Study plan

Name of study plan: BS Informatická fyzika

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Applications of Natural Sciences

Type of study: Bachelor full-time

Required credits: 83

Elective courses credits: 97 Sum of credits in the plan: 180

Note on the plan:

Name of the block: Compulsory courses of the specialization

Minimal number of credits of the block: 83

The role of the block: PO

Code of the group: BSIFPP1

Name of the group: BSIF - povinné p edm ty 1. ro ník

Requirement credits in the group: In this group you have to gain at least 24 credits

Requirement courses in the group: In this group you have to complete at least 7 courses

Credits in the group: 24 Note on the group:

00PT

Preparatory Week

	' '					
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, Miroslav Myška Miroslav Myška Igor Jex (Gar.)	Z	2	2+0	Z	PO
02ELMA	Electricity and Magnetism Iskender Yalcinkaya, Goce Chadzitaskos, Josef Schmidt, Jan Vysoký Jan Vysoký Goce Chadzitaskos (Gar.)	Z,ZK	6	4+2	L	РО
02MECH	Mechanics Iskender Yalcinkaya, David B e Michal Jex David B e (Gar.)	Z	4	4+2	Z	РО
02MECHZ	Mechanics - Examination Iskender Yalcinkaya, Goce Chadzitaskos, David B e , Filip Petrásek, Stanislav Skoupý, Antonín Hoskovec, Petr Novotný Antonín Hoskovec David B e (Gar.)	ZK	2	-	Z	PO
00PT	Preparatory Week Petr Ambrož, Milan Krbálek Petr Ambrož Petr Ambrož (Gar.)	Z	2	týden	Z	РО
02TER	Heat and Molecular Physics Filip Petrásek Petr Novotný Petr Jizba (Gar.)	Z,ZK	4	2+2	L	PO
18ZPRO	Basics of Programming Maksym Dreval, Vladimír Jarý, Miroslav Virius, Jakub Klinkovský, Petr Pauš, František Vold ich, Jan Tomsa, Zuzana Pet í ková Miroslav Virius Miroslav Virius (Gar.)	Z	4	4C	Z	PO

Characteristics of the courses of this group of Study Plan: Code=BSIFPP1 Name=BSIF - povinné p edm ty 1. ro ník

UZDEFI	Filstory of Frigsics 1	_	-
Physics and its place	in the system of sciences. The relationship of man and nature. Natural sciences in ancient Orientand Greece, Greek natural p	hilosophers, Aristo	otle. Physics in
Helenistic period, Ard	rhimed. Arabic science, European science in Middle Ages. Renaissance - da Vinci, Giordano Bruno. Copernicus, Kepler, Galile	o, Huygens. The b	oirth of physics
as experimental scie	nce. Newton and his work.		
02ELMA	Electricity and Magnetism	Z,ZK	6
Electric charge, Coul	omb's law, electrostatic field, Gauss' law. Electric dipole, polarization. Conductors anddielectrics. Electric current and circuits, c	onductivity. Basics	of the relativity
theory. Electrodynam	ic forces, magnetic field. Magnetic dipole, magnetics. Electromagnetic induction, ac currents. Electromagnetic waves, Maxwell e	quations	
02MECH	Mechanics	Z	4
ntroduction to physic	s, physical quantities and units. Particle kinematics, basic types of motion and theirsuperposition. Particle dynamics, one-dimen	sional equations o	of motion, motion
in central force field,	forces innoninertial reference frames. Mechanics of system of free particles, two-body problem, collisions. Mechanics ofrigid bo	ody, rotation. Fund	amentals of
continuum mechanic	s, elasticity, hydrodynamics. Sound.		
02MECHZ	Mechanics - Examination	ZK	2
The content of the su	biect is the examination according to the plan of studies.		•

Heat and Molecular Physics

Thermal expansion of materials, heat transfer; stationary and non-stationary heat conduction, heat transfer and penetration; 1st and 2nd thermodynamic principle, ideal and real gas, entropy; non-chemical systems: dielectric and magnetic materials; Maxwell relations and thermodynamic potentials; kinetic theory: Maxwell's velocity distribution, equipartition theorem.

18ZPRO Basics of Programming

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 programming language.

Code of the group: BSIFPP2

Name of the group: BSIF - povinné p edm ty 2. ro ník

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

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

Credits in the group: 18 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
02TEF1	Theoretical Physics 1 Petr Novotný Petr Novotný Igor Jex (Gar.)	Z,ZK	4	2+2	Z	РО
02TEF2	Theoretical Physics 2 Filip Petrásek, Petr Novotný Josef Schmidt Petr Novotný (Gar.)	Z,ZK	4	2+2	L	РО
02TSFA	Thermodynamics and Statistical Physics Igor Jex, Jaroslav Novotný Antonín Hoskovec Igor Jex (Gar.)	Z,ZK	4	2+2	L	РО
02VOAF	Waves, Optics and Atomic Physics Josef Schmidt, Petr Novotný Jan Vysoký Ji í Tolar (Gar.)	Z,ZK	6	4+2	Z	PO

Characteristics of the courses of this group of Study Plan: Code=BSIFPP2 Name=BSIF - povinné p edm ty 2. ro ník

Theoretical Physics 1 The course is an introduction to analytical mechanics. The students acquire knowledge of the basic concepts of the Lagrange and Hamiltonian formalism as well as diferent approaches to description of dynamics (Newton's, Lagrange, Hamilton and Hamilton-Jacobi equations). The efficiency of these methods is illustrated on elementary examples like the two-body problem, the motion of a system of constrained mass points, and of a rigid body. Advanced parts of the course cover differential and integral principles of mechanics. The subject is the first part of the course of classical theoretical physics (02TEF1, 02TEF2).

Theoretical Physics 2

Tensors and transformations in physics. Mechanics of point mass, rigid body and continuum. The special theory of relativity: relativistic mechanics and classical field theory in the Minkowski space-time. Classical electrodynamics: Maxwell's equations in the Minkowski space-time, electromagnetic waves in dielectric media, electromagnetic radiation in the dipole approximation.

02TSFA Thermodynamics and Statistical Physics

Foundation of thermodynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatelier principle. Statistical entropy. Basics of many body descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical ensemble, Fermi gas, models of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena

02VOAF Waves, Optics and Atomic Physics

Wave phenomena in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarization, interference, diffraction, coherence. Geometrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broglie waves, the Schrodinger equation, stationary states and spectra of finite systems.

Code of the group: BSIFPP3

Name of the group: BSIF - povinné p edm ty 3. ro ník

Requirement credits in the group: In this group you have to gain at least 41 credits

Requirement courses in the group: In this group you have to complete at least 10 courses

Credits in the group: 41

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
12BPIF1	Bachelor Thesis 1	Z	5	0+5	Z,L	PO
12BPIF2	Bachelor Thesis 2 Milan Ši or Richard Liska (Gar.)	Z	10	0+10	L,Z	РО
02KVAN	Quantum Mechanics Martin Štefa ák Martin Štefa ák (Gar.)	Z,ZK	6	4+2	Z	РО
01MMF	Methods of Mathematical Physics Pavel Š oví ek	Z,ZK	6	4+2	L	РО
12MPF1	Methods of Computational Physics 1	Z,ZK	2	2	Z	PO
12MPF2	Methods of Computational Physics 2	Z,ZK	2	2	L	РО
12POAL	Computer Algebra Richard Liska Richard Liska Richard Liska (Gar.)	KZ	2	2	Z	РО

01RMF	The Equations of Mathematical Physics Václav Klika Václav Klika Václav Klika (Gar.)	Z,ZK	6	4+2	Z	РО
12ZELD	Fundamentals of Electrodynamics Milan Ši or Ivan Richter Ivan Richter (Gar.)	Z,ZK	2	2+0	Z	РО
12ZFP	Principles of Plasma Physics Ji í Limpouch, Martin Jirka Martin Jirka Ji í Limpouch (Gar.)	Z,ZK	4	3+1	L	РО

Characteristics of the courses of this group of Study Plan: Code=BSIFPP3 Name=BSIF - povinné p edm ty 3. ro ník

12BPIF1 **Bachelor Thesis 1**

5

The course concerns the topic, given by the bachelor work supervisor. The successful defense of the bachelor thesis is the integral part of the particular bachelor curriculum, depending on the specialization. The bachelor work submission is agreed upon by the departmental head and the faculty dean. A student pursues the background research, based on journal, internet as well as special book literature, given by the bachelor work advisor, included in the official bachelor work submission, and further independently searched out by the student. With a supervisor agreement, the student further solves given particular problems, based on the studied and recommended literature sources. The thesis is reviewed by one (typically internal) reviewer who is an expert in the field. Contact hours represent individual communications with the bachelor work advisor where current needs are discussed and solved. The course is thus not regularly scheduled

12BPIF2 **Bachelor Thesis 2**

The course concerns the topic, given by the bachelor work supervisor. The successful defense of the bachelor thesis is the integral part of the particular bachelor curriculum, depending on the specialization. The bachelor work submission is agreed upon by the departmental head and the faculty dean. A student pursues the background research, based on journal, internet as well as special book literature, given by the bachelor work advisor, included in the official bachelor work submission, and further independently searched out by the student. With a supervisor agreement, the student further solves given particular problems, based on the studied and recommended literature sources. The thesis is reviewed by one (typically internal) reviewer who is an expert in the field. Contact hours represent individual communications with the bachelor work advisor where current needs are discussed and solved. The course is thus not regularly scheduled.

02KVAN **Quantum Mechanics**

The lecture describes the birth of quantum mechanics and description of one particle and more particles by elements of the Hilbert space as well as its time evolution. Besides that it includes description of observable quantities by operators in the Hilbert space and calculation of their spectra.

01MMF Methods of Mathematical Physics Z,ZK

6

The course provides an introduction to the theory of distributions with applications to solutions of partial differential equations with constant coefficients, further the Fredholm theorems are discussed for the case of a continuous kernel on a compact set as well as Sturm-Liouville operators on bounded intervals, and applications of the separation of variables method to the solution of some boundary value problems and mixed problems.

12MPF1 Methods of Computational Physics 1 Z,ZK

Numerical simulation and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics problems. Computer languages for physics. Numerical libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic simulations. High-performance computing, parallel computing, software for parallel simulations. Integrated computing environments.

12MPF2 Methods of Computational Physics 2 Z,ZK

The first part concentrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics and Monte Carlo method, kinetic simulations using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second part is devoted to Maxwell equation problems, quantum physics simulations and selected artificial intelligence algorithms.

12POAL Computer Algebra

Lisp, representation of basic objects (integers, rational and algebraic numbers, polynomials, rational functions, radicals, algebraic functions), arithmetics, simplification, greatest common divisor, resultant, derivation, series summation, integration, ordinary differential equations, factorization, equations solving, quantifier elimination, substitution and pattern matching, algebraic programming, graphics, Maple - detailed introduction and solving of practical examples, applications, overview of other systems (Axiom, Macsyma, Mathematica), miniproject.

01RMF The Equations of Mathematical Physics

The subject of this course is solving integral equations, theory of generalized functions, classification of partial differential equations, theory of integral transformations, and solution of partial differential equations (boundary value problem for eliptic PDE, mixed boundary problem for eliptic PDE).

127FLD Fundamentals of Electrodynamics Z,ZK

2

Subject starts by derivation of Maxwell-Lorentz microscopic equations followed by transition to Maxwell macroscopic theory. Using special theory of relativity formulae are found for transformation of field vectors between two inertial systems of coordinates with appropriate invariants. Wave and Helmholtz equations are derived. By expansion into plane monochromatic waves methods of solving these equations are studied in homogeneous media with gradually increasing complexity: isotropic without losses, with absoption, with dispersion, and non-isotropic. Finally, solution in weakly non-homogeneous madia is presented using the method of eiconal. Individual chapters are illustrated by appropriate examples

Principles of Plasma Physics

Basic physics of high temperature plasmas is explained using particle, kinetic and fluid approaches. It includes drift motions and adiabatic invariants, linear theory of waves in plasmas and propagation of electromagnetic waves in inhomogeneous plasmas. Basic non-linear effects, such as ponderomotive force, self-focusing and parametric instabilities are explained. It comprises brief introduction into magnetohydrodynamics and nuclear fusion. Basics of atomic physics od multiply-ionized plasmas are introduced.

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	Z	1	0+2	L	PV
00RET	Rhetoric Jana Ková ová Jana Ková ová	Z	1	0+2		PV
00UPRA	Introduction to Law Martin ech Jana Ková ová	Z	1	0+2		PV
00UPSY	Introduction to Psychology Jakub Haii ek Jana Koyá oyá	Z	1	0+2		PV

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

00EKOT	Economy in Technology	Z	1
The course introduces t	he basics of micro- and macroeconomics.		
00ETV	Ethics of Science and Technology	Z	1
00RET	Rhetoric	Z	1
The course is focused of	in 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 nonverb	al aspects. Stylistics exercises, strategies for coping with stage-fright and a short excursion into the history of rhetoric are ar	integral part of the	ne course.
00UPRA	Introduction to Law	Z	1
00UPSY	Introduction to Psychology	Z	1

Code of the group: BSMALA

Name of the group: BS - analýza a algebra

Requirement credits in the group:

Requirement courses in the group: In this group you have to complete at least 10 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)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
01DIFR	Differential Equations Michal Beneš Michal Beneš (Gar.)	Z,ZK	4	2P+2C	L	PV
01LALA	Linear Algebra A 1, Examination Petr Ambrož	ZK	5	-		PV
01LAA2	Linear Algebra A2 Lubomíra Dvo áková	Z,ZK	6	2+2	L	PV
01LALB	Linear Algebra B 1, Examination Lubomíra Dvo áková	ZK	3	-		PV
01LAB2	Linear Algebra B2 Petr Ambrož	Z,ZK	4	1+2	L	PV
01LAP	Linear Algebra Plus Lubomíra Dvo áková	Z,ZK	5	1+1	Z	PV
01LA1	Linear Algebra 1 Lubomíra Dvo áková	Z	1	2+1	Z	PV
01LAL	Linear Algebra 1 Petr Ambrož, Lubomíra Dvo áková Lubomíra Dvo áková (Gar.)	Z	2	2P+2C		PV
01LNA1	Linear Algebra 1 Lubomíra Dvo áková	Z	2	2+2		PV
01LAZ	Linear Algebra 1, Examination Lubomíra Dvo áková	ZK	2	-	Z	PV
01MANA	Calculus A 1, Examination Severin Pošta	ZK	6	-		PV
01MAA2	Calculus A2 Edita Pelantová	Z,ZK	10	4+4	L	PV
01MAA3	Calculus A3 František Štampach	Z,ZK	10	4+4	Z	PV
01MAA4	Calculus A4 František Štampach František Štampach (Gar.)	Z,ZK	10	4+4	L	PV
01MANB	Calculus B 1, Examination Severin Pošta	ZK	4	-		PV
01MAB2	Calculus B2 Severin Pošta	Z,ZK	7	2+4	L	PV
01MAB3	Calculus B3 Milan Krbálek Milan Krbálek Milan Krbálek (Gar.)	Z,ZK	7	2+4	Z	PV

01MAB4	Calculus B4 Milan Krbálek, Ji í Mikyška, Miroslav Kolá Milan Krbálek Milan Krbálek (Gar.)	Z,ZK	7	2+4	L	PV
01MAP	Calculus Plus Mat j Tušek	ZK	6	0	Z	PV
01MA1	Calculus 1 Mat j Tušek	Z	4	4+4	Z	PV
01MAN	Calculus 1 Pavel Strachota, Miroslav Kolá, Edita Pelantová Pavel Strachota Edita Pelantová (Gar.)	Z	4	4+4		PV
01MAZ	Calculus 1, Examination Mat j Tušek	ZK	4	-	Z	PV
01NUM1	Numerical Mathematics 1	Z,ZK	4	3+1	Z	PV
12NME1	Numerical Methods 1 Pavel Váchal Pavel Váchal (Gar.)	Z,ZK	4	2+2	L	PV
01VYMA	Selected Topics in Mathematics Ji í Mikyška Ji í Mikyška Ji í Mikyška (Gar.)	Z,ZK	4	2+2	L	PV

Characteristics of the courses of this group of Study Plan: Code=BSMALA Name=BS - analýza a algebra 01DIFR **Differential Equations** Z,ZK 4 The course contains introduction in the solution of ordinary differential equations. It contains a survey of equation types solvable analytically, basics of the existence theory, solution of linear types of equations and introduction in the theory of boundary-value problems. 01LALA Linear Algebra A 1, Examination ZK 5 01LAA2 Linear Algebra A2 Z,ZK 6 The subject is devoted to the theory of linear operators on vector spaces (mainly equipped with scalar product). In the same time we introduce the corresponding matrix theory. 01LALB Linear Algebra B 1, Examination ZK 3 Z,ZK01LAB2 Linear Algebra B2 4 The subject summarizes the most important notions and theorems related to the matrix theory, to the study of vector spaces with a scalar product and to the linear geometry. 01LAP Linear Algebra Plus Z,ZK 5 The subject summarizes the most important notions and theorems related to the study of vector spaces. Z 01LA1 Linear Algebra 1 1 The subject summarizes the most important notions and theorems related to the study of vector spaces Z 01LAL 2 Linear Algebra 1 1. Vector space. 2. Linear dependence and independence. 3. Basis and dimension. 4. Subspaces of vector spaces. 5. Linear mappings. 6. Matrices of linear mappings. 7. Frobenius theorem. 01LNA1 Linear Algebra 1 Ζ 2 The subject summarizes the most important notions and theorems related to the study of vector spaces. Linear Algebra 1, Examination ZK 2 01LAZ The content of this subject is the exam in Linear Algebra 1. 01MANA Calculus A 1, Examination ZK 6 Examination of knowledge about stuff lectured in the 01MAN course. 01MAA2 Calculus A2 Z,ZK 10 The subject is devoted mainly to the integral calculus of the real functions with one real variable and to the theory of the number series and the power series. 01MAA3 Calculus A3 Z,ZK 10 Function sequences and series, foundation of topology, and differential calculus of several variables. 01MAA4 Calculus A4 Z,ZK 10 Integration of functions of several variables, measure theory, foundation of differential and integral calculus on manifolds and complex analysis. 01MANB Calculus B 1, Examination ZK 4 Examination of knowledge about stuff lectured in the 01MAN course. 01MAB2 Z,ZK Calculus B2 Basic calculus (real analysis, indefinite and definite integrals and series). 01MAB3 Calculus B3 Z,ZK The course is devoted to functional sequences and series, theory of ordinary differential equations, theory of quadratic forms and surfaces, and general theory of metric spaces, normed and prehilbert?s spaces. Z,ZK 7 01MAB4 Calculus B4 The course is devoted properties of functions of several variables, differential and integral calculus. Furthermore, the measure theory and theory of Lebesgue integral is studied. 01MAP Calculus Plus ZK 6 01MA1 Calculus 1 Ζ 4 Basic course of real analysis (functions of one real variable, differential calculus). 01MAN Ζ 4 Calculus 1 Basic calculus (real analysis, functions of one real variable, differential calculus). 01MAZ Calculus 1, Examination ZK 4 01NUM1 Z,ZK 4 Numerical Mathematics 1 The course introduces to numerical methods for solving the basic problems arising from technical and research problems. The accent is put on a good understanding of the root of theoretical methods. 12NME1 Numerical Methods 1 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 principle programming language as a demonstration tool. The seminars are held in computer laboratory. Selected Topics in Mathematics Fourier series: complete orthogonal systems, expansion of functions into Fourier series, trigonometric Fourier series and their convergence. Complex analysis: derivative of holomorphic functions, integral, Cauchy's theorem, Cauchy's integral formula, singularities, Laurent series, residue theorem.

