures.	Z acticing more diffic	2 cult grammar
•	in tor the course is to achieve the BT CEPK level. The objective of the course is revision of standard language structures, pro- ig the fundamentals of technical language and training writing skills.	actioning more diffic	on graninal
04XRP2	Russian for Advanced Students P2	Z	2
	RP1. It expands grammatical structures important for understanding technical texts (verbal adjectives, participles, passives, ton independent oral and written communication.	verb aspects, spe	cific syntactic
on dotalog. Oness is pu	Contribution of the terror to the minute of the minute of the contribution of the cont		

04XRP3			
0174141 0	ussian for Advanced Students P3	Z	2
	P2 and is mainly focused on working with technical and scientific texts (reading comprehension, oral and written paraphras		
	ious knowledge of general language at secondary level (listening, reading, correct communication in everyday situations). Is aimed at professional and technical skills (reading technical literature according to the students' specialization, oral and		
=	vocabulary and practice quick and correct communication in professional situations. They will be able to both speak write a	=	
technical topics.			
04XRZ1 F	ussian for Beginners Z1	Z	2
<u>-</u>	first stage of the five-semester programme, its final aim being reading and understanding professional texts written in Russi	_	-
· · · · · · · · · · · · · · · · · · ·	ooth reading and writing skills) and fundamentals of grammar necessary for everyday communication (listening and speaki ress, understand its contents and summarize it.	ng). Students will	be able to read
	ussian for Beginners Z2	Z	2
	e programme is designed to teach skills for basic communication in everyday situations and for reading easy and short sul		
	short sentences and appropriate structures, and read aloud with confidence a short text without marked stress. They will a		
master further grammatica	I structures. They will have mastered with confidence the Russian alphabet and will be able to use it in writing.		
04XRZ3	ussian for Beginners Z3	Z	2
	2 and includes further everyday topics, develops understanding of short compact texts on new subtechnical topics (for train	-	_
- :	es new grammar. Students will be trained to distinguish intonation patterns while listening to spoken language. They will be	e able to respond	so as to be
	s their opinion. Writing skills will be trained on guided writing tasks and note-taking. Lussian for Beginners Z4	Z	2
	ussian for Degitifiers 24. 3. It improves and expands the knowledge of general language in all four skills (reading and understanding longer texts with		
	in everyday situations, writing longer texts). Students are trained to use grammar structures effectively (e.g., irregular verb	•	ŭ
from Czech, modality, imp	eratives, conditionals). They practice and develop communication skills for everyday situations (food, travelling, free time), a	and practice oral	and written
	pecific topics (environment, addictions, the green movement). They become acquainted with various geographical data (e.g	g., Siberia), learn	how to fill in
	ion from the timetable, learn about Russian holidays and typical meals.		
	ussian for Beginners Z5	Z	2
•	ident to have completed RZ4. It concentrates predominantly on reading skills (working with professional texts, i.e. understan		_
•	zed text) and speaking, and to a certain extent, writing about the professional information obtained by reading the texts. Co grammar is based on professional and technical texts and only includes items typically used in professional communicatior		
	evelop their technical and economic vocabulary, and are also trained in some professional skills (writing a CV, polite reques	-	os, participies,
	panish for Intermediate Students M1	Z	2
	students whose competence is at level B1 of CEFR, i.e. those who studied Spanish in the secondary school. The 3-semestation of the secondary school of	ster course devel	ops standard
vocabulary and pays atten	ion to further grammar topics, to written and oral communication on a given everyday or easy subtechnical topic, for which the	ne students are tr	ained by reading
texts or listening to them.			
l l	panish for Intermediate Students M3	.,.Z	2
able to work with specializ	tudents' knowledge from the previous course (XSM1). Students are gradually acquainted with fundamentals of Spanish for and texts on the Internet	r specific purpose	es in order to be
	panish for Intermediate Students M3	7	2
	partish for intermediate Otoderits indo lemented with additional subtechnical materials, so the students will be gradually acquainted with the peculiarities of acade	_	· -
	in Spanish and search for information of their specialization or field of interest. Students will use the information to write sh		
final part of the programm	e, general Spanish course based on course books, covers presentations and, finally, a written and oral examination.		
	panish for Advanced Students P1		
	· ·	Z	2
of CEFR.	ore difficult grammar topics, revision of vocabulary, basics of Spanish for specific purposes as well as written communication		_
		on. Course prered	quisites: level B2
04XSP2	panish for Advanced Students P2	on. Course prered	quisites: level B2
04XSP2 S Course XSP2 is the second		on. Course prered	quisites: level B2
04XSP2 S Course XSP2 is the secon written communication.	panish for Advanced Students P2 d part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and sy	on. Course prered Z ntax and focuses	quisites: level B2 2 on independent
04XSP2 S Course XSP2 is the secon written communication. 04XSP3 S	panish for Advanced Students P2	on. Course prered Z ntax and focuses	quisites: level B2 2 on independent
04XSP2 S Course XSP2 is the secon written communication. 04XSP3 S	panish for Advanced Students P2 d part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and syn panish for Advanced Students P3 art of the advanced Spanish course. It is based on texts chosen by the students according to their future specialization. It is for	on. Course prered Z ntax and focuses	quisites: level B2 2 on independent
O4XSP2 S Course XSP2 is the secon written communication. O4XSP3 S Course XSP3 is the final p based on what students w	panish for Advanced Students P2 d part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and syn panish for Advanced Students P3 art of the advanced Spanish course. It is based on texts chosen by the students according to their future specialization. It is for	on. Course prered Z ntax and focuses	quisites: level B2 2 on independent
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List of courses of this pass:

	Name of the course	Completion	Credits
00EKOT	Economy in Technology The course introduces the basics of micro- and macroeconomics.	Z	1
00ETV	Ethics of Science and Technology	Z	1
00MAM1	Essentials of High School Course 1 Students are introduced to mathematical concepts and methods used in the introductory physics course.	Z	1
00MAM2	Essentials of High School Math Course 2	Z	1
	ices the fundamental areas of mathematics essential for university studies and practical applications. It covers sets, logic, proofs, fur		
	analytic geometry, combinatorics, and probability, with emphasis on understanding principles, rigor, and problem solving.		,og.a.o,
00PT	Preparatory Week	Z	2
00RET	Rhetoric	Z	1
	sed on the acquisition of speech and voice techniques and on the rules of correct pronounciation. The course is also devoted to the	composition of put	olic speech
as well as to its	nonverbal aspects. Stylistics exercises, strategies for coping with stage-fright and a short excursion into the history of rhetoric are an	n integral part of the	e course.