Code of the group: BSJAZYKY Name of the group: BS - languages Requirement credits in the group:

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

Credits in the group: 0 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
04AMZK	English for Intermediate Students Examination Jana Ková ová, Slav na Brownová, Hana ápová Jana Ková ová Hana ápová (Gar.)	ZK	4		Z	PV
04APZK	English for Advanced Students Examination Slav na Brownová, Darren Copeland	ZK	5		Z	PV
04CESMZK	Czech for Intermediate Students Examination Jana Ková ová Jana Ková ová	ZK	4		Z	PV
04CESPZK	Czech for Foreign Students - Advanced Examination Jana Ková ová	ZK	5		Z	PV
04FMZK	French for Intermediate Students Examination V ra Šlechtová V ra Šlechtová (Gar.)	ZK	4		Z	PV
04FPZK	French for Intermediate Students Examination V ra Šlechtová V ra Šlechtová (Gar.)	ZK	5		Z	PV
04FZZK	French for Beginners Examination V ra Šlechtová V ra Šlechtová V ra Šlechtová (Gar.)	ZK	3		L	PV
04NMZK	German for Intermediate Students Examination Miloslava echová Miloslava echová Miloslava echová (Gar.)	ZK	4		Z	PV
04NPZK	German for Advanced Students Examination Miloslava echová Miloslava echová (Gar.)	ZK	5		Z	PV
04RMZK	Russian for Intermediate Students Examination Zhanna Isaeva Jana Ková ová Zhanna Isaeva (Gar.)	ZK	4		Z	PV
04RPZK	Russian for Intermediate Students Examination Zhanna Isaeva Zhanna Isaeva (Gar.)	ZK	5		Z	PV
04RZZK	Russian for Beginners Examination Zhanna Isaeva Miloslava echová Zhanna Isaeva (Gar.)	ZK	3		L	PV
04SMZK	Spanish for Intermediate Students Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	ZK	4		Z	PV
04SPZK	Spanish for Advanced Students Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	ZK	5		Z	PV
04SZZK	Spanish for Beginners Examination Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.) Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo	ZK	3		L	PV

	(Gar.)					
Characteristics	of the courses of this group of Study Plan: Code=BSJAZYKY Name=E	3S - langua	iges			
04AMZK	English for Intermediate Students Examination			ZK	$\overline{}$	4
The course content	is the examination as given by the study plan. The examination covers the 04AM1, 04AM2, and 0	04AM3 courses	and consis	ts of two parts -	written	(100 min) and
	e student is expected to master the AM syllabus and demonstrate the ability to apply their knowle					
04APZK	English for Advanced Students Examination			ZK		5
The course content	is the examination as given by the study plan. The student is supposed to demonstrate mastering	g the 04AP3 sy	llabus and t	he ability to app	ly their l	knowledge
obtained in the three	e 04AP courses. The examination consists of 2 parts - written (110 min) and oral (30 min) and inc	ludes also oral	l presentation	on of a topic fror	n the stu	ident's field of
study.						
04CESMZK	Czech for Intermediate Students Examination			ZK		4
The course content i	is the examination as given by the study plan. The examination consisting of a written and oral pa	art covers all the	e topics of the	he 04CESM1,2,	3 course	s and can only
be taken after succe	essful completion of the 3 courses. Detailed information is to be obtained from the teacher.					
04CESPZK	Czech for Foreign Students - Advanced Examination		•	ZK		5
The course content	is the examination as given by the study plan. The examination consisting of a written and oral page	art covers all th	e topics of t	he 04CESP1,2,	3 course	s and can only
be taken after succe	essful completion of the 3 courses. Detailed information is to be obtained from the teacher.					
04FMZK	French for Intermediate Students Examination			ZK		4
The content is the ex	xamination as given by the study programme. The whole French programme is ended with an exa	amination cove	ring the cor	itents of FM1-FI	M3. The	examination
consists of a written	and oral part and is organized according to Examination Instructions, a document available on the	ne web.				
04FPZK	French for Intermediate Students Examination			ZK		5
The whole French po	rogram is ended with an examination covering the contents of FP1-FP3. The examination consist	ts of a written a	and/or an or	al part and is or	ganized	according to
Examination Instruct	tions, a document available on the web. Assessment of the presentation is included into the exam	nination grading	g.			
04FZZK	French for Beginners Examination			ZK		3
The content is the ex	xamination as given by the study plan. The course is terminated with an examination consisting of	of oral and writt	en part. The	e examination is	ruled by	the document
Instruction for exami	ination. Its content covers the levels FZ1 - FZ5.					
04NMZK	German for Intermediate Students Examination			ZK		4
The course content i	is the examination as given by the study plan. The whole German for Intermediate Students Cours	se is completed	l by an exan	nination consisti	ng of two	ວ parts - written
and oral, which cove	r the courses 04NM1 - 04NM3. The oral part follows after passing the written part successfully and	after obtaining	the 04NM3	assessment. M	ore deta	iled information
is to be obtained from	m the teacher.					

04NPZK	German for Advanced Students Examination	ZK	5
The course content	is the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examinat	ion consisting of tw	o parts - written
and oral, which cove	er the courses 04NM1 - 04NM3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 u	ngraded assessme	nt. More detailed
information is to be	obtained from the teacher.		
04RMZK	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 known	wledge and skills a	acquired in RM1
 RM3. Students are 	e eligible for the oral examination only after a prior pass in RM3 and a successful written examination. Students are given instru	ctions by the teach	er.
04RPZK	Russian for Intermediate Students Examination	ZK	5
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 known	wledge and skills a	acquired in RP1
- RP3. Students are	eligible for the oral examination only after a prior pass in RP3 and a successful written examination. Students are given instruction	tions by the teache	er.
04RZZK	Russian for Beginners Examination	ZK	3
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 known	wledge and skills a	acquired in RZ1
- RZ5. Students are	eligible for the oral examination only after a prior pass in RZ5 and a successful written examination. Students are given instruc	tions by the teacher	∍r.
04SMZK	Spanish for Intermediate Students Examination	ZK	4
The course content	is the examination as given by the study plan. 04SMZK examination consists of two parts - written and oral; to be eligible for th	e written part, stud	ents will have
obtained non-grade	d assessment for course 04SM3.Oral examination follows the written part.		
04SPZK	Spanish for Advanced Students Examination	ZK	5
The course content	is the examination as given by the study plan. Examination 04SPZK consists of two parts, namely oral and written. The prereq	uisite for admission	to oral part is
having passed the v	vritten test. Examination content is based on syllabi of courses SP1, SP2, and SP3 or on an individual study plan of the studen	t.	
04SZZK	Spanish for Beginners Examination	ZK	3

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

The role of the block: V

passed the written examination test.

Code of the group: BSVOLPREDM

Name of the group: BS - volitelné p edm ty

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

Credits in the group: 0 Note on the group:

Note on the $\mathfrak Q$		1	1	ı		
Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
12AUX	Administration of UNIX System Milan Ši or Milan Ši or Milan Ši or (Gar.)	KZ	2	2+0	L	V
01ALG	Algebra Pavel Š oví ek	ZK	4	4+0	Z	V
01ALGE	Algebra Zuzana Masáková Zuzana Masáková Zuzana Masáková (Gar.)	Z,ZK	6	4+1		V
11ANEL	Linear Circuit Analysis Pavel Jiroušek Pavel Jiroušek (Gar.)	Z,ZK	4	4	Z	V
15CHEM	Analytical Calculations and Chemometry Principals Ji í Zima Ji í Zima Ji í Zima (Gar.)	ZK	2	2+0	Z	V
04ABZK	English - State Examination Jana Ková ová	ZK	5	2	L	V
04AM1	English for Intermediate Students M1 Jana Ková ová	Z	1	0+2	Z	V
04AM2	English for Intermediate Students M2 Jana Ková ová	Z	1	0+2	L	V
04AM3	English for Intermediate Students M3 Jana Ková ová Hana ápová (Gar.)	Z	1	0+2	Z	V
04AP1	English for Advanced Students P1	Z	1	0+2	Z	V
04AP2	English for Advanced Students P2	Z	1	0+2	L	V
04AP3	English for Advanced Students P3	Z	1	0+2	Z	٧
16APLB	Application of Ionizing Radiation in Analytical Methods Tomáš echák	ZK	5	4+0	L	V
12APL	Application of Lasers Helena Jelínková, Alexandr Jan árek Helena Jelínková Helena Jelínková (Gar.)	Z,ZK	2	2+0	Z	V
11APLG	Applications of Group Theory in Solid State Physics Zden k Pot ek Zden k Pot ek (Gar.)	ZK	2	2	Z	V
02AMS	Atomic and Molecular Spectroscopy Svatopluk Civiš Svatopluk Civiš (Gar.)	Z,ZK	4	2+2	Z	V
04CESM1	Czech for foreigners - Intermediate Jana Ková ová	Z	1	0+2	Z	V

04CESM2	Intermediate Czech 2 Jana Ková ová	Z	1	0+2	L	V
04CESM3	Intermediate Czech 3 Jana Ková ová Jana Ková ová (Gar.)	Z	1	0+2	Z	V
04CESP1	Czech for Foreign Students - Advanced Examination Jana Ková ová	Z	1	0+2	Z	V
04CESP2	Czech for Foreigners - Advanced Jana Ková ová	Z	1	0+2	L	V
04CESP3	Czech for Foreigners - Advanced	Z	1	0+2	Z	V
15DALCH	Jana Ková ová History of Alchemy and Chemistry	ZK	2	2+0	Z	V
02DEF1	Vladimír Karpenko Vladimír Karpenko Vladimír Karpenko (Gar.) History of Physics 1	Z	2	2+0	Z	V
02DEF2	Igor Jex, Miroslav Myška Miroslav Myška Igor Jex (Gar.) History of Physics 2	Z	2	2+0	 	V
	Igor Jex Miroslav Myška Igor Jex (Gar.) History of Mathematics					-
01DEM	Lubomíra Dvo áková Lubomíra Dvo áková Lubomíra Dvo áková (Gar.)	Z	1	0+2	L	V
02DRG	Differential Equations, Symmetries and Groups Libor Šnobl Martin Štefa ák Libor Šnobl (Gar.)	Z	4	2+2	Z	V
01DIM1	Discrete Mathematics 1 Lubomíra Dvo áková, Edita Pelantová, Zuzana Masáková Lubomíra Dvo áková Zuzana Masáková (Gar.)	Z	2	2P+0C	Z	V
01DIM2	Discrete Mathematics 2 Edita Pelantová, Zuzana Masáková Zuzana Masáková (Gar.)	Z	2	2P+0C	L	V
01DIM3	Discrete Mathematics 3 Lubomíra Dvo áková	Z	2	2+0	Z	V
00EKOT	Economy in Technology Jana Ková ová	Z	1	2+0		V
11ELEA	Instrumentation and Measurement Pavel Jiroušek Pavel Jiroušek (Gar.)	Z,ZK	2	2	L	V
14ELMI	Electron Microscopy	Z,ZK	3	2+0		V
18ESPG1	European Computer Driving Licence 1	Z	2	0+2	Z	V
18ESPG2	European Computer Driving Licence 2	Z	2	0+2	L	V
16EPAM	Exact Methods in Research of Historic Monuments Ladislav Musílek Ladislav Musílek Ladislav Musílek (Gar.)	ZK	2	2+0	Z	٧
02EXF1	Experimental Physics 1 Jan epila	Z	2	2+0	L	V
02EXF2	Experimental Physics 2	ZK	2	2+0	Z	V
17ENF	Experimental Neutron Physics Jan Rataj	KZ	2	2+1	L	V
04FM1	French for Intermediate Students M1	Z	1	0+2	Z	V
04FM2	French for Intermediate Students M2	Z	1	0+2	L	V
04FM3	French for Intermediate Students M3 V ra Šlechtová (Gar.)	Z	1	0+2	Z	V
04FP1	French for Advanced Students P1 Michal Beneš	Z	1	0+2	Z	V
04FP2	French for Advanced Students P2 V ra Šlechtová	Z	1	0+2	L	V
04FP3	French for Advanded Students P3	Z	1	0+2	Z	V
04FZ1	V ra Šlechtová (Gar.) French for Beginners Z1	Z	1	0+4	L	V
04FZ2	V ra Šlechtová French for Beginners Z2	Z	1	0+4	Z	V
04FZ3	Michal Beneš French for Beginners Z3	Z	1	0+4	L	V
04FZ4	V ra Šlechtová French for Beginners Z4	Z	1	0+4	Z	V
04FZ5	V ra Šlechtová (Gar.) French for Beginners Z5	Z	1	0+4	L	V
01FKP	V ra Šlechtová V ra Šlechtová (Gar.) Functions of Complex Variable	ZK	2	2+0	 Z	V
01FKPB	Severin Pošta, Pavel Š oví ek Pavel Š oví ek Pavel Š oví ek (Gar.) Functions of Complex Variable B	Z	2	2+0	 	V
01FAN1	Pavel Š oví ek Functional Analysis 1	Z,ZK	4	2+2	_	V
01FA1	Pavel Š oví ek Pavel Š oví ek Pavel Š oví ek (Gar.) Functional Analysis 1	Z,ZK	3	2+1	Z	V
-	Pavel Š oví ek Functional Analysis 2					-
01FA2	Pavel Š oví ek Pavel Š oví ek Pavel Š oví ek (Gar.)	Z,ZK	4	2+2	L	V

	Experimental Laboratory 1					
02PRA1	Libor Škoda, Katarína K ížková Gajdošová, Barbara Antonina Trzeciak, Jaroslav Biel ík Jaroslav Biel ík Jaroslav Biel ík (Gar.)	KZ	6	0+4	Z	V
02PRA2	Experimental Laboratory 2 Libor Škoda, Jaroslav Biel ík Jaroslav Biel ík (Gar.)	KZ	6	0+4	L	V
02FYS1	Physical Seminar 1 Martin Štefa ák Vojt ch Svoboda (Gar.)	Z	2	0+2	Z	V
02FYS2	Physical Seminar 2 Jan epila	Z	2	0+2	L	V
01GTDR	Geometric Theory of Ordinary Differential Equations Michal Beneš Michal Beneš (Gar.)	Z	2	0+2	Z	V
12INS1	Information Systems 1	Z,ZK	2	2	Z	V
12INS2	Information Systems 2 Antonín Novotný	Z,ZK	2	2	L	V
16ZJTB	Nuclear Energy Facilities and Accelerators Kamil Augsten, Tomáš echák Kamil Augsten Tomáš echák (Gar.)	ZK	2	2+0	Z	V
17JARE	Nuclear Reactors Tomáš Bílý Tomáš Bílý Tomáš Bílý (Gar.)	ZK	2	2	L	V
01JEPR	Simple Compilers Zden k ulík Zden k ulík (Gar.)	Z	2	2	L	V
16KPR	Clinical Propaedeutic Jana Votrubová Jana Votrubová (Gar.)	ZK	2	2+0	Z	V
04AKS	English Conversation Jana Ková ová Jana Ková ová (Gar.)	Z	1	0+2	L	V
02KF	Quantum Physics Filip Petrásek Martin Štefa ák Libor Šnobl (Gar.)	Z,ZK	3	2P+1C	Z	V
02LCF1	Experimental Laboratory 1 Jaroslav Biel ik Jaroslav Biel ik (Gar.)	Z	2	0+2	Z	V
02LCF2	Experimental Laboratory 2 Jaroslav Biel ik Jaroslav Biel ik (Gar.)	Z	2	0+2	L	V
12LT1	Laser Technique 1 Václav Kube ek Václav Kube ek Václav Kube ek (Gar.)	Z,ZK	3	2+1	Z	V
12LT2	Laser Technique 2 Helena Jelinková	Z,ZK	2	2+0	L	V
12LAS	Laser Systems Václav Kube ek Václav Kube ek Václav Kube ek (Gar.)	Z,ZK	3	2+1	L	V
01LIP	Linear Programming Jan Volec estmír Burdík Jan Volec (Gar.)	Z,ZK	3	2+1	Z	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
01MAPR	Markov processes Jan Vybíral Jan Vybíral (Gar.)	Z,ZK	4	2+2		V
18EKO1	Mathematical Economics 1	Z,ZK	5	2+2	Z	V
18EKO2	Mathematical Economics 2	Z,ZK	5	2+2	L	V
01MASC	Mathematical Statistics - Seminar Tomáš Hobza Tomáš Hobza Tomáš Hobza (Gar.)	Z	2	0+2		V
00MAM1	Essentials of High School Course 1 David Be Martin Stefa ák	Z	1	0+1		V
00MAM2	Essentials of High School Math Course 2 Lukáš Heriban Severin Pošta Lukáš Heriban (Gar.)	Z	1	0+1		V
01MMPV	Mathematical Models of Groundwater Flow Ji í Mikyška Ji í Mikyška Ji í Mikyška (Gar.)	KZ	2	2+0	L	V
01MMF	Methods of Mathematical Physics Pavel S oví ek	Z,ZK	6	4+2	L	V
18MIK1	Microeconomics 1 Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	5	2P+2C	Z	V
18MIK2	Microeconomics 2 Quang Van Tran Quang Van Tran (Gar.)	Z,ZK	5	2P+2C	L	V
11MIK	Logical Circuits and Microprocessors Pavel Jiroušek, Petr Levinský Pavel Jiroušek Pavel Jiroušek (Gar.)	Z,ZK	4	4	L	V
12MPR1	Microprocessors 1 Miroslav ech Miroslav ech (Gar.)	ZK	4	4+0	Z	V
12MPR2	Microprocessors 2 Miroslav ech Miroslav ech (Gar.)	ZK	2	2+0	L	V
12MOF	Molecular Physics Jan Proška, Martin Michl Jan Proška (Gar.)	ZK	2	2+0	L	V
12NT	Nanotechnology Jan Proška, Eduard Hulicius Jan Proška Eduard Hulicius (Gar.)	ZK	2	2+0	Z	V
02NSAD	Simulations and Data Analysis Tools Jan epila	Z	2	2+0		V
04NM1	German for Intermediate Students M1	Z	1	0+2	Z	V

04NM2	German for Intermediate Students M2 Miloslava echová Miloslava echová (Gar.)	Z	1	0+2	L	V
04NM3	German for Intermediate Students M2 Miloslava echová Miloslava echová (Gar.)	Z	1	0+2	Z	V
04NP1	German for Advanced Students P1	Z	1	0+2	Z	V
04NP2	German for Advanced Students P2 Miloslava echová	Z	1	0+2	L	V
04NP3	German for Advanced Students P3 Miloslava echová Miloslava echová (Gar.)	Z	1	0+2	Z	V
01NME2	Numerical Methods 2 Michal Beneš Michal Beneš (Gar.)	KZ	2	2+0	L	V
15CH1	General Chemistry 1 Ond ej Holas, Petr Distler, Václav uba Petr Distler Petr Distler (Gar.)	Z	3	2+1	Z	V
15CH2	General Chemistry 2 Ond ej Holas, Petr Distler, Václav uba Petr Distler Petr Distler (Gar.)	Z,ZK	3	2+1	L	V
02OR	General Relativity Old ich Semerák Boris Tomášik Boris Tomášik (Gar.)	ZK	3	3+0	L	V
01POPJ1	Computers and Natural Language 1	Z	2	0+2	Z	V
01POPJ2	Computers and Natural Language 2	Z	2	0+2	L	V
12POAL	Computer Algebra Richard Liska Richard Liska (Gar.)	KZ	2	2	Z	V
01POGR1	Computer Graphics 1 Pavel Strachota Pavel Strachota (Gar.)	Z	2	2	Z	V
01POGR2	Computer Graphics 2 Pavel Strachota Pavel Strachota (Gar.)	Z	2	2	L	V
01SITE1	Computer Networks 1 Miroslav Minárik Miroslav Minárik (Gar.)	Z	2	1+1	Z	V
01SITE2	Computer Networks 2 Miroslav Minárik Miroslav Minárik (Gar.)	Z	2	1+1	L	V
01POPR	Advanced Probability Tomáš Hobza	Z	2	2+0		V
12PIN1	Practical Informatics for Technics 1 Richard Liska, Milan Kucha ik Milan Kucha ik Milan Kucha ik (Gar.)	Z	2	1+1	L	V
12PIN2	Practical Informatics for Technics 2 Milan Ši or Milan Ši or (Gar.)	Z	2	1+1	Z	V
12PIN3	Practical Informatics for Technics 3 Milan Ši or Milan Ši or (Gar.)	Z	2	1+1	L	V
15INPR	Laboratory Practice in Instrumental Methods	KZ	4	0+4	L	V
01PRA1	Probability and Mathematical Statistics 1 Václav K s	Z,ZK	6	4+2	Z	V
01PRA2	Probability and Mathematical Statistics 2 Václav K s	ZK	2	2+0	L	V
01PRST	Probability and Statistics Tomáš Hobza Tomáš Hobza (Gar.)	Z,ZK	4	3+1	Z	V
01PRSTB	Probability and Statistics B Tomáš Hobza Tomáš Hobza (Gar.)	KZ	4	3+1	Z	V
16UAZB	Principles of Ionizing-Radiation Applications Ladislav Musílek Kamil Augsten Ladislav Musílek (Gar.)	ZK	2	2+0	Z	V
16FNZB	Problems of Non-ionizing Radiation	ZK	2	2+0	Z	V
12PSEM	Problem Seminary	Z	2	0+4	L	V
01PERI	Programming of Peripherals Devices Zden k ulík Zden k ulík (Gar.)	Z	2	2+0	Z	٧
01PW	Windows Programming Zden k ulík Zden k ulík (Gar.)	Z	2	2+0	Z	V
18PRC1	Programming in C++ 1 Vladimír Jarý, Miroslav Virius Miroslav Virius Miroslav Virius (Gar.)	Z	4	2+2	Z	V
18PRC2	Programming in C++ 2 Vladimír Jarý, Miroslav Virius, Jakub Klinkovský Miroslav Virius Miroslav Virius (Gar.)	KZ	4	2+2	L	V
18PJ	Programming in Java Miroslav Virius Miroslav Virius (Gar.)	Z,ZK	5	2P+2C	Z	V
18MTL	Programming in MATLAB	Z,ZK	5	2+2	Z	V
18MPT	Programming in MATLAB	KZ	5	0+4	Z	V
18PAS	Pascal Programming Miroslav Virius	Z	4	2+2	L	V
12PDR1	Data Communication and Interfaces 1	Z	2	2+0	Z	V
12PDR2	Data Communication and Interfaces 2 Josef Blažej	Z	2	2+0	L	V
01PSL	LaTeX - Publication Instrument Petr Ambrož Petr Ambrož (Gar.)	Z	2	0+2	L	V
00RET	Rhetoric Jana Ková ová Jana Ková ová	Z	1	0+2		V

01RMF	The Equations of Mathematical Physics Václav Klika Václav Klika Václav Klika (Gar.)	Z,ZK	6	4+2	Z	V
02RQGP1	Seminar on Quark-Gluon Plasma 1 Jaroslav Biel ik	Z	1	2+0		V
02RQGP2	Seminar on Quark-Gluon Plasma 2 Jaroslav Biel ik	Z	1	2+0		V
04RM1	Russian for Intermediate Students M1 Michal Beneš	Z	1	0+2	Z	V
04RM2	Russian for Intermediate Students M2 Miloslava echová	Z	1	0+2	L	V
04RM3	Russian for Intermediate Students M3 Zhanna Isaeva (Gar.)	Z	1	0+2	Z	V
04RP1	Russian for Advanced Students P1 Michal Beneš	Z	1	0+2	Z	V
04RP2	Russian for Advanced Students P2 Miloslava echová	Z	1	0+2	L	V
04RP3	Russian for Advanced Students P3 Zhanna Isaeva (Gar.)	Z	1	0+2	Z	V
04RZ1	Russian for Beginners Z1 Miloslava echová	Z	1	0+4	L	V
04RZ2	Russian for Beginners Z2 Michal Beneš	Z	1	0+4	Z	V
04RZ3	Russian for Beginners Z3 Miloslava echová	Z	1	0+4	L	V
04RZ4	Russian for Beginners Z4	Z	1	0+4	Z	V
04RZ5	Zhanna Isaeva (Gar.) Russian for Beginners Z5	Z	1	0+4	L	V
01RSWP	Zhanna Isaeva Žhanna Isaeva (Gar.) Project Management of Software Projects	KZ	2	0+2	Z	V
02SMF	Seminar of Mathematical Physics	Z	2	0+2	Z	V
01SSM1	Martin Štefa ák Ladislav Hlavaťý (Gar.) Seminar of Contemporary Mathematics 1	Z	2	0+2	Z	V
01SSM2	Mat j Tušek Edita Pelantová (Gar.) Seminar of Contemporary Mathematics 2	Z	2	0+2	L	V
16SED1	Václav Klika Dosimetry Seminar 1	Z	2	0+2		V
16SED2	Kate ina Pila ová Kate ina Pila ová (Gar.) Dosimetry Seminar 2	Z	2	0+2		V
01SMB1	Kate ina Pila ová Seminar on Calculus B1	Z	2	0+2	Z	V
01SMB2	Milan Krbálek Seminar on Calculus B2	Z	2	0+2	L	V
01SOS1	Milan Krbálek Software Seminar 1	Z	2	0+2	Z	V
01SOS2	Zden k ulík Zden k ulík Zden k ulík (Gar.) Software Seminar 2	Z	2	0+2	L	V
02SPRA1	Zden k ulík Zden k ulík Zden k ulík (Gar.) Special Practicum 1	KZ	6	0+4	Z	V
02SPRA2	Lukáš Novotný, Jan epila Jan epila Jan epila (Gar.) Special Practicum 2	KZ	6	0+4	L	V
01STR	Jan epila Jan epila Jan epila (Gar.) Statistical Decision Theory	ZK	2	2+0	L	V
11SFBM	Václav K s Václav K s Václav K s (Gar.) Structure and Function of Biomolecules	Z,ZK	3	2+1	Z	V
04SM1	Petr Kolenko, Tomáš Kova Petr Kolenko Petr Kolenko (Gar.) Spanish for Intermediate Students M1	Z	1	0+2	Z	V
04SM2	Spanish for Intermediate Students M3 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+2	L	V
04SM3	Spanish for Intermediate Students M3 Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+2	Z	V
04SP1	Spanish for Advanced Students P1	Z	1	0+2	Z	V
04SP2	Spanish for Advanced Students P2	Z	1	0+2	L	V
04SP3	Spanish for Advanced Students P3 Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+2	Z	V
04SZ1	Spanish for Beginners Z1	Z	1	0+4	L	V
04SZ2	Spanish for Beginners Students Z2	Z	1	0+4	Z	V
04SZ3	Spanish for Beginners Z3 Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+4	L	V
04SZ4	Spanish for Beginners Z3 Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+4	Z	V
04SZ5	Spanish for Beginners Z5 Beatriz Vadillo Gonzalo Beatriz Vadillo Gonzalo (Gar.)	Z	1	0+4	L	V

14TM	Engineering Mechanics Ji í Kunz, Aleš Materna Ji í Kunz Ji í Kunz (Gar.)	Z,ZK	4	2+2	3	V
14TEM	Engineering Mechanics Ji í Kunz Ji í Kunz (Gar.)	Z,ZK	6	4	5	V
12TAIS	Ion Beam Techniques and Applications.	ZK	3	3+0	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
02TEF1	Theoretical Physics 1 Petr Novotný Petr Novotný Igor Jex (Gar.)	Z,ZK	4	2+2	Z	V
02TEF2	Theoretical Physics 2 Filip Petrásek, Petr Novotný Josef Schmidt Petr Novotný (Gar.)	Z,ZK	4	2+2	L	V
01DYSY	Theory of Dynamic Systems Branislav Rehák Branislav Rehák (Gar.)	ZK	3	3+0	L	V
01TKO	Theory of Codes Edita Pelantová, Jan Volec Edita Pelantová Jan Volec (Gar.)	ZK	2	2P+0C	L	V
02TER	Heat and Molecular Physics Filip Petrásek Petr Novotný Petr Jizba (Gar.)	Z,ZK	4	2+2	L	V
02TSFA	Thermodynamics and Statistical Physics Igor Jex, Jaroslav Novotný Antonín Hoskovec Igor Jex (Gar.)	Z,ZK	4	2+2	L	V
01TOP	Topology estmír Burdík estmír Burdík (Gar.)	ZK	2	2+0	Z	V
16MCRB	Transport of Ionizing Radiation and Monte Carlo Method	Z,ZK	4	2+2	L	V
18INTA	Development of internet applications Jakub Klinkovský, Dana Majerová Dana Majerová (Gar.)	KZ	4	2P+2C	L	V
01DYK	Introduction to Continuum Dynamics Pavel Strachota	Z	2	0+2		V
16ZIVB	Introduction to Ecology Hana Pr šová Hana Pr šová (Gar.)	KZ	2	2+0	Z	V
02UFEC	Introduction to Elementary Particle Physics Jaroslav Biel ik, Marek Matas Jaroslav Biel ik Jaroslav Biel ik (Gar.)	Z	2	2+0	Z	V
11UFPLN	Introduction to Solid State Physics Petr Kolenko, Ivo Kraus Petr Kolenko Ivo Kraus (Gar.)	ZK	2	2+0	L	V
17UINZ	Introduction to Engineering	Z,ZK	3	2+1	Z	V
02UKP	Introduction to Curves and Surfaces Jan epila	Z	2	1+1	L	V
12ULT	Introduction to Laser Technique	Z,ZK	3	2+1	Z	V
12UMF	Introduction to Modern Physics Jan Pšikal Jan Pšikal Jan Pšikal (Gar.)	Z	3	2+1	L	V
18UOA	Introduction into Object Oriented Architecture Rudolf Pecinovský Rudolf Pecinovský	Z,ZK	4	2P+2C	Z	V
00UPRA	Introduction to Law Martin ech Jana Ková ová	Z	1	0+2		V
00UPSY	Introduction to Psychology Jakub Haji ek Jana Ková ová	Z	1	0+2		V
01UTIZ	Introduction to Theoretical Informatics Petr Ambrož	ZK	2	2+0		V
11UVOD	Introduction to Specialization	Z	2	0+2	Z	V
12VAK	Vacuum Physics and Technology Richard Švejkar Richard Švejkar (Gar.)	KZ	4	2+2	Z	V
12PYTH	Scientific Programming in Python Pavel Váchal, Jakub Urban Pavel Váchal Pavel Váchal (Gar.)	Z	2	0+2	L	V
12VTV	Scientific and Technical Computing Ivan Procházka Ivan Procházka Ivan Procházka (Gar.)	Z	2	1+1	L	V
12VFT	High Frequency and Impulse Circuitry Jaroslav Pavel Jaroslav Pavel (Gar.)	Z,ZK	2	2+0	L	V
17VYR	Research Reactors	ZK	2	2	L	V
12EPR1	Basic Electronics Practicum 1 Ivan Procházka, Jaroslav Pavel Ivan Procházka Ivan Procházka (Gar.)	KZ	3	0+2	Z	V
12EPR2	Basic Electronics Practicum 2 Ivan Procházka, Jaroslav Pavel Ivan Procházka Ivan Procházka (Gar.)	KZ	3	0+2	L	V
12ZPLT	Basic Laser Technique Laboratory Václav Kube ek, Josef Blažej Josef Blažej Václav Kube ek (Gar.)	KZ	6	0+4	L	V
12ZPOP	Basic Optical Laboratory Alexandr Jan árek Alexandr Jan árek (Gar.)	KZ	6	0+4	L	V
18ZALG	Basics of Algorithmization Vladimír Jarý, Miroslav Virius, Petr Pauš, František Vold ich, Zuzana Pet í ková, František Gašpar Vladimír Jarý Miroslav Virius (Gar.)	Z,ZK	4	2+2	L	V
16AMMB	Fundamentals of Analytical Measurement Methods Hana Pr šová Hana Pr šová (Gar.)	ZK	2	2+0	L	V