00UPRA	Introduction to Law	Z	1
00UPSY	Introduction to Psychology	Z	1
01BASE	Bachelor Seminar	Z	1
projects at the facu	e seminar, students familiarize themselves with the general principles of publishing and presenting scientific work and the formal requestly. The second part is designed as a practical training for the defense of the bachelors degree project. The students give oral presentation achieved during the work on their projects. Each presentation is followed by a discussion on scientific matters as well as on the possib performance.	ntations of the curre	ent state of
01BPAI1 Ba	Bachelor's Degree Project 1 achelor's Degree project on the selected topic under the supervision. Supervision and regular checking of the bachalor project under	Z r preparation.	5
01BPAI2	Bachelor's Degree Project 2 achelor's Degree project on the selected topic under the supervision. Supervision and regular checking of the bachalor project under	Z r preparation.	10
01DEM	History of Mathematics	Z	1
The subject has the	form of regular seminars where the members of the department of mathematics, but also invited speakers - specialists in the field - g	ive their talks on va	roius topic
	from the history of mathematics.	,	
01DIM1	Discrete Mathematics 1	Z	2
	ne seminar is devoted to elementary number theory and applications. In addition to the material discussed, it includes individual prol		_
01DIM2	Discrete Mathematics 2 The seminar is devoted to recurrence relations. It includes individual problem solving.	Z	2
01EIG	Elementary Introduction to Graph Theory The course provides an explanation of basics of graph theory, followed by a survey of common graph algorithms.	ZK	3
01JEPR	Simple Compilers Lexical and syntax analysis, code generation, simple optimizations, development environments, reflection.	Z	2
01MAT1	Mathematics 1	Z	4
The course is devo	ted to the study of the basics of calculus of one variable. It includes an introduction to differential and integral calculus, with particula practical problems.	ar emphasis on app	olications in
01MAT2	Mathematics 2	Z	4
The course, which	n is the continuation of Mathematics 1, is devoted to the integration techniques, improper Riemann integral, introduction to parametr	` .	ly in polar
	coordinates), the basics of sequences and infinite series, and finally to the Taylor and power series and their applications.		
01MAT3	Mathematics 3	Z,ZK	4
	The subject summarises the most important notions and theorems related to the study of finite-dimensional vector spaces		4
01MAT4	Mathematics 4	Z,ZK	'
Linear and non	-linear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable cal	culus and its applic	
Linear and non	linear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable cal Mathematics, Examination 1	culus and its applic	2
Linear and non 01MATZ1 01MATZ2	linear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable cal Mathematics, Examination 1 Mathematics, Examination 2	Iculus and its applic	2 2
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Linear and non 01MATZ1 01MATZ2 01PERI	Inear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable cal Mathematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals	culus and its applic	2 2 2
Linear and non 01MATZ1 01MATZ2 01PERI Memory or 01PGR1 The first part of the a survey of fundame	Inear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable call Mathematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals 1 two-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the state of the problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems and encowledge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of compositions.	culus and its appliculus and its appliculus and its appliculus ZK ZK Z cherals device driver Z,ZK of the art technolog aplanation of the co	2 2 2 ers. 2 ies. Further
Linear and non 01MATZ1 01MATZ2 01PERI Memory or 01PGR1 The first part of the a survey of fundame algorithms using keeps	Inear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable call Mathematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals 1 two-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the state of the process of a specific sp	culus and its application of the conputer graphics applications.	2 2 ers. 2 ies. Further rresponding proaches in
Linear and non 01MATZ1 01MATZ2 01PERI Memory or 01PGR1 The first part of the a survey of fundame algorithms using k	Inear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable call Mathematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals 1 two-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the state of the problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems and encowledge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of compositions.	culus and its application of the conjuter graphics application of the conjuter graphics application of the Z,ZK	2 2 ers. 2 ies. Further rresponding roaches in
Linear and non 01MATZ1 01MATZ2 01PERI Memory or 01PGR1 The first part of the a survey of fundame algorithms using k 01PGR2 The second part of	Inear differential equations of the first order. Linear differential equations of higher order with constant coefficients. Multivariable call Mathematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals 1 two-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the state of that problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems and enowledge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of computer Graphics 2 Computer Graphics 2	culus and its appliculus and its appliculus and its appliculus ark ZK ZK ZC cherals device driver Z,ZK of the art technolog xplanation of the computer graphics applicular graphics appliculus ir z,ZK nenon ubiquitous ir	2 2 ers. 2 ies. Further rresponding proaches in 2 n computer
Linear and non 01MATZ1 01MATZ2 01PERI Memory or 01PGR1 The first part of the a survey of fundame algorithms using k 01PGR2 The second part o graphics. Further, rendering. Focus is	Authematics, Examination 1 Mathematics, Examination 2 Programming of Peripherals Devices ganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of peripherals problems in 2D computer Graphics 1 course is devoted to the specifics of digital display devices spanning from history up to the state of that problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems and entowledge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of computer Graphics. Computer Graphics 2 If the two-semester "Computer Graphics" course begins with a brief introduction to signal theory in the context of aliasing - a phenometric differential equations of the process of authoring scientific documents and presentations.	culus and its appliculus and its appliculus and its appliculus are zK ZK Z cherals device driver Z,ZK of the art technolog xplanation of the conputer graphics applicular graphics applicular graphics applicular	2 2 ers. 2 ies. Further rresponding roaches in 2 n computer its realistic cts available

01PW	Windows Programming	Z	2
	graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificat		2
01SITE1		7	2
	Computer Networks 1		
_	history and present network (LAN, WAN, use the principles and technologies). Architecture of reference model ISO/OSI. Network pro tions. Internet services - mail, remote access, www. Secure communication, tunneling. Directory services, certificates, certification autho		
	ictice. Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises. (According to the interest - the se		
		_	
01SITE2	Computer Networks 2	Z	2
_	history and present network (LAN, WAN, use the principles and technologies). Architecture of reference model ISO/OSI. Network pro tions. Internet services - mail, remote access, www. Secure communication, tunneling. Directory services, certificates, certification autho		
	ictice. Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises. (According to the interest - the se		
01SOS1	Software Seminar 1	Z	2
013031	Java, Java Beans, Assembly language programming for microprocessors Intel 80x86	۷	
01SOS2	Software Seminar 2	7	2
1	GTK+ and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix like	- 1	
Oraphilical libraries	for Linux systems. Portability to Microsoft Windows.	operating systems,	especially
01UOP	Introduction to Object Programming	ZK	2
01001	Object oriented programming languages. Object oriented programming libraries for graphics, databases and distributed syste	,	2
01UP1		Z,ZK	3
	Introduction to Probability 1 ith finite set of possible results, classical probability, independent random events 2.Probability and combinatorics 3.Probability and gr		