	Fundamentals of Human Biology, Anatomy and Physiology					
16ZBAF1	Alena Doubková, Šimon Vaculín, Zde ka Polívková, Josef Stingl Alena Doubková Alena Doubková (Gar.)	Z,ZK	4	2+2	Z	V
	Fundamentals of Human Biology, Anatomy and Physiology					
16ZBAF2	2 Alena Doubková, Šimon Vaculín, Josef Stingl Alena Doubková Alena Doubková (Gar.)	Z,ZK	4	2+2	L	V
16ZDOZ1	Fundamentals of Radiation Dosimetry 1 Tomáš Trojek Tomáš Trojek (Gar.)	Z,ZK	4	2+2		V
16ZDOZ2	Fundamentals of Radiation Dosimetry 2 Tomáš Trojek Tomáš Trojek (Gar.)	ZK	2	2+0	L	V
17ZEH	Basics of Economic Assessment	ZK	2	2+0	Z	V
17ZEL	Basics of Electronics Martin Kropík Martin Kropík (Gar.)	KZ	3	2+2	Z	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
)2ZFM1	Foundations of Physical Measurements 1	Z	2	2+0	Z	V
)2ZFM2	Foundations of Physical Measurements 2	Z	2	0+2	L	V
11ZFPL	Basic to Solid State Physics Ladislav Kalvoda, Eva Mihóková Eva Mihóková Ladislav Kalvoda (Gar.)	KZ	2	26P+0C	Z	V
12ZFP	Principles of Plasma Physics Ji í Limpouch, Martin Jirka Martin Jirka Ji í Limpouch (Gar.)	Z,ZK	4	3+1	L	V
)2ZJF	Nuclear Physics Vladimír Wagner Martin Štefa ák Vladimír Wagner (Gar.)	Z,ZK	6	3+2	Z	V
)2ZJFB	Nuclear Physics B Vladimír Wagner Martin Štefa ák Vladimír Wagner (Gar.)	KZ	3	3+0	Z	V
5ZKJE	Nuclear Power Plants Design and Operation Tomáš Bílý, Lenka Frýbortová, ubomír Sklenka Lenka Frýbortová Tomáš Bílý (Gar.)	ZK	3	2+0	L	V
6MEZB	Fundamentals of Ionizing-Radiation Metrology Tomáš echák	Z,ZK	4	2+1	Z	V
01ZOS	Introduction to Operating Systems Zden k ulik Zden k ulik Zden k ulik (Gar.)	Z	2	2+0	L	V
2ZAOP	Fundamentals of Optics Ivan Richter, Pavel Kwiecien Ivan Richter Ivan Richter (Gar.)	Z,ZK	2	2+0	Z	V
1ZPB1	Introduction to Computer Security 1 Petr Voká Petr Voká Petr Voká (Gar.)	Z	2	1+1		V
6ZPSP	Basic Work with PC Kamil Augsten Kamil Augsten (Gar.)	Z	2	0+2	1	V
8ZPRO	Basics of Programming Maksym Dreval, Vladimír Jarý, Miroslav Virius, Jakub Klinkovský, Petr Pauš, František Vold ich, Jan Tomsa, Zuzana Pet í ková Miroslav Virius Miroslav Virius (Gar.)	Z	4	4C	Z	٧
6ZRAO	Basics of Radiation Protection Aneta Dušková Aneta Dušková (Gar.)	Z	2	2+0		V
2ZSM	Introduction to the Standard Model Zden k Hubá ek Zden k Hubá ek (Gar.)	ZK	2	2+0		V
6ZEDB	Basics of Experimantal Data Processing Kate ina Pila ová Kate ina Pila ová (Gar.)	ZK	2	2+0	Z	V
4ZZKS	Testing and Processing of Metals and Alloys	KZ	4	4	6	V
2ZDP	Data Processing for Publishing Antonín Novotný Antonín Novotný Antonín Novotný (Gar.)	Z	2	2	Z	V
haracteristics of the	courses of this group of Study Plan: Code=BSVOLPREDM Na	me=BS - voli	itelné n	edm tv		
	story of Physics 1				Z	2
hysics and its place in the slelenistic period, Archimed.	system of sciences. The relationship of man and nature. Natural sciences in ancient Or Arabic science, European science in Middle Ages. Renaissance - da Vinci, Giordano E					
s experimental science. Ne 2TER He	at and Molecular Physics			7	,ZK	4
· ·	ials, heat transfer; stationary and non-stationary heat conduction, heat transfer and per	netration; 1st and	2nd therm	1	, I	-
•	ms: dielectric and magnetic materials; Maxwell relations and thermodynamic potentials;				-	_
	sics of Programming			I	Z	4
	nly for students with little or no experience in programming. It familiarizes the students v	vith the basic cor	ncepts in pr	ogramming a	nd with the P	ython
rogramming language.	coratical Physics 1				71/	

Fundamentals of Human Biology, Anatomy and Physiology

Z,ZK

02TEF1

Theoretical Physics 1

the first part of the course of classical theoretical physics (02TEF1, 02TEF2).

The course is an introduction to analytical mechanics. The students acquire knowledge of the basic concepts of the Lagrange and Hamiltonian formalism as well as diferent approaches to description of dynamics (Newton's, Lagrange, Hamilton and Hamilton-Jacobi equations). The efficiency of these methods is illustrated on elementary examples like the two-body problem, the motion of a system of constrained mass points, and of a rigid body. Advanced parts of the course cover differential and integral principles of mechanics. The subject is

02TEF2	Theoretical Physics 2	Z,ZK	4
	tions in physics. Mechanics of point mass, rigid body and continuum. The special theory of relativity: relativistic mechanics are		=
approximation.	Classical electrodynamics: Maxwell's equations in the Minkowski space-time, electromagnetic waves in dielectric media, elect	iromagnetic radiat	ion in the dipole
02TSFA	Thermodynamics and Statistical Physics	Z,ZK	4
	namics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Cha	, ,	atistical entropy.
	escriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical	cal ensemble, Fe	rmi gas, models
	s body radiation). The Boltzmann equation is usedto discusses simple transport phenomena.	7 714	
01MMF	Methods of Mathematical Physics	Z,ZK	6
•	introduction to the theory of distributions with applications to solutions of partial differential equations with constant coefficien use of a continuous kernel on a compact set as well as Sturm-Liouville operators on bounded intervals, and applications of the		
	boundary value problems and mixed problems.	o coparation of va	
12POAL	Computer Algebra	KZ	2
	asic objects (integers, rational and algebraic numbers, polynomials, rational functions, radicals, algebraic functions), arithmetic	-	
	tion, series summation, integration, ordinary differential equations, factorization, equations solving, quantifier elimination, sub-		_
01RMF	graphics, Maple - detailed introduction and solving of practical examples, applications, overview of other systems (Axiom, Mac	Z,ZK	6
	The Equations of Mathematical Physics se is solving integral equations, theory of integral equations, theory of generalized functions, classification of partial differential equations, theory of integral	′	-
=	ions (boundary value problem for eliptic PDE, mixed boundary problem for eliptic PDE).		,
12ZFP	Principles of Plasma Physics	Z,ZK	4
· · ·	mperature plasmas is explained using particle, kinetic and fluid approaches. It includes drift motions and adiabatic invariants,	=	
	tromagnetic waves in inhomogeneous plasmas. Basic non-linear effects, such as ponderomotive force, self-focusing and para	ametric instabilitie	s are explained.
	uction into magnetohydrodynamics and nuclear fusion. Basics of atomic physics od multiply-ionized plasmas are introduced.	7	
00EKOT The course introduces t	Economy in Technology he basics of micro- and macroeconomics.	Z	1
00RET	Rhetoric	Z	1
	on the acquisition of speech and voice techniques and on the rules of correct pronounciation. The course is also devoted to the	= 1	-
as well as to its nonverb	pal aspects. Stylistics exercises, strategies for coping with stage-fright and a short excursion into the history of rhetoric are an	integral part of th	e course.
00UPRA	Introduction to Law	Z	1
00UPSY	Introduction to Psychology	Z	1
12AUX	Administration of UNIX System	KZ	2
	ed administration of Unix operating system		
01ALG	Algebra	ZK	4
commutative fields.	o the set theory standard algebraic structures are dealt with: groups, rings, fields, modules, linear algebras, lattices, Boolean a	ligebras, rings of p	olynomials over
01ALGE			
	l Algebra	7 7K	6
-	Algebra sare treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the	Z,ZK he axiom of choice	6 and equivalent
Firstly, the Peano axiom	, <u> </u>	he axiom of choice	e and equivalent
Firstly, the Peano axiom statements, definition of fields, lattices. Independ	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral dent chapters are devoted to divisibility in integral domains and to finite fields.	ne axiom of choice omains, principal i	e and equivalent deal domains,
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detect chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis	he axiom of choice omains, principal in Z,ZK	e and equivalent deal domains,
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral defends the devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial	he axiom of choice omains, principal in Z,ZK	e and equivalent deal domains,
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral defent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment.	he axiom of choice omains, principal i Z,ZK Ily oriented to the	e and equivalent deal domains, 4 understanding
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral defends the devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial	he axiom of choice omains, principal i Z,ZK ly oriented to the	e and equivalent deal domains, 4 understanding
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals	he axiom of choice promains, principal in Z,ZK Ily oriented to the ZK asic data distribution	e and equivalent deal domains, 4 understanding 2 ons, one- and
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals or principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in potential and the calculations in potential analysis.	he axiom of choice omains, principal in Z,ZK Ily oriented to the ZK asic data distribution eminar part consideration of the considera	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria.	he axiom of choice omains, principal in Z,ZK Iy oriented to the ZK asic data distribution eminar part consideration and the coulon are the	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry,
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination	the axiom of choice ormains, principal in Z,ZK Ily oriented to the ZK asic data distribution eminar part consideratiometry, coulon ZK	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry,
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on	the axiom of choice ormains, principal in Z,ZK Ily oriented to the ZK asic data distribution as the company coulon are the consideration and the coulon are the coulon ar	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination	the axiom of choice ormains, principal in Z,ZK Ily oriented to the ZK asic data distribution as the company coulon are the consideration and the coulon are the coulon ar	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the
Firstly, the Peano axiom statements, definition of fields, lattices. Independent 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals or principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations.	the axiom of choice ormains, principal in Z,ZK Ily oriented to the ZK asic data distribution as the company coulon are the consideration and the coulon are the coulon ar	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals or principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so metry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (not provided the students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the students who have successfully completed the full secondary school English language course at least at the A2 level of the students who have successfully completed the full secondary school English language course at least at the A2 level of the students who have successfully completed the full secondary school English language course at least at the A2 level of the state in the s	the axiom of choice ormains, principal in the state of th	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Language.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals or principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so metry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (not into English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals	the axiom of choice ormains, principal in the state of th	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languag professional oral and with the statements of the service of the se	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so metry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical	the axiom of choice ormains, principal in the state of th	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languag professional oral and we extending the knowledge.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examinations in the programme covers also examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 le	the axiom of choice ormains, principal in the second secon	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of is also paid to
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so metry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical	the axiom of choice omains, principal in the state of the	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of is also paid to
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course expeand lexical items typical	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04AP4K, 04AP4K, 04APK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical e of grammar issues used in EAP. English for Intermediate Students M2	the axiom of choice omains, principal in the second	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of is also paid to 1 mmar, functions,
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience in conditions of the course is designed of the course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience is included.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of thages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student 's life and needs as well as topics of subtechnical erig grammar issues used in EAP. English for Intermediate Students M2 english for Intermediate Students M2 english for Intermediate Students M2 english for Intermediate	the axiom of choice omains, principal in the second	and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 oean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience of the course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience for Languar in the course is included.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examination of 04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals inten communication situations. Thus it covers topics related to the student 's life and needs as well as topics of subtechnical er of grammar issues used in EAP. English for Intermediate Students M2 eacts the student to have completed the 04AM1 course. It develops their skills for work with subtechnical texts, focusing also more of ESP and EAP (e.g., definition, existence and classification of phenomena, object des	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of t	and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework d style typical of is also paid to 1 mmar, functions, assary, grammar 1
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience of the course is included. 04AM3 The course develops the	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04AP4K, 04AP1, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical et grammar issues used in EAP. English for Intermediate Students M2 English for Intermediate Students M2 English for Intermediate Students M3 eskills that enable stud	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and the a	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework double style typical of is also paid to 1 mmar, functions, essary, grammar 1 und independent
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience and lexical items typical revision is included. 04AM3 The course develops the understanding of professions.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examination of 04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals inten communication situations. Thus it covers topics related to the student 's life and needs as well as topics of subtechnical er of grammar issues used in EAP. English for Intermediate Students M2 eacts the student to have completed the 04AM1 course. It develops their skills for work with subtechnical texts, focusing also more of ESP and EAP (e.g., definition, existence and classification of phenomena, object des	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and their appropriate of the axiom of the a	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar 1 and independent viriate Czech
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichic spectrophotometry and 04ABZK The course content is the respective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience and lexical items typical revision is included. 04AM3 The course develops the understanding of professions.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so resperation methods, solving of complex forming equilibria. English - State Examination The examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04AP4K, 04AP1, and 04APK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ges (CEFR). It provides an introduction into English for Intermediate Students M2 English for Intermediate Students M2 English for Intermediate Students M3 eskills that ena	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and their appropriate of the axiom of the a	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar 1 and independent viriate Czech
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and we extending the knowledg 04AM2 The 04AM2 course experience of the course is included. 04AM3 The course develops the understanding of profese equivalents. The course student's field.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral delent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, symetry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination the examinations governed by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APKK). From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04API, and 04APKR). From its first semester, part of the APIN programme covers also examinations who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ergos (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ergos (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ergos (CEFR). It provides an introduction into En	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and the axiom of choice of vocabulary and their appropria on a chosen top and on a chosen top axiom on a chosen top axiom on a chosen top of vocabulary and their appropria on a chosen top axiom on a chosen top axiom and their appropria on a chosen top axiom axi	and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 nean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar 1 and independent oriate Czech oic related to the
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and with extending the knowledg 04AM2 The 04AM2 course experience of the course is included. 04AM3 The course develops the understanding of profese equivalents. The course student's field. 04AP1 The course is designed	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination ne examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical er of grammar issues used in EAP. English for Intermediate Students M2 est the student to have completed the 04AM1 course. It develops their skills for work with subtech	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and the axiom of	and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 nean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar 1 and independent oriate Czech oic related to the 1 and Framework
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and where the solving the knowledg 04AM2 The 04AM2 course experience of the solving is included. 04AM3 The course develops the understanding of profese equivalents. The course student's field. 04AP1 The course is designed of Reference for Languar student's field.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, to ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral details that cardinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral details that cardinals are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, so metry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04AP4K, 04API, and 04APRK). From its first semester, part of the APIN programme covers also examply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical english for Intermediate Students	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of the axiom and their appropriate of vocabulary and and their appropriate of vocabulary and their appropriates of	and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework d style typical of is also paid to 1 mmar, functions, essary, grammar 1 and independent triate Czech oic related to the 1 ean Framework dy, functions,
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and where the solving the knowledg 04AM2 The 04AM2 course experience for Languar profession is included. 04AM3 The course develops the understanding of profese equivalents. The course student's field. 04AP1 The course is designed of Reference for Languar grammar, and style typical grammar.	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral detent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be setting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination ne examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04API, and 04APRK). From its first semester, part of the APIN programme covers also excomply with respective rules and regulations for state language examinations. English for Intermediate Students M1 for students who have successfully completed the full secondary school English language course at least at the A2 level of the ages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical er of grammar issues used in EAP. English for Intermediate Students M2 est the student to have completed the 04AM1 course. It develops their skills for work with subtech	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of t	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework double style typical of is also paid to 1 mmar, functions, assary, grammar 1 and independent oriate Czech oic related to the 1 ean Framework y, functions, as, etc). It also
Firstly, the Peano axiom statements, definition of fields, lattices. Independ 11ANEL The course is the introd of the computer method 15CHEM Lecture deals with basic two-tailed significance to solving, titration stoichid spectrophotometry and 04ABZK The course content is threspective courses and examination conditions 04AM1 The course is designed of Reference for Languar professional oral and where the solving the knowledg 04AM2 The 04AM2 course experience of the solving is included. 04AM3 The course develops the understanding of profese equivalents. The course student's field. 04AP1 The course is designed of Reference for Languar grammar, and style typic covers professional oral oral oral course is designed of Reference for Languar grammar, and style typic covers professional oral	s are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, to ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral defent chapters are devoted to divisibility in integral domains and to finite fields. Linear Circuit Analysis uction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especial is of analysis. The second part gives a short list of most commonly used circuits in experimental equipment. Analytical Calculations and Chemometry Principals principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, be esting, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in pot separation methods, solving of complex forming equilibria. English - State Examination le examination as given by the study plan. Student is eligible for the State language examination (level C1 or B2 of CEFR) on examinations (04AP3KK, 04APAK, 04APAK, 04APAK, 04APAK), From its first semester, part of the APIN programme covers also examinations (04AP3KK, 04APAK, 04APAK, 04APAK). From its first semester, part of the APIN programme covers also examinations who have successfully completed the full secondary school English language course at least at the A2 level of thages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals ritten communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical et grammar issues used in EAP. English for Intermediate Students M2 exist has taudents who have completed the 04AM1 course. It develops their skills for work with subtechnica	the axiom of choice omains, principal in the axiom of choice omains, principal in the axiom of t	e and equivalent deal domains, 4 understanding 2 ons, one- and sts of equation metry, 5 assed all the ts. As required, 1 the dean Framework double style typical of is also paid to 1 mmar, functions, assary, grammar 1 and independent oriate Czech oic related to the 1 ean Framework y, functions, as, etc). It also