	bility, Bayes theorem, medical diagnosis, Simpsons paradox 5.Random variable with discrete state space, its distribution and mean v	•	
4.Conditional proba	calculation of mean value 7.Probabilistic method in graph theory 8.Random algorithms, Morris algorithm and its variants	value o.i Toblems ii	ivolving the
01UP2	Introduction to Probability 2	Z.ZK	3
	continuous random variable and its statistical description. 2. Distribution function and probability density. 3. Axiomatic introduction of	, ,	-
	Numerical characteristics of continuous random variables. 5. Selected variants of continuous distributions and their characteristics. 6.	-	
measure tricory. 4. i	estimations. 7. Generating pseudorandom numbers from the selected distribution.	Licincinally metric	us for point
01UTEI	Introduction to Theoretical Informatics	ZK	3
		Z,ZK	2
01ZAOS	Introduction to Operating Systems tion to structure of operating systems. Processes, thread, memory management. Synchronization of multi-threaded applications. Mer	,	2
01ZPB1		7	2
- 1	Introduction to Computer Security 1		2
	cure systems 2. Secure programming techniques, static code analysis 3. Buffer overflow 4. Securing operation systems 5. Running ur	Tirusieu code (sand	
02DEF1	History of Physics 1		2
	ace in the system of sciences. The relationship of man and nature. Natural sciences in ancient Orientand Greece, Greek natural philo	-	-
neienistic period,	Archimed. Arabic science, European science in Middle Ages. Renaissance - da Vinci, Giordano Bruno. Copernicus, Kepler, Galileo, F as experimental science. Newton and his work.	auygens. The birth	oi priysics
025/4		7 71/	
02FY1	Physics 1	Z,ZK	4 fooloated
mistory, principles	and applications of mechanics, waves and thermodynamics? basic level. The lecture is supplemented with practical investigation are physical phenomena.	ia demonstration o	Selected
02FY2	Physics 2	Z,ZK	4
- 1	rrysics 2 nics, electricity and magnetism, modern physics. The lecture is supplemented with practical investigation and demonstration of select		
04AP3KK	Course in Communication Skills - Final Examination	ZK	2
1	is the examination as given by the study plan. Final examination 04AP3KK covers syllabi of all three courses in communication skills		
	stered. Examination requirements are similar to those of state examination. Student will be able to engage in communication and disc	-	
toot may be damine	appropriate vocabulary and grammar structures.	accion on a given	lopio, dollig
04APA	Course in Applied English Usage	Z	1
	urse, student will have passed final examination in Course in Language Structures (04APSK). The course concludes study of gramma	l l	oplies them
-	veryday and ESP language situations, laying stress on choice of exact and adequate language and grammar structures in both Engli		
3 -	translations		. 5
04APAK	Course in Applied English Usage - Examination	ZK	2
	is the examination as given by the study plan. Written and oral parts of the examination test skills and knowledge acquired in course		
	- 100 minutes, oral part - ca 30 minutes.		.
04API	Presentation Course	Z	2
	pare students for presenting issues in their field by mastering the strategies and techniques of oral presentation. The course includes o	discussions (expres	
	ent, disagreement). Students will be able to respond to comments on their presentation and answer questions addressed to them aft	· ·	
	skill required for the defence of the Bachelor Project. Students will learn the basic structure of a Bachelor Project and rules for writin	g a paper.	
04APJP	Language Support to Bachelor Project	Z	5
To sign in for the co	urse students will have passed all the English courses from the previous 5 semesters. The course instructs students in the strategy of	writing, submitting,	presenting,
and defending the E	Bachelor Project in English. Their progress is continuously monitored and assessed. To finish the course, students will give a present	ation of their Bache	lor Project.
04APK1	Course in Communication Skills 1	Z	2
The course will dev	elop communication strategy and skills of student acquired at secondary school or elsewhere. Competence at B1 level of CEFR is a	prerequisite for reg	istering for
the course. It run	s for 3 semesters, being a core course of the Applied Information Technology programme. It will develop student's communication sk	tills in an integral fo	rm (e.g.,
listening and discu	ssion on a topic). The list of topics is similar to that of the State Language Examination. Student will develop their vocabulary for various		situations
	and will master their communication strategy. He/she will be trained to express his/her ideas clearly and according to current Englis	sh usage.	
04APK2	Course in Communication Skills 2	Z	2
	o concerned with developing speaking skills in English acquired at secondary school and course 04APK1. Speaking skills will be train	-	- 1
Topics will concent	rate on everyday life and cover topics of the State Language Examination, stressing mastery of speaking strategy in various situation	ns. The course will	emphasise
	developing student's vocabulary, ability to express thoughts with accuracy in correct English.		
04APK3	Course in Communication Skills 3	Z	1
The last semester	of conversation course. Student will further develop his/her speaking skills to be able to use English competently, speak about topics	covered by previou	us courses
	without making mistakes and making use of appropriate vocabulary.		

04APKK	Course in Communication Skills - Examination	ZK	1
The course conte	int is the examination as given by the study plan. The examination tests how well student has mastered vocabulary and facts of course	s 04APK1 and 04	4APK2. The
04APO1	examination consists of two parts - written (duration 100 minutes), and oral (about 30 minutes).	Z	2
	Text Analysis and Comprehension equel to the 04APU1 and 04APU2 courses and students will have successfully passed the 04APS2 course. It focuses on further writte		
	ses (ESP). Increasing attention is given to extending subtechnical vocabulary, text grammar and text comprehension. Students are taug		
	in written and oral communication.		0 0
04APO2	Text Analysis and Comprehension 2	Z	1
The course is a see	quel to course 04APO1 and focuses on guided writing (e.g., note-taking, précis, abstract). It is intended as preparation for writing the ba	chelor's project b	y developing
	text grammar practice and acquainting with basics of English punctuation.		
04APOK	Text Analysis and Comprehension - Examination	ZK	1
	nt is the examination as given by the study plan. To be eligible to take the examination students will have successfully completed the 0		
The examination	consists of two parts: written (duration 100 minutes) and oral (about 30 minutes). Students will prove they can use and apply the know both courses.	viedge and skills a	acquired in
04APR1	Life and Institutions of English-speaking Countries and the CR 1	7	2
	aimed at preparing the student for the state language examination and is based on topics required for this examination. Great emphas	_	1
	n of facts about English speaking-countries in comparison with the Czech Republic. The course covers one third of topics for the state	•	-
04APR2	Life and Institutions of English-speaking Countries and the CR 2	Z	2
The course following	ng the 04APR1 course is again aimed at preparing the student for the state language examination and is based on topics required for this	examination. Gre	at emphasis
is placed on trainir	ng oral presentation of facts about English speaking-countries in comparison with the Czech Republic. The course covers two remaining	ng thirds of topics	for the state
	language examination.		
04APRK	Life and Institutions of English-speaking Countries and the CR - Examination	ZK	3
	nt is the examination as given by the study plan. To be eligible to take the examination students will have successfully completed the C consists of two parts: written (duration 100 minutes) and oral (about 30 minutes). Students will prove they can use and apply the known		
rne examination	both courses.	vieuge and skills a	acquired in
04APS1	Course in Language Structures 1	KZ	3
	signed to instruct how to correctly use and to revise English grammar structures acquired by student at secondary school, develop the		1
	and strengthen them. The required level for registration is B1 of CEFR. The course stresses mainly frequency of structures and those		
	students.		-
04APS2	Course in Language Structures 2	KZ	3
The cours	se 04APS2 is a sequel to course 04APS1. Its purpose is also to correctly use and revise further English grammar structures as acquire	ed and develop th	em.