04AP2 English for Advanced Students P2	Z	1
The 04AP2 course is based on 04AP1, thus extending the student's skills for working with subtechnical texts, and even with professional texts of chosen course is based on 04AP1, thus extending the student's skills for working with subtechnical texts, and even with professional texts of chosen course is based on 04AP1.		_
to the students' needs it concentrates on chosen grammar topics, but mainly intends to develop understanding of syntactic structures and typical rhe		. 0,
types of descriptions, and, if possible, a case study). Increasing emphasis is placed on the undergraduate's independent work with and reading of limit materials. The course extends the student's subtechnical vocabulary, and includes fundamental notions of chosen branches of science. It is focused	-	_
sentence and paragraph structure, linking, cohesion and coherence in texts.	on ronnar mining	,o.aag a.ro
04AP3 English for Advanced Students P3	Z	1
The 04AP3 course is based on 04AP2 and expects the student to work without any guidance with authentic professional materials and to interpret the		-
written communication skills and functions (e.g., expressing an opinion, agreement, and objections; taking part in discussion, note-taking; summariz		
possible, also preparing a project on a given or chosen topic and presenting it. The course places emphasis on distinguishing levels of formal and in written communication.	formal language t	both in oral and
16APLB Application of Ionizing Radiation in Analytical Methods	ZK	5
Subject The application of ionizing radiation in analytical methods is devoted to radioanalytical methods and the use of radionuclides and ionizing radiation.	l	-
of technological processes.	,	
12APL Application of Lasers	Z,ZK	2
Application of lasers in industrial technologies, medicine, remote sensing, energetics, telecommunication, military, entertainment and other branches		
11APLG Applications of Group Theory in Solid State Physics	ZK	2
Consideration of atomic system symmetry allows, without any quantitative calculations, rigorously and precisely determine how many energy states		
and transitions between them may occur. Therefore, the main purpose of this course is to describe the methods by which we can extract the informal alone will provide. The application of these methods is illustrated by an example of molecular orbitals, inner orbitals of ions in the crystal field environ	-	
vibrations, and selection rules for optical absorption transitions.	ment, normal mo	des of molecular
02AMS Atomic and Molecular Spectroscopy	Z,ZK	4
The lecture is devoted to atomic and molecular spectroscopy.	, —,—	
04CESM1 Czech for foreigners - Intermediate	Z	1
The course is focused on correct pronunciation, important morphological phenomena, prepositional phrases, and verb forms as well as on extending the	ne student's vocal	bulary for various
social situations.		
04CESM2 Intermediate Czech 2	Z	1
The course develops the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and real in understanding common abbreviations, abbreviated words, and mathematical terms and formulas.	ading skills and tra	ains the student
04CESM3 Intermediate Czech 3	7	1
The last course revises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especially	_	1
lexicology and on developing the student's writing skills.	,	,
04CESP1 Czech for Foreign Students - Advanced Examination	Z	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 E	-	
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 and includes communication with teachers and faculty administrators.	. Student Life. Wri	itten practice
04CESP2 Czech for Foreigners - Advanced	Z	1
This course extends the student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical a	_	1
emphasis on individual work.		
04CESP3 Czech for Foreigners - Advanced	Z	1
The course develops the student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation	on, and, finally, pr	esentation of the
student's project. Writing skills necessary for professional communication are trained.	714	
15DALCH	ZK	2
The last part of course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach		
advancement is illustrated.		
02DEF2 History of Physics 2	Z	2
Development of classical mechanics after Newton, Bernoulli's, Euler, Lagrange. Historical development of optics, corpuscular and wave approach. E	lectricity and mag	netism -
electrostatics, galvanism, electrodynamics and electromagnetism, Faraday and Maxwell. Thermodynamics and its laws, statistical physics, Boltzman		=
and relativistic physics, Planck and Einstein. Discovery of radioaktivity, structure of atom, atomic nucleus, Rutherford and Bohr. The way to nuclear e standard model. The concept of Nature and Universe of today.	nergy, Elementar	y particles,
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	-	I
from the history of mathematics.	3	
02DRG Differential Equations, Symmetries and Groups	Z	4
The purpose of the lecture is to teach students computation of symmetries of the differential equations.		
01DIM1 Discrete Mathematics 1	Z	2
The seminar is devoted to elementary number theory and applications. It includes individual problem solving.		1
01DIM2 Discrete Mathematics 2	Z	2
The seminar is devoted to recurrence relations. It includes individual problem solving.	Z	2
01DIM3 Discrete Mathematics 3 The subject is devoted to elementary proofs of non-trivial combinatoriwal identities and to generating functions and their applications. In the seminar	_	-
solution chosen from the given literature.	Students present	a problem with
11ELEA Instrumentation and Measurement	Z,ZK	2
The course is the introduction to the instrumentation and measurement for physicists.	, · · ·	
14ELMI Electron Microscopy	Z,ZK	3
In this course the students are introduced to the microscopic methods used for the characterization of materials, thin layers or nanoparticles. The int		
analogy of light and electron microscopy and to various types of microscopes. An important part of the course is given to the interaction of different t		
mathematical formulations and tools used in microscopy and to the description of particular parts of the microscopes. Introduction to kinematic and do f contrast, and diffraction and imaging techniques are also covered. A particular attention is given to analytical methods and imaging techniques in	-	= -
1 of contract, and simulation and imaging techniques are also covered. A particular attention is given to analytical methods and imaging techniques in	atorino resolution	•

18ESPG1	European Computer Driving Licence 1	Z	2
	s are an important tool, especially for students and graduates in Software engineering in economics. The winter semester intro		
and user functions will b	is put on advanced functions of MS Excel (names, functions and expressions, pivot table and graph). Next, the VBA languag in addressed	e will be introduce	d and macros
18ESPG2	European Computer Driving Licence 2	Z	2
I	are an important tool, especially for students and graduates in Software engineering in economics. Summer semester follows to	_	
•	s (charts, objects, graphical user interface, add-ins programming) and introduces some applications in economics, mathema		
computer science.			
16EPAM	Exact Methods in Research of Historic Monuments	ZK	2
	toric monument investigations, methods of age determination (radiocarbon, thermoluminescence and related methods, further rac		
photogrammetry.	alytical methods for determination of origin and production technologies of artefacts (activation analysis, X-ray fluorescence	analysis and othe	r metnoas),
02EXF1	Experimental Physics 1	Z	2
	troductory course in experimental physics. Students will learn methods of measurement of basic physical quantities and me	1	
02EXF2	Experimental Physics 2	ZK	2
	ntroductory course in experimental physics. Students will learn methods of measurement of basic physical quantities and me	1	
17ENF	Experimental Neutron Physics	KZ	2
The lectures are mainly	focused on detailed characterisation of neutron properties, characteristics of neutron (reactor and non reactor) sources, pro	perties of prompt	and delayed
neutrons, neutron detec	tion methods, neutron induced nuclear reactions, modification and adjustment of neutron field, science and industry neutron	applications. Last	lecture deals
	rocessing and analysis. The lectures are supplemented with experimental practices in the field of neutron detection, determina	=	
	n in various materials, preparation and characterisation of photo-neutron source and neutron source calibration. Experimental	practices will be ru	nning at training
reactor VR-1 and in the 04FM1		Z	1
· · · · · · ·	French for Intermediate Students M1 M The objective of this three-semester course is to improve and further develop communication in the French language in bo	1	
	cate in social interaction and in academic, scientific and professional environment. They will be able to use the language to tr		
	problems. 04FM1 The course builds on and further develops linguistic competence acquired at secondary school. It revises, s	•	
skills gained in previous	study. The following topics are covered: University studies in our country and in France, writing of transactional letters, CV, pe	rsonal statement,	request, answer
	ture and geography, Paris. Topics of specialization: mathematics, physics. Reading technical and popular science texts, work	based on these to	
04FM2	French for Intermediate Students M2	Z	1
	M1. Linguistic structures and competence acquired in previous study are systemized and expanded. Reading popular science		
	(passives, nominalization, word formation). Topics: physics, power engineering, environment, Internet, success of French sci- chitects. Description of an object, device, shapes, dimensions, material.	ence and technolo	gy, Fiericii
04FM3	French for Intermediate Students M3	Z	1
1	n improvement and further development of linguistic competence acquired during the follow-up courses. Syntactic structures (. – .	-
	mpound tenses). Text summaryStudents prepare a written paper which will be delivered in form of an oral presentation in-c	•	
	specialisation or to their interest and generally covers a technical /applied science topic. It is not a translation but a creative w		French articles
· · ·	ge/experienceLonger monologues on topics /situations set for the examination are prepared. Text structure, cohesion and	coherence.	
04FP1	French for Advanced Students P1	, Z	1
	The objective of this three-semester course is to improve and further develop communication in the French language in both cate in social interaction and in academic, scientific and work environment. They will be able to use the language to transmit		
	page in social interaction and in academic, scientific and work environment. They will be able to use the language to transmit 14FP1 The course builds on and further develops linguistic competence acquired at secondary school. Difficult grammar topi	-	
•	sé-imparfait, pronouns. The following specific topics are covered: University studies in our country and in France, writing of t		
statement, request, answ	wer to an advert, environmental issues, success of French science and technology, chosen topics from French regional cultu	re, Paris. Topics o	f specialization:
	hysics, chemistry. Reading of technical and popular science texts, further work with these texts and interpretation.		
04FP2	French for Advanced Students P2	Z	1
	ents, the course further develops language skills. Focus is put on reading popular science texts and on oral communication of	n given topics. Fea	atures typical of
04FP3	communication are stressed (passive voice, nominalization, word formation). French for Advanded Students P3	Z	1
	n systemization and improvement of acquired linguistic competence, skills and knowledge, and their use for communication in	1	-
	ter texts (both from and into the language). Writing of a paper and making oral presentation in-class. The paper generally co		
	k compiled from 3 French sources. Preparation of several set topics for oral examination.		
04FZ1	French for Beginners Z1	Z	1
-	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	-	
	ench for specific / technical communication and reading of popular science and scientific texts. 04FZ1 The objective is to be a		
	knowledge of chosen elementary language. The contents is roughly outlined by lessons 1 - 7 of the textbook Pravda - Pravdote ky). It is extended with situations of communication and functions from the textbook Espaces I, lessons 1-4 : introductions		·
	nple instructions and questions. Special attention is paid to pronunciation. Spelling is explained in connection with pronuncial	-	- 1
	French for Beginners Z2	Z	1
	with 04FZ1. Elementary linguistic knowledge and communication skills are expanded. The scope is given by lessons 8 - 13 of	of the textbook: Pr	avda - Pravdová
: French for Beginners	Additional topics and skills are filled in from the textbook Espaces I, lesson 1 - 5 (introductions, invitation, welcoming, agreer	nent - disagreeme	nt, apology,
	of France, food, expression of will, wish, order, prohibition, pleasure). Correct pronunciation is practiced. Stress on oral comm	unication. Specific	topics covered:
	work? A few expressions concerning the study. Name of University and Faculty.		
04FZ3	French for Beginners Z3 ME72. Basic linguistic knowledge and skills are developed. The contents is given by lessons 14 - 18 of the teythook: Prayda	Z Pravdová: Frenc	h for Beginners
•	04FZ2. Basic linguistic knowledge and skills are developed. The contents is given by lessons 14 - 18 of the textbook: Pravda 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.	and lou	
04FZ4	French for Beginners Z4	Z	1
	04FZ3. Basic linguistic knowledge and skills are further developed. Oral communication and reading skills are practiced. The	e contents is roug	hly covered with
	ktbook French for Beginners, and is expanded with topics and functions from other materials. Reading is developed from the lea		
	purse covers generals and specific topics: health- illness, sport, free time, environment, study, travelling in France, Paris, sho	pping, weather, ur	niversity in our
country and in France, h	now to write CV, application, topics in mathematics, reading physics - mechanics, informatics, internet.		

04FZ5 French for Beginners Z5	Z	1
All four skills acquired in FZ4 are further developed, as well as technical language. Students prepare a paper on a chosen popular science topic. The	y present it orally	in the class. The
general contents is covered by lessons 24 - 26 of the textbook: Pravda-Pravdova, French for Beginners, and is complemented from other materials.	Topics: on physics	from lecture
notes, success of French science and technology, information about France. Grammar is systemized and complemented with syntax (subordinate cl	auses, typical cor	ijunctions,
subjunctive clauses, gerund, passive.		
01FKP Functions of Complex Variable	ZK	2
The course develops advanced properties of systems of holomorphic functions, Ascoli-Vitali's theorem, advanced properties of conformal mappings,	transcendental a	nd meromorphic
functions. Basic properties of complex functions of several complex variables together with improper line integrals and its applications are presented	l.	
01FKPB Functions of Complex Variable B	Z	2
The course develops advanced properties of systems of holomorphic functions, Ascoli-Vitali's theorem, advanced properties of conformal mappings,	, transcendental a	nd meromorphic
functions. Basic properties of complex functions of several complex variables together with improper line integrals and its applications are presented	l.	
01FAN1 Functional Analysis 1	Z,ZK	4
Basic notions and results are addressed concerning successively topological spaces, metric spaces, topological vector spaces, normed and Banach		spaces.
01FA1 Functional Analysis 1	Z,ZK	3
Continuing course of mathematical analysis and algebra introduction to the basics of functional analysis. There are the concepts that students need to	'	_
and technical disciplines.		ranous priyotat
01FA2 Functional Analysis 2	Z,ZK	4
The course aims to present selected fundamental results from functional analysis including basic theorems of the theory of Banach spaces, closed or spaces.		•
Hilbert-Schmidt operators, spectral decomposition of bounded self-adjoint operators.	operators and the	п эрссичт,
	KZ	6
	l	_
Lecture is intended especially for students who intend to study some of the physical specializations of FNSPE(branch Physical Engineering, Nucleal attended by students interested in the otherspecializations. In Experimental laboratory students learn how to prepare for experiments (including work with		
of the measurement (acquire of different experimental procedures and routines), willteach writing the records of measurement, processing and evaluations are the measurement of the measurement (acquire of different experimental procedures and routines).	•	-
practically extendthe knowledge gained in lectures on physics.	uation of results. F	At the same time
	KZ	6
,	l	6
Lecture is intended especially for students who intend to study some of the physical specializations of FNSPE(branch Physical Engineering, Nuclear		
attended by students interested in the otherspecializations. In Experimental laboratory students learn how to prepare for experiments (including work with	· ·	
of the measurement (acquire of different experimental procedures and routines), willteach writing the records of measurement, processing and evaluate experimental procedures are physics.	uation of results. F	at the same time
practically extendthe knowledge gained in lectures on physics.	-	
02FYS1 Physical Seminar 1	Z	2
The seminar is devoted to detailed study of interesting physical problems. It should help students to deeper understanding of fundamentals of physical problems.	-	e course of
Mechanics. The problems are chosen, studied and presented by the students themselves, with the possibility to use PC and physical laboratory equ	<u> </u>	
02FYS2 Physical Seminar 2	Z	2
The seminar is devoted to detailed study of interesting physical problems. It should help students to deeper understanding of fundamentals of physical problems.	-	
Electricity and Magnetism. The problems are chosen studied and presented by the students themselves, with the possibility to use PC and physical		
01GTDR Geometric Theory of Ordinary Differential Equations	Z	2
The seminar consists of the qualitative theory of ODEs dealing with the geometric and topological properties of the solution. In this context, we mention	n suitably formula	ted basic results
of the existence and uniqueness, continuous dependence on parameters and initial conditions. Main part is devoted to the autonomous systems.		
12INS1 Information Systems 1	Z,ZK	2
Information technology, architecture of the databases, network databases, cloud application Google, Microsoft, information managament, aproaches to	solve task of info	rmation systems
12INS2 Information Systems 2	Z,ZK	2
Graduation of Information systems 1 is required. In more details: Information technology, architecture of the databases, network databases, cloud approximation to the databases are detailed as a contract of the databases.	pplication Google,	Microsoft,
information managament, aproaches to solve task of information systems		
16ZJTB Nuclear Energy Facilities and Accelerators	ZK	2
Basic scheme of nuclear reactor and nuclear power plant, chain fission reaction development, main components of nuclear energetic reactor, most i	l	
high-voltage accelerators, linear high-frequency accelerators, accelerators based on cyclotron, microtron, betatron, electron and proton synchrotron	-	
accelerators, targets.		
17JARE Nuclear Reactors	ZK	2
Introduction. World power issue. Previous evolution of power reactor. Nuclear fission reactors, fuel assemblies, active core, control systems, safety sy	l	
of reactors into IV generations. Standard types of nuclear power reactors: concept, description, layout, previous evolution, world share, perspectives. F		
Western-type PWR (Westinghouse, KWU, Framatom). VVER-type reactors, Temelin nuclear power plant. Boiling water reactors. Heavy water reactors		
high-temperature gas cooled reactors. Second nuclear era. reactors of generation III (EPR, AP-1000, VVER 1200). Reactors of generation IV: GIF a		
and selection of proposed systems. Six selected concepts. ICRP scenarios of word evolution, hydrogen power, role of nuclear power in long-term ou	ıtlook	
01JEPR Simple Compilers	Z	2
Lexical and syntax analysis, code generation, simple optimizations, development environments, reflection.	. –	_
16KPR Clinical Propaedeutic	ZK	2
Making students familiar with the basics of anamnesis, physical examination, examinational methods of different organs, hematological and biochemi	ı	
04AKS English Conversation	Z	1
The course will develop the student's communication skills acquired throughout their previous studies. It aims to improve all aspects of oral communication skills acquired throughout their previous studies.	l	· ·
their vocabulary for various communication situations and will master their communication strategy. They will also practise their listening skills in order		-
in discussions. The student will be trained to express their ideas clearly and according to current English usage, and become a more confident spea		ana partioipato
	Z,ZK	3
02KF Quantum Physics State description, wave function, postulates of quantum mechanics, Born's statistical interpretation, expectation values, Schrödinger equation, Heis		_
quantization of angular momentum, solution of simple systems, hydrogen atom.	enberg uncertain	ty principie,
	7	
02LCF1 Experimental Laboratory 1	Z	2
Cavendish experiment. Elasticity.Thermal capacities. Electric measurements, Acoustic. Oscillations.	7	
02LCF2 Experimental Laboratory 2	Z	2
Electric and magnetic field, microwaves, Xray and gamma rays, geometric optics		
12LT1 Laser Technique 1	Z,ZK	3
Open resonators. Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an a		
mode. ABCD method. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersional description of the control of the con	on, saturation. Col	nerent and
non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical resonator.		