04APS3	Course in Language Structures 3	Z	1
The course 04APS	63 is a sequel to course 04APS2. Its purpose is also to correctly use and revise further English grammar structures as acquired by stu	dent, to develop th	nem and use
0.44.001.6	in practice.	717	
04APSK	Course in Language Structures - Final Examination	ZK	2
	ent is the examination as given by the study plan. To register for final examination 04APSK student will have passed a 3-semester pro 2, and 04APS3. It consists of two parts: written (duration 100 minutes) and oral (duration about 30 minutes). Student will demonstrate		-
0-711 01, 0-711 02	grammar and can reliably use it in practice as well as explain why a rule applies.	ic/site tias tilaste	ica English
04APSZK	English - State Examination	ZK	5
	ent is the examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) only		
respective courses	s and examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also exam	nination subjects.	As required,
	examination conditions comply with respective rules and regulations for state language examinations.		
04APU1	Introduction to English for Specific Purposes 1	Z	2
The course will i	introduce student into English for Specific Purposes (ESP) and acquaint him/her with its functions in subtechnical or easy technical te	kts. It brings vocal	bulary and
0.44.01.10	functions typical of ESP and it introduces student to basic mathematics and information technology terms.		
04APU2	Introduction to English for Specific Purposes 2 J2 is a sequel to course 04APU, concentrating more thoroughly on ESP text content, text grammar and vocabulary. It introduces more	Z	2
THE COURSE 04AF	ESP and more advanced information technology terms.	auvanceu iunciio	nis typicai oi
04APUK	Introduction to English for Specific Purposes - Examination	ZK	1
	ent is the examination as given by the study plan. Examination 04APUK consists of two parts - written part (duration 100 minutes) and		1
	rs a 2-semester programme. To be eligible for examination, student will have passed courses 04APU1 and 04APU2 and the examination		
	has to prove he/she can use the acquired basic knowledge and skills typical of English for Specific Purposes (ESP).		
04JPBP	Language Support to Bachelor Project	Z	3
-	ourse students will have passed all the English courses from the previous 5 semesters. The course instructs students in the strategy of		-
	Bachelor Project in English. Their progress is continuously monitored and assessed. To finish the course, students will give a present		
04XAM1	English for Intermediate Students M1	Z	2
	gned for students who have successfully completed the full secondary school English language course at least at the A2 level of the C anguages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals of	· ·	
	anguages (CEFK). It provides an introduction into English to Specific and Academic Purposes (ESF, EAF), i.e., into fundamentals of and written communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical into	•	
,	extending the knowledge of grammar issues used in EAP.		paid to
04XAM2	English for Intermediate Students M2	Z	2
	expects the student to have completed the AM1 course. It develops their skills for work with subtechnical texts, focusing also more on		1
	rpical of ESP and EAP (e.g., definition, existence and classification of phenomena, object descriptions). Part of the course is also guided		
	revision is included.		
04XAM3	English for Intermediate Students M3	Z	2
	ps the skills that enable students to cope with features typical of professional style. Increasing attention is paid to developing subtechnic	=	-
_	f professional texts. Great emphasis is placed on distinguishing different levels of formal and informal oral and written communication		
equivalents. The co	purse also includes studying abstracts and rules for writing them as well as basic rules for preparing and giving a short presentation o student's field.	i a cnosen topic r	elated to the
	Student S neia.		

04XAP1 English for Advanced Students P1 The course is at the level of advanced English, designed for students who have successfully completed the full secondary school English language course (at least to the B1 level of the Common European Framework of Reference for Languages - CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), providing insights into the fundamentals of vocabulary, grammar, and the purpose and style which is typical of academic and professional oral and written communication situations concerning science, technology, engineering and mathematics (STEM) contexts. There is an emphasis on reading material and discussing ideas with colleagues prior to participating in plenary sessions. Full and active participation is a basic expectation. 04XAP2 English for Advanced Students P2 2 The course is designed for students who have successfully completed AP1 and is a continuation of the Advanced English course. The AP2 course builds on content covered in AP1, thus extending the students skills for working with texts relating to science, technology, engineering and mathematics (STEM), and honing spoken and written communication in STEM contexts. The course extends the students academic vocabulary, through exposure to a wide variety of diverse texts and broadens knowledge of key aspects of grammar (referred to as Language Topics), pertinent to effective academic discourse and communication. There is a specific emphasis on responding to graphic data and the synthesizing of comprehensive and nuanced interpretations of such data. There is a focus on formal conventions in written communication including sentence and paragraph structure, discourse marking and cohesion. As in AP1, considerations of the purpose and concomitant style which is typical of academic and professional oral and written communication is explored through sample materials. And once again, students are expected to discuss ideas with colleagues prior to participating in plenary sessions. Full and active participation is a basic expectation. 04XAP3 English for Advanced Students P3 The AP3 course is designed for students who have successfully completed AP2 and is a continuation of the Advanced English course leading to a zápo et and a final graded examination. The AP3 course builds on content covered in both AP1 and AP2, and in terms of the final examinations, provides a summative assessment of the knowledge and skills acquired over the course of the three semesters. The AP3 course places greater emphasis on student participation, training oral communication skills, particularly when expressing an opinion, agreement, and objections in formal discussions. There is also focus on professional written communication in the context of applying for work placements and opportunities for further study. For most students this is their third year of studying for their bachelors degree and so there is a commitment to honing efficient and effective language skills with a view to enabling successful communication in English both in the academic context and in the wider world. Collaborating with colleagues to enable deeper understanding of complex ideas is a key goal. 04XCESM1 7 2 Czech for Foreigners - Intermediate 1 The course is focused on correct pronunciation, important morphological phenomena, prepositional phrases, and verb forms as well as on extending the student's vocabulary for various social situations. 04XCESM2 Czech for Foreigners - Intermediate 2 The course develops the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading skills and trains the student in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. 04XCESM3 Czech for Foreigners - Intermediate 3 Z 2 The last course revises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especially focused on stylistics and lexicology and on developing the student's writing skills. 04XCESMZK Czech for Intermediate Students Examination ZK 4 The course content is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the CESM1,2,3 courses and can only be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. 04XCESP1 Czech for Foreign Students - Advanced 1 Ζ The prerequisite of the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common European Framework of Reference. It is focused partly on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of science. Students are taught the basics of functional style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Student Life. Written practice includes communication with teachers and faculty administrators. 04XCESP2 Czech for Foreigners - Advanced 2 7 2 This course extends the student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and specialist texts placing greater emphasis on individual work. 04XCESP3 Czech for Foreigners - Advanced 3 2 The course develops the student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, and, finally, presentation of the student's project. Writing skills necessary for professional communication are trained. 04XCESPZK Czech for Foreign Students - Advanced Examination ZK 4 The course content is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the CESP1,2,3 courses and can only be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. 04XCESZ1 Czech for Foreigners - Beginners 1 The course is designed for students of the English programme. Students will become acquainted with the main characteristics of Czech (phonetic and grammar features) and they will acquire basic language and speaking skills. The course focuses on pronunciation exercises, simple social phrases, and oral and written communication in the most common everyday situations. The course covers roughly lessons 1-3 of eština Express (Czech Express) by L. Holá and P. Bo ilová. 04XCESZ2 Czech for Foreigners - Beginners 2 The language and communication competences acquired in CESZ1 are further developed. Students deepen their knowledge of the declension and conjugation system and practise basic communication topics. The course covers roughly lessons 3-5 in Czech Express by L. Holá and P. Bo ilová. 04XCESZ3 Czech for Foreigners - Beginners 3 The course further develops the language and communication competences acquired in the XCESZ1 and XCESZ2 courses. The teaching focuses on building up basic vocabulary, fixing correct pronunciation and deepening grammar, features through practice, as well as introducing the Czech culture. Students are asked to produce simple texts and they practise frequent types of dialogue. They also practise understanding texts in terms of main ideas or looking for specific details in texts. The course covers roughly lessons 5-7 in estina expres 04XFM1 French for Intermediate Students M1 2 French - intermediate FM The objective of this three-semester course is to improve and further develop communication in the French language in both written and oral form. Students will be able to communicate in social interaction and in academic, scientific and professional environment. They will be able to use the language to transmit general and technical information and to solve problems. FM1 The course builds on and further develops linguistic competence acquired at secondary school. It revises, systemizes and expands language skills gained in previous study. The following topics are covered: University studies in our country and in France, writing of transactional letters, CV, personal statement, request, answer to an advert, French culture and geography, Paris. Topics of specialization: mathematics, physics. Reading technical and popular science texts, work based on these texts. 04XFM2 French for Intermediate Students M2 Course FM2 builds on FM1. Linguistic structures and competence acquired in previous study are systemized and expanded. Reading popular science texts, features typical for technical and scientific language (passives, nominalization, word formation). Topics: physics, power engineering, environment, Internet, success of French science and technology, French scientists, artists and architects. Description of an object, device, shapes, dimensions, material.

04XFM3	French for Intermediate Students M3	Z	2
	sed on improvement and further development of linguistic competence acquired during the follow-up courses. Syntactic structures (sub res, compound tenses). Text summaryStudents prepare a written paper which will be delivered in form of an oral presentation in-clas		
	es, compound tenses). Text summary, "Students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students prepare a written paper which will be delivered in form of all oral presentation in local students.		
	s own knowledge/experienceLonger monologues on topics /situations set for the examination are prepared. Text structure, cohesia	•	
04XFMZK	French for Intermediate Students Examination	ZK	4
The content is the	e examination as given by the study programme. The whole French programme is ended with an examination covering the contents of		amination
047/ED4	consists of a written and oral part and is organized according to Examination Instructions, a document available on the web		
04XFP1	French for Advanced Students P1 se The objective of this three-semester course is to improve and further develop communication in the French language in both writte	Z Z	2 tudents will
	icate in social interaction and in academic, scientific and work environment. They will be able to use the language to transmit general		
	FP1 The course builds on and further develops linguistic competence acquired at secondary school. Difficult grammar topics are repeated		
•	parfait, pronouns. The following specific topics are covered: University studies in our country and in France, writing of transactional le	· · · · · · · · · · · · · · · · · · ·	
request, answer to	an advert, environmental issues, success of French science and technology, chosen topics from French regional culture, Paris. Topics of internet, physics, chemistry. Reading of technical and popular science texts, further work with these texts and interpretation	-	atnematics,
04XFP2	French for Advanced Students P2	 7	2
	contents, the course further develops language skills. Focus is put on reading popular science texts and on oral communication on gi	- 1	_
	technical and scientific communication are stressed (passive voice, nominalization, word formation).		
04XFP3	French for Advanded Students P3	Z	2
	sed on systemization and improvement of acquired linguistic competence, skills and knowledge, and their use for communication in eng		
skiii - translation c	f shorter texts (both from and into the language). Writing of a paper and making oral presentation in-class. The paper generally covers topic. It is a creative work compiled from 3 French sources. Preparation of several set topics for oral examination.	s a tecnnicai /appii	ed science
04XFPZK	French for Advanced Students Examination	ZK	4
	n program is ended with an examination covering the contents of FP1-FP3. The examination consists of a written and/or an oral part a	l l	
	Examination Instructions, a document available on the web. Assessment of the presentation is included into the examination gra	ading.	
04XFZ1	French for Beginners Z1	Z	2
=	rs The objective of this 5-level course is to be able to communicate in French orally and in writing in situations of everyday life, in soci		
	es French for specific / technical communication and reading of popular science and scientific texts. FZ1 The objective is to be able to using the knowledge of chosen elementary language. The contents is roughly outlined by lessons 1 - 7 of the textbook Pravda - Pravd		, ,
=	za áte ky). It is extended with situations of communication and functions from the textbook Espaces I, lessons 1-4: introductions, pel		-
giving the	directions, simple instructions and questions. Special attention is paid to pronunciation. Spelling is explained in connection with pronu	nciation and gramm	nar.
04XFZ2	French for Beginners Z2	Z	2
	ng up with FZ1. Elementary linguistic knowledge and communication skills are expanded. The scope is given by lessons 8 - 13 of the		
-	ners . Additional topics and skills are filled in from the textbook Espaces I, lesson 1 - 5 (introductions, invitation, welcoming, agreeme , map of France, food, expression of will, wish, order, prohibition, pleasure). Correct pronunciation is practiced. Stress on oral communic	=	
	How does the machine work? A few expressions concerning the study. Name of University and Faculty.		
04XFZ3	French for Beginners Z3	Z	2
	upon FZ2. Basic linguistic knowledge and skills are developed. The contents is given by lessons 14 - 18 of the textbook: Pravda - Pra		-
Topics, functions	and situations are complemented from other materials. Stress is put on oral communication in dialogues and on reading, both for info pronunciation practice. Reading covers short adapted texts of general interest first, and later popular science texts.	rmation and loud	as part of
04XFZ4	French for Beginners Z4	Z	2
-	t reflect for Degrified 24 up on FZ3. Basic linguistic knowledge and skills are further developed. Oral communication and reading skills are practiced. The con	- 1	
lessons 19 - 23 of t	he textbook French for Beginners, and is expanded with topics and functions from other materials. Reading is developed from the lecture	notes French for E	Engineering
Students of FJFI.	The course covers generals and specific topics: health- illness, sport, free time, environment, study, travelling in France, Paris, shoppi	•	rsity in our
0.47/575	country and in France, how to write CV, application, topics in mathematics, reading physics - mechanics, informatics, interne		
04XFZ5 All four skills acqui	French for Beginners Z5 red in FZ4 are further developed, as well as technical language. Students prepare a paper on a chosen popular science topic. They pr	Z esent it orally in the	2 e class The
· · · · · · · · · · · · · · · · · · ·	is covered by lessons 24 - 26 of the textbook: Pravda-Pravdova, French for Beginners, and is complemented from other materials. To	=	
notes, success	of French science and technology, information about France. Grammar is systemized and complemented with syntax (subordinate cla	iuses, typical conju	unctions,
	subjunctive clauses, gerund, passive.		