12LT2	Laser Technique 2	Z,ZK	2
Laser oscillator, the rate	equation, the laser amplifier, Q-switching, mode-locking	, ,	
12LAS	Laser Systems	Z,ZK	3
	second lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. conductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultra		-
	s. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron lasers.	aviolet lasers. A re	ay lasers. riigir
01LIP	Linear Programming	Z,ZK	3
	ms about constrained extremum problems for multivariable functions (the function is linear and the constraint equations are gi	ven by linear equa	ations and linear
inequalities).		7 71/	
18MAK1	Macroeconomics 1 does students with a fundamental theoretical basis for understanding how an economy works. It introduces main macroeconomy	Z,ZK	4 onev market
· ·	rium theory, fundamentals of open economy theory, inflation, unemployment, economic growth, economic fluctuations, basic r		=
-	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.		
18MAK2	Macroeconomics 2	Z,ZK	4
	inds 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	-	
	onomic models derived from microeconomic behavior of subjects and economics and their rational expectations. It also provides		
of labor market modelin	g.		
01MAPR	Markov processes	Z,ZK	4
18EKO1	Mathematical Economics 1	Z,ZK	5
	selected models and methods for economic decision making. The main attention is given to optimization models of linear progolving by means of the current software products.	ramming, possibil	lities of their real
18EKO2	Mathematical Economics 2	Z,ZK	5
	selected models and methods for economic decision making. The main attention is given to optimization models in graphs, pro-		_
management with deter	ministic and stochastic demand, queuing theory and simulation models.		
01MASC	Mathematical Statistics - Seminar	Z	2
	o practical use of statistical methods studied in the course Mathematical Statistics 01MAS. The tutorial deals with calculation g unbiased estimators with minimal variance, parameter estimation by method of moments and method of maximum likelihoo		
	y the Neyman-Pearson lemma and likelihood ratio, calculation of confidence intervals and non-parametric density estimation.	u, derivation of ci	ilicai regions ioi
00MAM1	Essentials of High School Course 1	Z	1
00MAM2	Essentials of High School Math Course 2	Z	1
Review of basics of high	n school mathematics.	<u>'</u>	
01MMPV	Mathematical Models of Groundwater Flow	KZ	2
· ·	overview of computational methods for selected groundwater flow problems. The first part of the course is devoted to mather part is aimed at selected numerical methods, emphasizing implementation issues related to these methods.	natical formulatio	ns of these
i problema, rrie aecono p			
		7 7K	5
18MIK1	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics	Z,ZK	5 olains the role of
18MIK1 Microeconomics is a se	Microeconomics 1	croeconomics ex	olains the role of
18MIK1 Microeconomics is a se prices and markets in th Consumer Theory.	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Minese processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduced in the control of the economic agents.	croeconomics exp	plains the role of nomics and
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Minese processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of Microeconomics 2	croeconomics exp ction in Microeco	plains the role of nomics and
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a serial	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics I consist of introduce of the microeconomics I consist of introduce of the ories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics I consist of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics	croeconomics exp ction in Microeco Z,ZK nics explain the ro	plains the role of nomics and
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a serial	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics I consist of introduces processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduces Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial	croeconomics exp ction in Microeco Z,ZK nics explain the ro	plains the role of nomics and
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a semarkets in this process 11MIK	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics I consist of introduce of the microeconomics I consist of introduce of the ories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics I consist of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics	croeconomics expection in Microeco Z,ZK nics explain the re Organisation. Z,ZK	olains the role of nomics and 5 ole of prices and 4
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The microprocessors.	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuits computer architecture and principles of interfacing is shown.	croeconomics expection in Microeco Z,ZK mics explain the re Organisation. Z,ZK cuits and complex	olains the role of nomics and 5 ole of prices and 4 c circuits like
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a semarkets in this process 11MIK The course is the introdimicroprocessors. The microprocessors.	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuits computer architecture and principles of interfacing is shown. Microprocessors 1	zroeconomics expection in Microeco Z,ZK mics explain the reconstruction. Z,ZK cuits and complex	5 ole of prices and 4 c circuits like
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a semarkets in this process 11MIK The course is the introd microprocessors. The markets 12MPR1 Microprocessor and micro	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuits computer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, increase).	croeconomics expection in Microeco Z,ZK mics explain the reconstruction. Z,ZK cuits and complex ZK direct, register, rel	5 ole of prices and 4 c circuits like 4 ative,, stack
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a semarkets in this process 11MIK The course is the introd microprocessors. The markets 12MPR1 Microprocessor and micro	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., s, IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroasses.	croeconomics expection in Microeco Z,ZK mics explain the reconstruction. Z,ZK cuits and complex ZK direct, register, rel	5 ole of prices and 4 c circuits like 4 ative,, stack
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a semarkets in this process 11MIK The course is the introd microprocessors. The markets 12MPR1 Microprocessor and micro	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., s, IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroasses.	croeconomics expection in Microeco Z,ZK mics explain the reconstruction. Z,ZK cuits and complex ZK direct, register, rel	5 ole of prices and 4 c circuits like 4 ative,, stack
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the introd microprocessor and mic	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description.	Z,ZK nics explain the re Organisation. Z,ZK cuits and complex ZK direct, register, relsembler, programs ZK	oblains the role of nomics and 5 oble of prices and 4 c circuits like 4 ative,, stack ming languages.
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process consumer to the course is the introd microprocessor and microprocessors - prince 12MPR2 Architecture IA-32. Data	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics	ZZK mics explain the re Organisation. Z,ZK cuits and complex ZK direct, register, releasembler, programs ZK ZK	5 ble of prices and 4 c circuits like 4 ative,, stack ming languages.
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process consumer to the microprocessor and microprocessor and microprocessor and microprocessors - prince processors - prince prince processors - prince pr	Microeconomics 1 to fitheories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to fitheories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to fitheories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiciples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determined and content and processors.	Z/ZK mines explain the record of the record	plains the role of nomics and 5 ple of prices and 4 c circuits like 4 ative,, stack ming languages. 2
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The market market memory, procedure called RISC processors - prince prince processors - prince processors - prince processors - prince processors - prince pr	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics	Z/K mination. Z/K Z/ZK mics explain the re Organisation. Z/ZK direct, register, rel Sembler, programs Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K Z/K	plains the role of nomics and 5 ple of prices and 4 c circuits like 4 ative,, stack ming languages. 2 2
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the microprocessor and microprocessor and microprocessor and microprocessor and microprocessors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ator 12NT Lectures will introduce services and microprocessors.	Microeconomics 1 to f theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determinant of the company of the economics of the economics of the constructure determinant of the processor of the processor of the economics of the ec	Z/K mination.	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the microprocessor and microprocessor and microprocessor and microprocessor and microprocessors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ator 12NT Lectures will introduce sedifferent technologies (Microprocessor).	Microeconomics 1 t of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 t of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconor and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 recomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroass ciples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determ Nanotechnology students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MSE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologon. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he	Z/K mination. Z/K mical and chemical opters which are suffered suffered by the reconstructure and correct of the reconstructure and correct o	plains the role of nomics and 5 ple of prices and 4 c circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the microprocessor and microprocessor and microprocessor and microprocessors - prince 12MPR1 Microprocessors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ator 12NT Lectures will introduce sedifferent technologies (Microprocessors in the microprocessors) 12MOF Basic ideas on multi-ator 12NT Lectures will introduce sedifferent technologies (Microprocessors)	Microeconomics 1 to f theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconom and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determination modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MSE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologon. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for head as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric lay	Z/K mination. Z/K mical and chemical opters which are suffered suffered by the reconstructure and correct of the reconstructure and correct o	plains the role of nomics and 5 ple of prices and 4 c circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the introduce of the course is the introduce of the course of	Microeconomics 1 to f theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconor and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 trocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, inc., Industrial Codes and Instruction codes Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determ Nanotechnology students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physic MBE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologon. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric lag denoasement.	Z/K mination. Z/C mi	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure ill be mentioned
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process 12MPR1 Microprocessor and mic memory, procedure calls RISC processors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ator 12NT Lectures will introduce sedifferent technologies (Nonanostructure preparation growths will be discussed as well as soldering and O2NSAD	Microeconomics 1 to f theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to f theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconom and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 crocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, inc., IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics mic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determination modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MSE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologon. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for head as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric lay	Z/K mination. Z/K mical and chemical opters which are suffered suffered by the reconstructure and correct of the reconstructure and correct o	plains the role of nomics and 5 ple of prices and 4 c circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the markets in this process. 11MIK The course is the introd microprocessors. The markets in this process of the microprocessors of the microprocessors of the microprocessor and microprocessors of the markets of the microprocessor of the microprocessors of the microprocesso	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuits computer architecture and principles of interfacing is shown. Microprocessors 1 cs, IO devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics microprocessors Memory segmentation and paging. Real and privileged mode instruction set, Assembler determination modecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determination mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MSE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologion. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he da as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric lay an encasement. Simulations and Data Analysis Tools ations of high energy elementary particle collisions. ROOT and Pythia programs. German for Intermediate Students M1	Z/K mination. Z/	plains the role of nomics and 5 ple of prices and 4 cricuits like 4 ative,, stack ming languages. 2 2 fundaments of abstantial for nanostructure ill be mentioned 2 1
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the markets in this process. 11MPR1 Microprocessor and mic memory, procedure callst RISC processors - princessors - princessor in the markets in this processor in the memory, procedure callst RISC processors - princessors - pri	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 Introduced the processors 1 Introduced the processors 1 Introduced the processors 1 Introduced the processor of the pro	Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of abstantial for nanostructure ill be mentioned 2 the passive) and
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the markets in this process. 12MPR1 Microprocessor and mic memory, procedure callst RISC processors - princest processors	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Milese processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduces processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduces of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 Trocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, inc., inc.	Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure ill be mentioned 2 the passive) and current
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the microprocessor and microproce	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitorocomputer architecture and principles of interfacing is shown. Microprocessors 1 Introduced the processors 1 Introduced the processors 1 Introduced the processors 1 Introduced the processor of the pro	Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure ill be mentioned 2 the passive) and current
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process of the microprocessor and microproce	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics 2 to theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circuitrocomputer architecture and principles of interfacing is shown. Microprocessors 1 rocomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, inc., I.O devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroass iples Microprocessors 2 types and addressing. Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics Microprocessors 2 types and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure determ Nanotechnology students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical BE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technologon. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he de as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric lay are assembly. Simulations and Data Analysis Tools autons and Data Analysis Tools autons of high energy elementary particle collisions. ROOT and Pythia programs. German for Intermediate S	Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of ubstantial for nanostructure ill be mentioned 2 the passive) and current
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process 11MPR1 Microprocessor and mic memory, procedure callst RISC processors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ato 12NT Lectures will introduce a different technologies (No nanostructure preparating growths will be discussed as well as soldering and 02NSAD Data analysis and simulticated of the course environmental issues to terminology. It develops 04NM2 The course introduces of	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Misese processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processors are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circircomputer architecture and principles of interfacing is shown. Microprocessors 1 **Tocomputer**, microprocessor**, memory types CPU, memory, Input output. Code and data, addressing modes (direct, inc., s., lo devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 **Total Addressing**, Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics microelocules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure detern Nanotechnology students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MoVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technology and accompany and the process of the students will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he ad as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric l	Z/K mination. Z/K mination. Z/K mination. Z/K mination. Z/C mination. Z/C mination. Z/C d structures (e.g. to between technooned)	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of abstantial for nanostructure ill be mentioned 2 the passive) and current mentals of IT 1 logy and society,
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process 11MPR1 Microprocessor and mic memory, procedure callst RISC processors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-ato 12NT Lectures will introduce a different technologies (Nonanostructure preparating growths will be discussed as well as soldering and 02NSAD Data analysis and simultication of the county word formation process environmental issues to terminology. It develops 04NM2 The course introduces of the course introduces of the world at the beginning the course introduces of the course introduces of the world at the beginning the course of the course introduces of the world at the beginning the course o	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Mises processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduction of the economic agents. This course of Microeconomics I consist of introduction of the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circiprocroputer architecture and principles of interfacing is shown. Microprocessors 1 Microprocessors 2 Microprocessors 2 Microprocessors 2 Microprocessors 2 Microprocessors 3 Microprocessors 3 Microprocessors 4 Microprocessors 5 Microprocessors 5 Microprocessors 5 Microprocessors 6 Microprocessors 6 Microprocessors 9 Micropr	Z/K mination. Z/K mination. Z/K mination. Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of abstantial for nanostructure lill be mentioned 2 the passive) and current mentals of IT 1 logy and society, tc. Students
18MIK1 Microeconomics is a se prices and markets in the Consumer Theory. 18MIK2 Microeconomics is a se markets in this process 11MIK The course is the introd microprocessors. The markets in this process 11MIK The course is the introd microprocessors. The markets in this process 12MPR1 Microprocessor and mic memory, procedure callst RISC processors - prince 12MPR2 Architecture IA-32. Data 12MOF Basic ideas on multi-atc 12NT Lectures will introduce sed different technologies (Nonanostructure preparating growths will be discussed as well as soldering and O2NSAD Data analysis and simultipolymous and simultipolymous and simultipolymous introduces centre in the course introduces centre in the course introduces centre in the course introduces centre in the deginning practise reading for information process reading for	Microeconomics 1 to theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Misese processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduce of the processors are allocated among alternative uses. Microeconomic and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Industrial Logical Circuits and Microprocessors uction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circircomputer architecture and principles of interfacing is shown. Microprocessors 1 **Tocomputer**, microprocessor**, memory types CPU, memory, Input output. Code and data, addressing modes (direct, inc., s., lo devices - program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassiples Microprocessors 2 **Total Addressing**, Memory segmentation and paging. Real and privileged mode. Instruction set, Assembler. description. Molecular Physics microelocules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure detern Nanotechnology students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical MoVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technology and accompany and the process of the students will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for he ad as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric l	Z/K mination. Z/K mination. Z/K mination. Z/K mination. Z/C mination. Z/	plains the role of nomics and 5 ple of prices and 4 circuits like 4 ative,, stack ming languages. 2 2 fundaments of abstantial for nanostructure lill be mentioned 2 the passive) and current mentals of IT 1 logy and society, tc. Students

04NM3	German for Intermediate Students M2	Z	1
	other more complex grammatical structures and their application in communication based on technical texts, such as the relation Ing of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and		
· -	rmation and reading aloud, and appropriate language for various purposes in oral and written communication. The course syster for professional discourse (participles, relative clauses).	natically revises ot	her grammatical
04NP1	German for Advanced Students P1	Z	1
	bod grammar knowledge, extended general vocabulary, and good communication skills acquired at secondary school to be le		
	nen focused on working with technical and scientific texts and practising reading techniques (skimming, scanning, reading for structures necessary for understanding a subtechnical text (passive voice, participles, participle structures) and it also focuses on	-	-
i.e., telephoning.	inductions necessary for understanding a subtechnical text (passive voice, participles, participle structures) and it also recuses of	practical everyday	communication,
04NP2	German for Advanced Students P2	Z	1
·	e students' skills in working with professional scientific texts (understanding, summarising, note-taking, interpreting) while extenc oduces mathematical expressions and texts of nuclear power engineering. Increasing emphasis is placed on understanding and		
	V, letter of application, interview, scholarship), and more complex grammatical structures (i.e., subjunctive, indirect speech).		
04NP3	German for Advanced Students P3	Z	1
	3 main parts (general communicative situations, grammar and technical topics). Students will develop their vocabulary in a va ar accidents, accident report, filling in a form, complaints). Based on presentations and technical and subtechnical texts, the v	-	
•	ring, the environment, computer science, and car technology, will also be extended. Only authentic professional texts are use		
practice to and from Ge	process information gained from their reading of complex and difficult texts and present it to the class in a simplified oral form.Therman.	ne course also incl	udes translation
01NME2	Numerical Methods 2	KZ	2
	o numerical solution of boundary-value problems and intial-boundary-value problems for ordinary and partial differential equation and the problems and finite differential equations to initial value problems and finite differential equations to initial value problems and finite differential equations to initial value problems and finite differential equations.	· ·	hods converting
15CH1	ms to initial-value problems and finite-difference methods for elliptic, parabolic and first-order hyperbolic partial differential equ General Chemistry 1	Z Z	3
	ncepts, quantities and units used in chemistry are introduced in the course General Chemistry I. Their significance and practic	1	-
solved in exercises.			
15CH2 The subject is the conti	General Chemistry 2 nuation of the course General chemistry I. The main attention is paid to general principles governing chemical processes. Usi	Z,ZK	les the fact that
· · · · · · · · · · · · · · · · · · ·	nciples is not restricted only to chemical processes is documented. The significance and practical use of explained principles		
in exercises.	One and Deletists	71/	
02OR Introduction to general	General Relativity theory of relativity: principle of equivalence and principle of general covariance, parallel transport and geodesic equation, gra	ZK vitational redshift.	3 Curvature and
-	law. Schwarzschild solution of the Einstein equations, homogeneous and isotropic cosmological models.		
01POPJ1	Computers and Natural Language 1	Z Z	2
-	tational processing and understanding of natural languages. Automatic methods of morphological and syntactic analysis inclun In will be discussed. Two-level morphology, tagging and language models, Viterbi algorithm, grammars, chart parsing, probabil	_	stical methods
01POPJ2	Computers and Natural Language 2	Z	2
-	is to get acquainted with the broad topic of machine translation (MT). Machine translation is a challenging task that can serve as natural languages. We cover several rather different approaches to the task as well as issues related to automatic and ma		_
quality.	de hataran languages. We devel devel a latifer amorent approaches to the lack activities to holdes to automatic and ma	Tradi ovaldation of	tranolation
01POGR1	Computer Graphics 1	Z	2
	-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the sta I problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems an		
algorithms using knowled	edge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of co	-	
<u> </u>	g scientific documents and presentations.	7	
01POGR2 The second part of the	Computer Graphics 2 two-semester "Computer Graphics" course begins with a brief introduction to signal theory in the context of aliasing - a phen-	Z omenon ubiquitou	2 s in computer
•	Il structured survey of fundamental problems in 3D computer graphics is given together with their solutions, from the description		
	on mathematical description of problems and explanation of the corresponding algorithms using knowledge previously obtaine m implementation aspect such as data structures design etc. is also a matter of concern. In the last lecture, a number of theol		=
-	-source 3D modeling and rendering software instrument.		
01SITE1	Computer Networks 1	Z	2
-	ory and present network (LAN, WAN, use the principles and technologies). Architecture of reference model ISO/OSI. Network s. Internet services - mail, remote access, www. Secure communication, tunneling. Directory services, certificates, certification a		
(PKI). Use in practice. N	Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises. (According to the interest - the security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises.	erial control lines,	modems)
01SITE2	Computer Networks 2	protocols proction	2
-	ory and present network (LAN, WAN, use the principles and technologies). Architecture of reference model ISO/OSI. Network s. Internet services - mail, remote access, www. Secure communication, tunneling. Directory services, certificates, certification a	•	
	Network security - firewalls (packet filters, proxies, gateways, NAT, DMZ), practical exercises. (According to the interest - the s		
01POPR	Advanced Probability to advanced Theory of probability and statistics on measure-theoretic level for general distributions of random variables. We determine the control of	Z	2
	on variables and convergence criteria. Further, the theory of statistical model estimation and testing is extended for parametri	•	-
12PIN1	Practical Informatics for Technics 1	Z	2
	g systems. Personal computer, workstation and supercomputers. Processor, memory, bus, devices, hard disk, network interfa ystems. Requirements on operating system for research and technical computing. Operating system UNIX. Basic principles, kern		
	s, working with files. Text editors: vi, emacs. Command interpreter (shell) sh, csh and its programming (scripts). Controlling programming (scripts).		
	s. Standard tools. Graphical user interface X-windows. Computer networks. Local computer networks. Global computer netwo	rks: Internet. Addr	esses and
12PIN2	ork configutation of a computer. Network services: hardware sharing, mail, ftp, etc. Network applications Practical Informatics for Technics 2	Z	2
	rections and applications of informatics for science and engineering included as obligatory alternative co		
in computer classrooms	s. The second part of the course is "Introduction to computer algebra systems?.		