04XFZZK	French for Beginners Examination	ZK	3
The content is the	examination as given by the study plan. The course is terminated with an examination consisting of oral and written part. The examination as given by the study plan. The examination are content covers the levels FZ1 - FZ5.	ation is ruled by the	e document
04XNM1	German for Intermediate Students M1	Z	2
	e course is to level off the students´ skills in the German language. The course focuses on revision of more difficult phenomena and sti		
	processes (e.g. importance of verb prefixes). In the lexical part, it covers topics referring to higher education in both the Czech Repu	=	
environmental is	sues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists,		ntals of IT
04XNM2	terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and unders	tandability.	2
		7	_
	German for Intermediate Students M2 ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be	Z etween technology	and society.
the world at the	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and computers and computers and computers are such as the relation beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and computers are such as the relation beginning of the 21st century.	tween technology	- 1
	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systemation	etween technology atc.	Students
practise reading for	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be	etween technology a car technology etc. cally revises other g	Students grammatical
practise reading for 04XNM3	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and confirmation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3	etween technology active technology etc. cally revises other c	Students grammatical
practise reading for 04XNM3 The course introdu	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be	etween technology etc. cally revises other g	Students grammatical 2 and society,
practise reading for 04XNM3 The course introdu the world at the	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and complex information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3 Ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be	etween technology etc. cally revises other g	Students grammatical 2 and society, Students
practise reading for 04XNM3 The course introdu the world at the practise reading for	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3 ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses).	etween technology etc. cally revises other g z etween technology etc. car technology etc. car technology etc. cally revises other g	Students grammatical 2 and society, Students grammatical
04XNM3 The course introdu the world at the practise reading for	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3 ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students Examination	etween technology active and technology active active and technology active activ	Students grammatical 2 and society, Students grammatical 4
04XNM3 The course introdu the world at the l practise reading for 04XNMZK The course content	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and of information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3 ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and of information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students Examination t is the examination as given by the study plan. The whole German for Intermediate Students Course is completed by an examination of	etween technology active and technology active active and technology active activ	Students grammatical 2 and society, Students grammatical 4 arts - written
04XNM3 The course introdu the world at the l practise reading for 04XNMZK The course content	ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M3 ces other more complex grammatical structures and their application in communication based on technical texts, such as the relation be beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and conformation and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematic phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students Examination	etween technology active and technology active active and technology active activ	Students grammatical 2 and society, Students grammatical 4 arts - written

04XNP1 German for Advanced Students P1	Z	2				
This course requires good grammar knowledge, extended general vocabulary, and good communication skills acquired at secondary school to be leve course. The course is then focused on working with technical and scientific texts and practising reading techniques (skimming, scanning, reading for d	-	- 1				
more difficult grammar structures necessary for understanding a subtechnical text (passive voice, participles, participle structures) and it also focuses on pra i.e., telephoning.	•					
04XNP2 German for Advanced Students P2	Z	2				
The course develops the students' skills in working with professional scientific texts (understanding, summarising, note-taking, interpreting) while extending	-					
vocabulary range. It introduces mathematical expressions and texts of nuclear power engineering. Increasing emphasis is placed on understanding and produced by the produced of continuous and produced in the	-	munication,				
both written and oral (CV, letter of application, interview, scholarship), and more complex grammatical structures (i.e., subjunctive, indi O4XNP3 German for Advanced Students P3	7	2				
The course consists of 3 main parts (general communicative situations, grammar and technical topics). Students will develop their vocabulary in a vari-	ety of less common					
(traffic problems and car accidents, accident report, filling in a form, complaints). Based on presentations and technical and subtechnical texts, the voca	=					
nuclear power engineering, the environment, computer science, and car technology, will also be extended. Only authentic professional texts are used.						
students are trained to process information gained from their reading of complex and difficult texts and present it to the class in a simplified oral form. The operation of the class in a simplified oral form. The operation of the class in a simplified oral form. The operation of the class in a simplified oral form. The operation of the class in a simplified oral form.	ourse also includes	translation				
04XNPZK German for Advanced Students Examination	ZK	4				
The course content is the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examination of						
and oral, which cover the courses NP1 - NP3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungraded						
information is to be obtained from the teacher.						
04XRM1 Russian for Intermediate Students M1	Z	2				
The course is designed for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphabet basic vocabulary for communication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, asking						
they can use basic grammar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement						
contents and scope of the course correspond approximately to the RZ3 course, but for half of the time allotted in the timetal	ole.					
04XRM2 Russian for Intermediate Students M2	Z	2				
The course is based on the RM1 course, its contents and scope correspond roughly to RZ4, however, for half of the time allotted in the						
04XRM3 Russian for Intermediate Students M3 The course develops the knowledge and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, how	Z Z	2 ma allottad				
in the timetable.	er, for than or the ti	ine anotteu				
04XRMZK Russian for Intermediate Students Examination	ZK	4				
The course content is the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowled	ige and skills acquir	red in RM1				
- RM3. Students are eligible for the oral examination only after a prior pass in RM3 and a successful written examination. Students are given inst	ructions by the teac					
04XRP1 Russian for Advanced Students P1	Z	2				
The entrance requirement for the course is to achieve the B1 CEFR level. The objective of the course is revision of standard language structures, practices, understanding the fundamentals of technical language and training writing skills.	ticing more difficult	grammar				
04XRP2 Russian for Advanced Students P2	Z	2				
The course is based on RP1. It expands grammatical structures important for understanding technical texts (verbal adjectives, participles, passives, verbal adjectives).						
structures). Stress is put on independent oral and written communication.						
04XRP3 Russian for Advanced Students P3	Z	2				
The course is based on RP2 and is mainly focused on working with technical and scientific texts (reading comprehension, oral and written paraphrasin	,					
courses require good previous knowledge of general language at secondary level (listening, reading, correct communication in everyday situations). The these skills. Further study is aimed at professional and technical skills (reading technical literature according to the students' specialization, oral and w	•					
develop their subtechnical vocabulary and practice quick and correct communication in professional situations. They will be able to both speak write acc						
technical topics.						
04XRPZK Russian for Advanced Students Examination	ZK	4				
The course content is the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowled - RP3. Students are eligible for the oral examination only after a prior pass in RP3 and a successful written examination. Students are given inst						
04XRZ1 Russian for Beginners Z1	Z	2				
The course represents the first stage of the five-semester programme, its final aim being reading and understanding professional texts written in Russiar	- 1					
the Russian alphabet (for both reading and writing skills) and fundamentals of grammar necessary for everyday communication (listening and speaking	_	- 1				
a short text with marked stress, understand its contents and summarize it.						