12PIN3 Practically oriented thre			
Practically offented thre	Practical Informatics for Technics 3	Z	2
in computer classrooms	e semester course of basics and applications of informatics for science and engineering included as obligatory alternative co . The third part of the course is "Introduction to scientific computing?.	ourse. Constituent p	part is realized
15INPR	Laboratory Practice in Instrumental Methods	KZ	4
	lents in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and	1	•
· ·	tories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear		no training to
01PRA1	Probability and Mathematical Statistics 1	Z.ZK	6
-	o the introduction to Theory of probability and statistics on measure-theoretic level for discrete models, continuous distribution	1 ' 1	_
· ·	eal with sample an integral characteristics of random variables and variants of limit theorems are derived (LLN, CLT). This kr	_	
	observations and statistical parametric model estimation.	g	
01PRA2	Probability and Mathematical Statistics 2	ZK	2
	the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood		_
	ss tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame of		
01PRST	Probability and Statistics	Z.ZK	4
	obability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition ar	, , ,	-
	s random variable, distribution function of random variable and characteristics of random variable are treated and basic limit	_	_
	ory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing are exp		•
01PRSTB	Probability and Statistics B	KZ	4
	obability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition ar		e Kolmogorov
	s random variable, distribution function of random variable and characteristics of random variable are treated and basic limit	-	_
On the basis of this the	ory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing are exp	olained.	
16UAZB	Principles of Ionizing-Radiation Applications	ZK	2
Historical outline of app	ications, review of interaction of radiation with a matter, radiation sources, detectors and instrumentation, evaluation of radio		
	ng of radiation beams, selected radioanalytical methods, tracer methods, radionuclide dating, further possibilities for the use		
16FNZB	Problems of Non-ionizing Radiation	ZK	2
_	ological effects of non-ionizing radiation and its use in physical praxis. Information about principles, biological effects and me		_
	nd as applied in various types of technical or medical equipment are given as well.		.
12PSEM	Problem Seminary	Z	2
	es from the region of solid materials engineering, physical electronics, materials science, nuclear reactors, dosimetry and app		
01PERI	Programming of Peripherals Devices	Z	2
-	iput and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of periphera		2
01PW	Windows Programming	Z	2
-	ms for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identification and		2
18PRC1		Z	4
	Programming in C++ 1		4
	nly the C programming language and non-object oriented features of the C++ language.	1/7	
18PRC2	Programming in C++ 2	KZ	4
	object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Template		
18PJ	Programming in Java	Z,ZK	5
	o the Java platform and to the development of the basic types of applications for this platform.	7.71/	
18MTL	Programming in MATLAB	Z,ZK	5
_	comment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic an	alysis, statistics, al	gorithmization
and geometric represer		1/7	
18MPT	Programming in MATLAB	KZ	5
	tudents with various programming techniques in the Matlab environment. The emphasis is placed on the differences in progr	'ammina methodola	ogy in iviatiab
compared to classical la	riguages.	amming moundable	
40040			
18PAS	Pascal Programming	Z	4
This lecture is intended	Pascal Programming mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program	Z	•
This lecture is intended programming language.	mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in progra	Z mming and with the	e Pascal
This lecture is intended programming language. 12PDR1	mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in progra Data Communication and Interfaces 1	Z	•
This lecture is intended programming language. 12PDR1 Principles of computer in	mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in progra Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures.	Z mming and with the	e Pascal
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2	mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in progra Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2	Z mming and with the	e Pascal
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet services.	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP.	Z mming and with the	e Pascal 2
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2	mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in progra Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2	Z mming and with the	e Pascal
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet son 1PSL	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP.	Z Z Z Z Z	e Pascal 2
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet son 1PSL	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument	Z mming and with the	e Pascal 2
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 ndards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX	Z Z Z Z Z	e Pascal 2 2 2
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 ndards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument of the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1	Z Z Z Z Z	e Pascal 2 2 2
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 nandards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics.	Z Z Z Z Z Z	e Pascal 2 2 2 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2	Z Z Z Z Z Z	e Pascal 2 2 2 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics.	Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	2 2 2 1 1 1 1 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1	Z Z Z Z Z Z Z Deet (both printed an	2 2 2 1 1 1 nd handwritten)
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for continuous intended in 12PQGP2	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphated in the supposed to the supposed to know the Russian alphated in the supposed to know the Russian alphated i	Z Z Z Z Deet (both printed an ing the way and given in the way and given	2 2 2 1 1 1 nd handwritten) ving directions)
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for conthey can use basic grant	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphatemunication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask	Z Z Z Z Deet (both printed an ing the way and given in the way and given	2 2 2 1 1 1 nd handwritten) ving directions)
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for conthey can use basic grant	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphaten munication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask mar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement	Z Z Z Z Deet (both printed an ing the way and given in the way and given	2 2 2 1 1 1 nd handwritten) ving directions)
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for contents and scope of to 04RM2	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphaten and the selection of the most fundamental articles in the secondary schools. Students are supposed to know the Russian alphaten structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement ne course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable.	Z mming and with the Z Z Z Z Z Det (both printed an ing the way and given the level of the RZ2 control of th	2 2 2 1 1 1 nd handwritten) ving directions) ourse. The
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for contents and scope of to 04RM2	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 nadards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphaten munication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask mar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement need course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. Russian for Intermediate Students M2 the RM1 course, its contents and scope correspond roughly to RZ4, however, for half of the time allotted in the timetable.	Z mming and with the Z Z Z Z Z Det (both printed an ing the way and given the level of the RZ2 control of th	2 2 2 1 1 1 nd handwritten) ving directions) ourse. The
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for contents and scope of to 04RM2 The course is based on 04RM3	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 andards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX. Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphatentumication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask mar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement ne course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. Russian for Intermediate Students M2	Z mming and with the Z Z Z Z Z Det (both printed an ing the way and give level of the RZ2 color.	2 2 1 1 1 nd handwritten) ving directions) ourse. The 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for contents and scope of to 04RM2 The course is based on 04RM3	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 nadards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphaten and the structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement are course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. Russian for Intermediate Students M2 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 mming and with the Z Z Z Z Z Det (both printed an ing the way and give level of the RZ2 color.	2 2 1 1 1 nd handwritten) ving directions) ourse. The 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for corthey can use basic grant contents and scope of to 04RM2 The course is based on 04RM3 The course develops the	Data Communication and Interfaces 1 letworks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 landards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument of the basics and facilities of computer typography, particularly to the system LaTeX. Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphat munication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, ask mar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement need course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. Russian for Intermediate Students M2 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 exhowledge and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 and RM2 and its contents and scope are roughly at the same level as those of RZ5, he achieved and skills acquired in RM1 an	Z mming and with the Z Z Z Z Z Det (both printed an ing the way and give level of the RZ2 color.	2 2 1 1 1 nd handwritten) ving directions) ourse. The 1
This lecture is intended programming language. 12PDR1 Principles of computer in 12PDR2 Principles of Ethernet is 01PSL The course is devoted to 02RQGP1 The aim of the seminar 02RQGP2 The aim of the seminar 04RM1 The course is designed basic vocabulary for contents and scope of to 04RM2 The course is based on 04RM3 The course develops the in the timetable.	Data Communication and Interfaces 1 networks, networks architectures and data transfer. Specification of existing network architectures. Data Communication and Interfaces 2 nadards and basics of protocol suite TCP/IP. LaTeX - Publication Instrument to the basics and facilities of computer typography, particularly to the system LaTeX Seminar on Quark-Gluon Plasma 1 is discuss the selection of the most fundamental articles in heavy ion physics. Seminar on Quark-Gluon Plasma 2 is discuss the selection of the most fundamental articles in heavy ion physics. Russian for Intermediate Students M1 for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphaten and the structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement are course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. Russian for Intermediate Students M2 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 mming and with the Z Z Z Z Z Det (both printed and ing the way and given the RZ2 color the RZ2 col	2 2 2 1 1 1 nd handwritten) ving directions) ourse. The 1 the time allotted