04XRZ2 Russian for Beginners Z2	Z	2				
The second semester of the programme is designed to teach skills for basic communication in everyday situations and for reading easy and short subtrable to communicate using short sentences and appropriate structures, and read aloud with confidence a short text without marked stress. They will als						
master further grammatical structures. They will have mastered with confidence the Russian alphabet and will be able to use it in		abulary and				
04XRZ3 Russian for Beginners Z3	Z	2				
The course is based on RZ2 and includes further everyday topics, develops understanding of short compact texts on new subtechnical topics (for training	various forms of re	ading skills				
and listening) and introduces new grammar. Students will be trained to distinguish intonation patterns while listening to spoken language. They will be	able to respond so	as to be				
understood, and to express their opinion. Writing skills will be trained on guided writing tasks and note-taking.	7					
04XRZ4 Russian for Beginners Z4 The course is based on RZ3. It improves and expands the knowledge of general language in all four skills (reading and understanding longer texts with a c	Z Z	2 of unfamiliar				
words, oral communication in everyday situations, writing longer texts). Students are trained to use grammar structures effectively (e.g., irregular verbs, differences in verb patterns						
from Czech, modality, imperatives, conditionals). They practice and develop communication skills for everyday situations (food, travelling, free time), and practice oral and written						
communication on more specific topics (environment, addictions, the green movement). They become acquainted with various geographical data (e.g.	., Siberia), learn ho	w to fill in				
forms, look up the information from the timetable, learn about Russian holidays and typical meals.	7					
04XRZ5 Russian for Beginners Z5 The course expects the student to have completed RZ4. It concentrates predominantly on reading skills (working with professional texts, i.e. understanding	Z Z	2 Immarizing				
information from a specialized text) and speaking, and to a certain extent, writing about the professional information obtained by reading the texts. Communication skills are trained on						
everyday topics. Studying grammar is based on professional and technical texts and only includes items typically used in professional communication (verbal adjectives, participles,						
passive voice). Students develop their technical and economic vocabulary, and are also trained in some professional skills (writing a CV, polite request, etc.)						

04XRZZK	Russian for Beginners Examination	ZK	3
	nt is the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowledge of the course is completed by taking a written and oral examination testing the knowledge.	-	
	lents are eligible for the oral examination only after a prior pass in RZ5 and a successful written examination. Students are given instr		
04XSM1	Spanish for Intermediate Students M1 signed for students whose competence is at level B1 of CEFR, i.e. those who studied Spanish in the secondary school. The 3-semes	Z	2
	signed for students whose competence is at level B1 of CEFK, i.e. those who studied Spanish in the secondary school. The 3-series as attention to further grammar topics, to written and oral communication on a given everyday or easy subtechnical topic, for which the	•	
roodbalaly alla pay	texts or listening to them.		. by rouding
04XSM2	Spanish for Intermediate Students M3	Z	2
The course develop	ps the students' knowledge from the previous course (XSM1). Students are gradually acquainted with fundamentals of Spanish for s	becific purposes in	order to be
	able to work with specialized texts on the Internet.		
04XSM3	Spanish for Intermediate Students M3	Z	2
	are supplemented with additional subtechnical materials, so the students will be gradually acquainted with the peculiarities of academ Internet in Spanish and search for information of their specialization or field of interest. Students will use the information to write sho	, ,	
enough to use the	final part of the programme, general Spanish course based on course books, covers presentations and, finally, a written and oral ex		nanes. The
04XSMZK	Spanish for Intermediate Students Examination	ZK	4
	rent is the examination as given by the study plan. XSMZK examination consists of two parts: written and oral; to be eligible for the wr		
	obtained non-graded assessment for course XSM3. Oral examination follows the written part.		
04XSP1	Spanish for Advanced Students P1	Z	2
Course concentrate	es on more difficult grammar topics, revision of vocabulary, basics of Spanish for specific purposes as well as written communication.	Course prerequisit	es: level B2
047000	of CEFR.	7	
04XSP2	Spanish for Advanced Students P2 e second part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and synta	Z Z	2
Course ASP2 is the	e second part of the advanced Spanish codise, extending Spanish of specific purposes topics, it comprises more grammar and synta written communication.	ix and locuses on ii	шерепиети
04XSP3	Spanish for Advanced Students P3	7	2
	e final part of the advanced Spanish course. It is based on texts chosen by the students according to their future specialization. It is foci	_	
	based on what students will need in their career.		
04XSPZK	Spanish for Advanced Students Examination	ZK	4
	ent is the examination as given by the study plan. Examination XSPZK consists of two parts, namely oral and written. The prerequisite		ral part is
	ing passed the written test. Examination content is based on syllabi of courses XSP1, XSP2, and XSP3 or on an individual study plan		
04XSZ1	Spanish for Beginners Z1 le first stage of the five-semester programme of Spanish studies; during the first stage the students will master phonetics and fundam	Z	2
	to communicate at an elementary level on topics of everyday life. They will acquire and extend fundamental vocabulary of general Spa	-	
04XSZ2	Spanish for Beginners Students Z2	7	2
	ased on course XSZ1, and expects students to develop and extend the knowledge and skills acquired so far. Grammar structures an	d lexis will be chose	
enable them to un	nderstand short adapted written texts and speech. Attention is also paid to cultural differences between Spanish-speaking countries a	ind others such as	the Czech
		ina otnera aden da	ine Ozecn
	Republic. Realia of Spanish-speaking countries are also included.		
04XSZ3	Spanish for Beginners Z3	Z	2
This course builds	Spanish for Beginners Z3 supon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes	Z es an introduction to	2 o the realia
This course builds and cultural contex	Spanish for Beginners Z3 supon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to f Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including	Z es an introduction to the pretérito perfec	2 o the realia to, pretérito
This course builds and cultural contex	Spanish for Beginners Z3 supon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes	Z es an introduction to the pretérito perfec	2 o the realia to, pretérito
This course builds and cultural contex	Spanish for Beginners Z3 supon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to f Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics.	Z es an introduction to the pretérito perfec	2 o the realia to, pretérito
This course builds and cultural contex indefinido, pretérite 04XSZ4 The course is base	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes at of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish	Z ss an introduction to the pretérito perfec Students are prepa Z speaking countrie	2 the realia to, pretérito red for this 2 s, mainly of
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish intion to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and su	2 to the realia to, pretérito red for this 2 s, mainly of
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenia.	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them.	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive),
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including of imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. Through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenic Spanish for Beginners Z5	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them. Z	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive),
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish intion to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenic Spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them. Z	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive),
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter 04XSZ5 The course books	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including or imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. Through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish report of the current of the course and indirect object pronouns, negative form of the towritten and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenity of the Spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for part, the general Spanish course based on the course book will end with a written and oral examination.	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them. Z r specific purposes	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive), 2 s. In its final
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter 04XSZ5 The course books 04XSZZK	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including o imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish intion to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenic Spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and su ng to them. Z r specific purposes	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive), 2 s. In its final
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter 04XSZ5 The course books 04XSZZK	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including or imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. Through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish and to further grammar topics (perifrasis verbales, future imperfecto, direct object and indirect object pronouns, negative form of the towritten and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listenity of the Spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for Beginners Examination. Spanish for Beginners Examination	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and su ng to them. Z r specific purposes	2 o the realia to, pretérito red for this 2 s, mainly of abjunctive), 2 s. In its final
This course builds and cultural contex indefinido, pretérito 04XSZ4 The course is base Spain. It pays atter 04XSZ5 The course books 04XSZZK The course content 12ANM	Spanish for Beginners Z3 s upon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It includes to of Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including or imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. Through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish for the Introduction on a given general or subtechnical topic, for which the student is trained by reading texts or listening spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for Beginners Examination Spanish for Beginners Examination tis the examination as given by the study plan. Examination consists of two parts: written and oral. Students can register for oral examination the written examination test. Applied Numerical Methods	Z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them. Z r specific purposes ZK nation only if they h	2 o the realia to, pretérito rred for this 2 s, mainly of abjunctive), 2 s. In its final 3 ave passed
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This course builds and cultural contex indefinido, pretérito 104XSZ4 The course is base Spain. It pays atter 104XSZ5 The course books 12ANM For English versit technology. Meth Integrated computer and computer and computer and computer and computer network 12UVP Practically oriented 12UVP	Spanish for Beginners Z3 supon the foundations established in course XSZ2 and further develops students vocabulary and grammatical competence. It include to for Spanish-speaking countries, with a primary focus on Spain. Particular attention is given to key grammatical structures, including to imperfecto, the gerund, and the imperative. The course also focuses on both written and spoken communication on general topics. Through targeted reading and listening activities. Spanish for Beginners Z4 and on course XSZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish notion to further grammar topics (perifrasis verbales, future imperfecto, direct object and indirect object pronouns, negative form of the to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listening are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for Beginners Z5 are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for Beginners Examination Spanish for Beginners Examination It is the examination as given by the study plan. Examination consists of two parts: written and oral. Students can register for oral examination use code 12YNME1. There are explained the basic principles of numerical mathematics important for numerical solving of problemods for solution of tasks very important for physicists (ordinary differential equations, random numbers) are included in addition to thoutational environment MATLAB is used as a demonstration tool. The seminars are held in computer laboratory and PASCAL is used language and MATLAB is also used. Computer Algebra Systems Introduction to UNIX perating systems. Personal computer, workstation and supercomputers. Processor, memory, bus, devices, hard disk, network interfating systems. Operating system UNIX. Basic prin	z s an introduction to the pretérito perfec Students are prepa Z speaking countrie imperative, and sung to them. Z or specific purposes ZK nation only if they h KZ ns important for phe basic numerical r as a principle programa a princip	2 to the realia to, pretérito red for this 2 s, mainly of dibjunctive), 2 s. In its final 3 ave passed 4 ysics and methods. ramming 2 assrooms: 2 software. : vi, emacs. rorks. Local : Network 2 tt scientific 3 s for linear

12ZEL2	Basic Electronics 2	Z,ZK	3			
	vs up with the Basic Electronics 1. Semiconductor elements basic properties are explained. Thecourse's final part deals with basic th					
18EKN	Econometrics	Z,ZK	4			
	sed on economic theory and the relations between economic quantities are expressed by mathematical tools and observed data from					
covers basic instrur	nents of econometric analysis as the basic econometric model, the generalized model, the system of simultaneous equations and instr verification.	uments for econon	netric model			
18INTA		KZ	4			
	Development of internet applications e an overview of modern technologies for the development of web applications. Students will learn basic web languages and concep		- I			
	ced to relational database systems. The tutorials are dedicated to practical examples of building web applications, from the simplest t		· · · · · · · · · · · · · · · · · · ·			
	is oriented primarily towards backend technologies and using the Python languages, but covers also frontend frameworks and Jav					
18MAK1	Macroeconomics 1	Z,ZK	4			
	I provides students with a fundamental theoretical basis for understanding how an economy works. It introduces main macroeconom	,	ey market,			
macroeconomic eq	uilibrium theory, fundamentals of open economy theory, inflation, unemployment, economic growth, economic fluctuations, basic mac	roeconomic mode	ls of IS-LM,			
AS-AD and their imp	olications for economic policies. The learning outcomes of the course is to equip students with ability to analyze macroeconomic phenometers of the course is to equip students with ability to analyze macroeconomic phenometers.	ena and their inter	connections			
	and subsequently to use them under the conditions of modern economic life.					
18MAK2	Macroeconomics 2	Z,ZK	4			
	Il extends theoretical knowledge acquired from Macroeconomics I of its students with the latest knowledge of contemporary macroec	-	I			
-	especially those with an emphasis on the role of human capital and technological progress. Furthermore, it introduces students to m					
modeling, i.e., maci	oeconomic models derived from microeconomic behavior of subjects and economics and their rational expectations. It also provides stu of labor market modeling.	idents with moderr	i knowledge			
18MIK	Microeconomics	Z,ZK	4			
Microeconomics is	a set of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Micro	economics explain	s the role of			
prices and markets	in these processes and makes more clear behaviour of the economic agents. Lectures and seminars are designed so that the explanati	on of microeconom	nic concepts			
	does not require knowledge of calculus.					
18PJ	Programming in Java	Z,ZK	5			
	This course is devoted to the Java platform and to the development of the basic types of applications for this platform.					
18PMTL	Programming in MATLAB	KZ	4			
Introducing Matlab	environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analysis	sis, statistics, algor	rithmization			
	and geometric representation of results.		_			
18PPY1	Programming in Python 1	Z	2			
	ces students to advanced features of the Python language and common scientific packages. The course covers both object-oriented as variety for the source describes the use of Python in the fields of existific and technical computing (NumPy and SkiPy packages), date					
18PPY2	owing part of the course describes the use of Python in the fields of scientific and technical computing (NumPy and SciPy packages), dat	Z				
-	Programming in Python 2 duces students to practical applications of the Python language in scientific as well as commercial fields. The course is a seminar wh	_	2			
This course intro	accompanied by a short demo of a real-world application in the specific field.	cre each presente	u topio is			
18PPY3	Programming in Python 3	Z	2			
	rse is intended for students who have basic experience with programming in Python and using its libraries. It introduces students to adv	_				
	language and modules they are based on.		,			
18PRC1	Programming in C++ 1	Z	4			
'	This course covers mainly the C programming language and non-object oriented features of the C++ language.	'				
18PRC2	Programming in C++ 2	KZ	4			
This co	ourse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard	Template Library.				
18PROP	Practical training in programming	KZ	3			
The goal of this c	ourse is to understand advanced topics related to programming, code design and software project development. Students will practic	e pragmatic techn	iques and			
principles on concre	ete real-world examples. Emphasis is put on the review of freely available software tools that can improve the programmers work efficiency	ciency and ensure	high quality			
	of the final source code.					
18PW	Web environment and markup languages	KZ	2			
	oduces students to fundamental principles and best practices for web design with respect to technical functionality, informational values					
18ZALG	Basics of Algorithmization	Z,ZK	4			
	devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of	tne algorithm com				
18ZPRO	Basics of Programming	<u></u>	4			
This course is intended mainly for students with little or no experience in programming. It familiarizes the students with the basic concepts in programming and with the Python						
TV-1	programming language.	Z	1			
	Physical Education		1			
TV-2	Physical Education	Z	1			
TV-3 TV-4	Physical education Physical education	Z Z	1			
			1			

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2025-10-19, time 15:02.