04RP2	Russian for Advanced Students P2	Z	1
	n RP1. It expands grammatical structures important for understanding technical texts (verbal adjectives, participles, passives,	verb aspects, spe	cific syntactic
·	ut on independent oral and written communication.	7	
)4RP3 The course is based or	Russian for Advanced Students P3 RP2 and is mainly focused on working with technical and scientific texts (reading comprehension, oral and written paraphras	Z sing translation)	The RD1 - RD3
	orevious knowledge of general language at secondary level (listening, reading, correct communication in everyday situations).	,	
	idy is aimed at professional and technical skills (reading technical literature according to the students' specialization, oral and		
	ical vocabulary and practice quick and correct communication in professional situations. They will be able to both speak write a		
echnical topics.		-	
)4RZ1	Russian for Beginners Z1	Z	1
he course represents	the first stage of the five-semester programme, its final aim being reading and understanding professional texts written in Russ	sian. Thus it begin	s with masterir
he Russian alphabet (for both reading and writing skills) and fundamentals of grammar necessary for everyday communication (listening and speak	ing). Students will	be able to rea
short text with marke	d stress, understand its contents and summarize it.		
)4RZ2	Russian for Beginners Z2	Z	1
he second semester	of the programme is designed to teach skills for basic communication in everyday situations and for reading easy and short su	ubtechnical texts.	Students will b
	sing short sentences and appropriate structures, and read aloud with confidence a short text without marked stress. They will	also develop their	vocabulary a
	tical structures. They will have mastered with confidence the Russian alphabet and will be able to use it in writing.		
4RZ3	Russian for Beginners Z3	Z	1
	RZ2 and includes further everyday topics, develops understanding of short compact texts on new subtechnical topics (for train	•	•
٠,	duces 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
	ress their opinion. Writing skills will be trained on guided writing tasks and note-taking.		
4RZ4	Russian for Beginners Z4	Z	. 1
	n 04RZ3. It improves and expands the knowledge of general language in all four skills (reading and understanding longer texts	•	•
	communication in everyday situations, writing longer texts). Students are trained to use grammar structures effectively (e.g., irr	-	
	nodality, imperatives, conditionals). They practice and develop communication skills for everyday situations (food, travelling, fre on more specific topics (environment, addictions, the green movement). They become acquainted with various geographical of		
	information from the timetable, learn about Russian holidays and typical meals.	uata (e.g., Siberia), learn now u
4RZ5	Russian for Beginners Z5	Z	1
	e student to have completed RZ4. It concentrates predominantly on reading skills (working with professional texts, i.e. understar		l nd cummorizi
	cialized text) and speaking, and to a certain extent, writing about the professional information obtained by reading the texts. Co		
· ·	ing grammar is based on professional and technical texts and only includes items typically used in professional communication		
	ts develop their technical and economic vocabulary, and are also trained in some professional skills (writing a CV, polite reque	-	· · · · · · · · · · · · · · · · · · ·
1RSWP	Project Management of Software Projects	KZ	2
-	nagement of software projects is dedicated to an explanation of general ideas, rules and procedures which are common to many		_
-		p ,	
	orresponds to a lifecycle of typical projects including many other aspects which have to be taken into account in the course of the	eir management, S	Specific attenti
	presponds to a lifecycle of typical projects including many other aspects which have to be taken into account in the course of the ect management and to IT projects in general. Interdisciplinary view of project management is emphasized.	eir management. S	Specific attenti
s paid to software proj	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized.		
s paid to software proj 2SMF	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics	Z	2
s paid to software proj 2SMF The purpose of the ser	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized.	Z	2
s paid to software proj 2SMF The purpose of the ser oncerning their scient	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics ininar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year	Z	2 simple tasks
s paid to software proj 12SMF The purpose of the ser oncerning their scient 11SSM1	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics innar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart	Z ment will present	2 simple tasks
paid to software proj 2SMF he purpose of the ser oncerning their scient 1SSM1 his seminar provides	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics ininar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart ific activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of	Z ment will present	2 simple tasks 2 natics.
s paid to software proj D2SMF The purpose of the ser concerning their scient D1SSM1 This seminar provides	ect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1	Z ment will present Z courses of mather	2 simple tasks 2 natics. 2
s paid to software proj 2SMF the purpose of the ser concerning their scient 21SSM1 this seminar provides 21SSM2 this seminar provides	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics minar is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of the seminar of the semi	Z ment will present Z courses of mather	2 simple tasks 2 natics. 2 natics.
paid to software projects 2SMF he purpose of the seroncerning their scient 11SSM1 his seminar provides 11SSM2 his seminar provides 6SED1	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics minar is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1	Z ment will present Z courses of mather Z courses of mather Z	2 simple tasks 2 natics. 2 natics.
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is suppo	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics minar is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of the seminar of the semi	Z ment will present Z courses of mather Z courses of mather Z ourses of mather	2 simple tasks 2 natics. 2 natics. 2 future writing
s paid to software projects PISMF The purpose of the seroncerning their scient PISSM1 This seminar provides PISSM2 This seminar provides FISSM2 The seminary is supposed bachelor's thesis. The	Seminar of Mathematical Physics intercolor of the student's bachelor theses in the next year Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devo	Z ment will present Z courses of mather Z courses of mather Z ourses of mather	2 simple tasks 2 natics. 2 natics. 2 future writing
s paid to software projects PISMF The purpose of the seroncerning their scient PISSM1 This seminar provides PISSM2 This seminar provides FISED1 The seminary is supposachelor's thesis. The MI, Hospital Na Hom	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics minar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.).	Z ment will present Z courses of mather Z courses of mather Z sted to support for	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV ež
paid to software proj 2SMF he purpose of the ser concerning their scient 11SSM1 his seminar provides 11SSM2 his seminar provides 6SED1 he seminary is suppo bachelor's thesis. The MI, Hospital Na Home 6SED2	Seminar of Mathematical Physics minar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, vertical properties of the physics of the physi	Z ment will present Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV ež
s paid to software projects PISMF The purpose of the seroncerning their scient PISSM1 This seminar provides PISSM2 This seminar provides FISED1 The seminary is supposachelor's thesis. The MI, Hospital Na Hom FISED2 Toosimetry Seminary 2	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics minar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.).	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z courses about their	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV ež
paid to software proj 2SMF he purpose of the ser procerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is suppo bachelor's thesis. The MI, Hospital Na Hom 6SED2 osimetry Seminary 2 search topic of their	Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart of a citivities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the property Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devoted following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature.	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z courses about their	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV eż progress on t
paid to software projects 2SMF the purpose of the seroncerning their scient 1SSM1 this seminar provides 1SSM2 this seminar provides 6SED1 the seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 osimetry Seminary 2 esearch topic of their in	Seminar of Mathematical Physics minar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give le	Z courses of mather Z courses of mather Z courses of mather Z oted to support for z v.v.i., ÚJF AV R Z courses about their	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV ež
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 osimetry Seminary 2 esearch topic of their in 1SMB1 he course is devoted	Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if it activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3.	Z courses of mather Z courses of mather Z courses of mather Z courses of mather Z cted to support for v.v.i., ÚJF AV R Z ctures about their	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 cosimetry Seminary 2 esearch topic of their seminary 1 1SMB1 he course is devoted 1SMB2	Seminar of Mathematical Physics ninar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1	Z courses of mather Z courses of mather Z courses of mather Z oted to support for z v.v.i., ÚJF AV R Z courses about their	2 simple tasks 2 natics. 2 natics. 2 future writing v.v.i., ÚJV eż progress on t
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 cosimetry Seminary 2 esearch topic of their in the course is devoted 1SMB1 he course is devoted	Seminar of Mathematical Physics Initial projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Initial projects by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 In a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the project of mathematics that are included in curriculum but also to those that are not part of basic of the project of mathematics that are included in curriculum but also to those that are not part of basic of the project of project management is emphasized. In a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the project of project management is emphasized. In a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the project of the project of project management is emphasized. In a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of the project of t	Z courses of mather Z courses of mather Z courses of mather Z courses of mather Z cted to support for v.v.i., ÚJF AV R Z ctures about their	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ež 2 progress on t
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 cosimetry Seminary 2 esearch topic of their in the course is devoted 1SMB1 he course is devoted 1SMB2 he course is devoted	Seminar of Mathematical Physics Initial physics by virtue of solved examples. It is supposed that the teachers of the physics depart if activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B4. Software Seminar 1	Z courses of mather Z courses of mather Z courses of mather Z courses of mather Z cted to support for v.v.i., ÚJF AV R Z ctures about their	2 simple tasks 2 natics. 2 natics. 2 future writing 2 v.v.i., ÚJV ež progress on t
paid to software projects 2SMF he purpose of the seroncerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Hom 6SED2 cosimetry Seminary 2 desearch topic of their in 1SMB1 he course is devoted 1SMB2 he course is devoted 1SOS1 ava, Java Beans, Ass	Seminar of Mathematical Physics minar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of solfierent approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B4. Software Seminar 1 embly language programming for microprocessors Intel 80x86	Z courses of mather Z courses about their C Z cotures about their C Z	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eignorgress on to 2 2 progress on to 2 2 2
paid to software projects 2SMF he purpose of the serencerning their scient 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 cosimetry Seminary 2 desearch topic of their in the course is devoted 1SMB1 he course is devoted 1SMB2 he course is devoted 1SOS1 ava, Java Beans, Ass 1SOS2	Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart if it activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 Interdisciplinary of Contemporary Mathematics 1 Interdisciplinary of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 Interdisciplinary of Contemporary Mathematics are included in curriculum but also to those that are not part of basic of the officers of the observable of these that are not part of basic of the observable of these that are not part of basic of the observable of these that are not part of basic of the observable of these of those that are not part of basic of the observable of these of those that are not part of basic of the observable of these of these of those that are not part of basic of the observable of these of those that are not part of basic of these of these of those that are not part of basic of the observable of those that are not part of basic of these of these of these of those that are not part of basic of these of the observable of these of these of these of the observable of these of the observable of these of the observable of these of the	Z courses of mather Z courses of mather Z courses of mather Z oted to support for v.v.i., ÚJF AV R Z cotures about their	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on t
paid to software projects project to software projects processed by the purpose of the service processed by the purpose of the service provides and the seminary provides and the seminary is supposed by the seminary is supposed	Seminar of Mathematical Physics Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics Interdisciplinary is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 In different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 In sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 In In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 In support the lectures of Calculus B3. Seminar on Calculus B2 To support the lectures of Calculus B4. Software Seminar 1 In this programming for microprocessors Intel 80x86 Software Seminar 2 Software Seminar 1 In the programming for microprocessors Intel 80x86 Software Seminar 2 Software Seminar 1 Seminar on Calculus applications for Unix Ii	Z courses of mather Z courses of mather Z courses of mather Z oted to support for v.v.i., ÚJF AV R Z cotures about their	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on t
paid to software projects projects of the servencerning their scient of their seminar provides of SED1 of the seminary is supposed bachelor's thesis. The MI, Hospital Na Home of SED2 of their seearch topic of their seea	Seminar of Mathematical Physics ninar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÜRO, violec, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature. Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B2 to support the lectures of Calculus B4. Software Seminar 1 embly language programming for microprocessors Intel 80x86 Software Seminar 2 Gen and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix liability to Microsoft Windows.	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on t
paid to software projects of the servencerning their scient of the servence of their servence of t	Seminar of Mathematical Physics iniar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic or bosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devo a following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SURO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B4. Software Seminar 2 Frankly language programming for microprocessors Intel 80x86 Software Seminar 2 Fran	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z ktures about their c. Z Ktures about their about their ktures about their about	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on to 2 2 ems, especial
paid to software projects projects of the servencerning their scient of their servences of the servences of the servences of their servence	Seminar of Mathematical Physics initial is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devote following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÜRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B2 to support the lectures of Calculus B4. Software Seminar 1 embly language programming for microprocessors Intel 80x86 Software Seminar 2 (**c+ and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix II ability to Microsoft Windows. Special Practicum 1 focused on instrumental techniques that are mainly used in physics and technical professions. Topics of each parts are chose	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z ktures about their c. Z Ktures about their about their ktures about their about	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on to 2 2 ems, especial
paid to software projects project to software projects p	Seminar of Mathematical Physics ninar is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1	Z courses of mather Z courses of mather Z courses of mather Z sted to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z kter about their c. Z Kz kter about their c. Kz kter ab	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ež 2 progress on t 2 2 2 2 2 2 2 2 2 6 6 can familiari:
paid to software projects of the seroncerning their scient of SSM1 his seminar provides of SED1 he seminary is supposed bachelor's thesis. The MI, Hospital Na Home of SED2 or search topic of their s	Seminar of Mathematical Physics Initiar is to illuminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart liftic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Dosimetry Seminar 1 sed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devore following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature. Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B2 to support the lectures of Calculus B4. Software Seminar 1 embly language programming for microprocessors Intel 80x86 Software Seminar 2 C+ and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix liability to Microsoft Windows. Special Practicum 1 focused on instrumental techniques that are mainly used in physics and technical professions. Topics of each parts are chose experimental physics and metrology.	Z courses of mather Z courses of mather Z courses of mather Z outed to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z kteures about their c. Z KZ kteures about their c. KZ kteures about their c. KZ	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ež 2 progress on t 2 2 ams, especial 6 s can familiari:
paid to software projects of the seroncerning their scient of SSM1 his seminar provides of SED1 he seminary is supposed bachelor's thesis. The MI, Hospital Na Home of SED2 of Seearch topic of their seminary 2 desearch topic of their seearch topic of th	Seminar of Mathematical Physics iniar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart liftic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of losimetry Seminar 1 Dosimetry Seminar 1 Dosimetry Seminar 2 following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÜRO, volce, FN v Motole, PTC Czech s.r.o.) Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B2 to support the lectures of Calculus B4. Software Seminar 1 seminar on Calculus B4. Software Seminar 2 seminar on Calculus B4. Software Seminar 1 seminar on Calculus B4. Software Seminar 2 seminar on Calculus B4. Software Seminar 1 seminar on Calculus B4. Software Seminar 2 seminar on Calculus B4. Software Seminar 1 seminar on Calculus B4. Software Seminar 2 seminar on Calculus B4. Software Seminar 1 seminar on Cal	Z courses of mather Z courses of mather Z courses of mather Z outed to support for v.v.i., ÚJF AV R Z cotures about their c. Z Z kteures about their c. Z KZ kteures about their c. KZ kteures about their c. KZ	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ez 2 2 progress on to 2 2 ems, especial 6 s can familiari 6
paid to software projects of the seroncerning their scient of SM1 his seminar provides of SED1 he seminary is supposed bachelor's thesis. The MI, Hospital Na Home of SED2 or search topic of their se	sect management and to IT projects in general. Interdisciplinary view of project management is emphasized. Seminar of Mathematical Physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics of DDAIR, who are currently employed in various organizations (SÜRO, volce, FN v Motole, PTC Czech s.r.o.). Dosimetry Seminar 2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature Seminar on Calculus B1 to support the lectures of Calculus B3. Seminar on Calculus B4. Software Seminar 1 embly language programming for microprocessors Intel 80x86 Software Seminar 2 thank of the programming for microprocessors Intel 80x86 Software Seminar 2 focused on instrumental techniques that are mainly used in physics and technical professions. Topics of each parts a	Z courses of mather Z cour	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV eż 2 progress on to 2 2 ems, especial 6 s can familiari 6 s can familiari
s paid to software projects paid to software projects MF the purpose of the seroncerning their scient of SSM1 this seminar provides of SED1 the seminary is support bachelor's thesis. The MI, Hospital Na Home of SED2 the seminary Seminary 2 desearch topic of their is obstantially seem of the course is devoted of SMB2 the course is devo	Seminar of Mathematical Physics Initrar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart fiftic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics 2 a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar of Contemporary Mathematics that are included in curriculum but also to those that are not part of basic of Seminar on Calculus 84. Solitware Seminar 1 Embly language programming tudents will listen to the lectures of the older students of DDAIR. The older students give letheses. The course also introduces the principles of creating good presentation and advice for working with scientific literature in Seminar on Calculus B1 To support the lectures of Calculus B3. Seminar on Calculus B4. Software Seminar 1 Embly language programming for microprocessors Intel 80x86 Software Seminar 1 Embly language programming for microprocessors Intel 80x86 Software Seminar 1 For the course of Seminar 1 For the co	Z courses of mather Z cour	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ež 2 progress on t 2 2 ems, especial 6 s can familiari: 6 s can familiari:
s paid to software projects paid to software projects paid to software projects of the seroncerning their scient of SSM1 This seminar provides of SED1 The seminary is support to bachelor's thesis. The MI, Hospital Na Home of SED2 Osimetry Seminary 2 desearch topic of their is obstacled of SMB1 The course is devoted of SMB2 The SMB3 The SMB4 The SMB5 The SMB5 The SMB6 The SMB6 The SMB7 Th	Seminar of Mathematical Physics Iniar is to iluminate mathematical Physics by virtue of solved examples. It is supposed that the teachers of the physics depart if the activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1	Z courses of mather Z cour	2 simple tasks 2 matics. 2 matics. 2 future writing v.v.i., ÚJV ež 2 progress on t 2 2 ems, especial 6 s can familiari: 6 s can familiari:
paid to software projects and applications and the subject is devoted roperties and applications.	Seminar of Mathematical Physics minar is to iluminate mathematical Physics binar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics depart iffic activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1	Z courses of mather Z courses about their Z cutures about their Z cutures about their Z cutures about their Z Z cutures about their Z Z Z Z Z ike operating syst KZ en so that students KZ en so that students C X C C C C C C C C C C C C C C C C C	2 simple tasks 2 matics. 2 matics. 2 future writing 2 v.v.i., ÚJV ež 2 progress on t 2 2 2 2 ems, especial 6 s can familiariz 6 s can familiariz
paid to software projects 2SMF he purpose of the server procerning their scients 1SSM1 his seminar provides 1SSM2 his seminar provides 6SED1 he seminary is support bachelor's thesis. The MI, Hospital Na Home 6SED2 osimetry Seminary 2 pasearch topic of their is 1SMB1 he course is devoted 1SMB2 he course is devoted 1SMB2 he course is devoted 1SOS1 pava, Java Beans, Ass 1SOS2 praphical libraries GTH por Linux systems. Port 2 2SPRA1 hysics measurement in advanced pats of 1 2SPRA2 hysics measurement in advanced pats of 1 1STR he subject is devoted roperties and applical 1 1SFBM	Seminar of Mathematical Physics Iniar is to iluminate mathematical Physics by virtue of solved examples. It is supposed that the teachers of the physics depart if the activities that could become the topics of the student?s bachelor theses in the next year Seminar of Contemporary Mathematics 1	Z courses of mather Z courses about their Z cutures about their Z cutures about their Z cutures about their Z Z Z Z Z Z Z Z Sike operating system of the students KZ en so that students KZ en so that students XZ Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	2 simple tasks 2 matics. 2 matics. 2 future writing 2 v.v.i., ÚJV e2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

04SM1	Spanish for Intermediate Students M1	Z	1
	for students whose competence is at level B1 of CEFR, i.e. those who studied Spanish in the secondary school. The 3-seme ention to further grammar topics (e.g., perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, nega		
	ention to further grammar topics (e.g., permasis verbales, futuro imperiecto, direct object and indirect object pronouns, nega and oral communication on a given everyday or easy subtechnical topic, for which the students are trained by reading texts of		•
04SM2	Spanish for Intermediate Students M3	Z	1
The course develops the	e students' knowledge from the previous course (SM1). Students are gradually acquainted with fundamentals of Spanish for	specific purposes	in order to be
able to work with specia	lized texts on the Internet.		
04SM3	Spanish for Intermediate Students M3	Z	1
	upplemented with additional subtechnical materials, so the students will be gradually acquainted with the peculiarities of acadents in Spanish and search for information of their specialization or field of interest. Students will use the information to write s		
•	inet in Spanish and search for information of their specialization of field of interest. Students will use the information to write same, general Spanish course based on course books, covers presentations and, finally, a written and oral examination.	nort articles and s	summanes. The
04SP1	Spanish for Advanced Students P1	Z	1
Course concentrates on	more difficult grammar topics, revision of vocabulary, basics of Spanish for specific purposes as well as written communicati	on. Course prered	quisites: level B2
of CEFR.			
04SP2	Spanish for Advanced Students P2 nd part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and sy	Z	1 on independent
written communication.	nd part of the advanced Spanish codise, exterioling Spanish for specific purposes topics. It comprises more grammar and syl	ilax and locuses	on independent
04SP3	Spanish for Advanced Students P3	Z	1
Course 04SP3 is the fina	al part of the advanced Spanish course. It is based on texts chosen by the students according to their future specialization. It is	locused on writter	communication
	will need in their career.		
04SZ1	Spanish for Beginners Z1	Z	1
	st stage of the five-semester programme of Spanish studies; during the first stage the students will master phonetics and fund cate at an elementary level on topics of everyday life. They will acquire and extend fundamental vocabulary of general Spanis	-	
04SZ2	Spanish for Beginners Students Z2	Z	1
	on course 04SZ1, and expects students to develop and extend the knowledge and skills acquired so far. Grammar structures	_	•
to enable them to under	stand short adapted written texts and speech. Attention is also paid to cultural differences between Spanish-speaking countr	ies and others su	ch as the Czech
	nish-speaking countries are also included.	_	
04SZ3	Spanish for Beginners Z3	Z	1
	course SZ2, and develops the student's vocabulary and grammar structure. The course covers realia (history and culture) of attention to further grammar topics (pretérito perfecto, pretérito indefinido, pretérito imperfecto, the gerund and the imperative		
	en general topic, for which the student is trained by reading texts or listening to them.	s). It inolades whe	ion and ora
04SZ4	Spanish for Beginners Z3	Z	1
	course SZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanis		
	to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of t	he imperative, an	d subjunctive),
04SZ5	nunication on a given general or subtechnical topic, for which the student is trained by reading texts or listening to them. Spanish for Beginners Z5	Z	1
	upplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish	_	•
	ch course based on the course book will end with presentations and, finally, a written and oral examination.		
14TM	Engineering Mechanics	Z,ZK	4
-	a link-up between the theoretical mechanics of rigid bodies and engineering disciplines dealing with the stress and strain ana		
14TEM	Engineering Mechanics	Z,ZK	6
-	presents a link-up between the theoretical mechanics of rigid bodies and engineering disciplines dealing with stress and strai ture mechanics, etc.). Principles of statics, kinematics, and dynamics and their application.	n analysis of real	structure parts
12TAIS	Ion Beam Techniques and Applications.	ZK	3
_	of ion beam, charged particle optics, interaction of ion with solid matter, technological and analytical applications.		
TV-1	Physical Education	Z	1
TV-2	Physical Education	Z	1
TV-3	Physical education	Z	1
TV-4	Physical education	Z	1
01DYSY	Theory of Dynamic Systems	ZK	3
· · · · · · · · · · · · · · · · · · ·	introduction to system theory with emphasis on control theory and understanding of the fundamental concepts of systems a	=	
	the dynamical behavior of systems as well as provide the necessary mathematical background. Internal and external system iriable, impulse response and transfer function, polynomial matrix, and fractional representations. Stability, controllability, obs-	•	
	asis always being on fundamental results. State feedback, state estimation, and eigenvalue assignment are discussed in detail.	•	
are also parameterized	using polynomial and fractional system representations. The emphasis in this primer is on linear time-invariant systems, both	continuous and	discrete time.
01TKO	Theory of Codes	ZK	2
	I in error detecting and error correcting codes.	714	•
01TOP	Topology e systematization and deepening the knowledge of general topology.	ZK	2
16MCRB	Transport of Ionizing Radiation and Monte Carlo Method	Z,ZK	4
	s of Monte Carlo method and its use for radiation transport simulation, selected concepts of probability theory and mathemat	· '	-
	rpes of radiation and their use for stochastic modeling of their substance transport. Model description concepts, geometric models	-	
	of measured variables and parameters. Statistical evaluation of reliability of modeling results, variance reduction methods, pro	•	
	NP program, its possibilities and use. Procedures for the practical use of the program for typical tasks in the field of dosimetry	y, application of io	nızıng radiation,
18INTA	systems, radiation protection and medical applications. Development of internet applications	KZ	4
	overview of modern technologies for the development of web applications. Students will learn basic web languages and con-		-
=	o relational database systems. The tutorials are dedicated to practical examples of building web applications, from the simple		
is oriented primarily tow	ards backend technologies and using the Python languages, but covers also frontend frameworks and JavaScript.		

01DYK	Introduction to Continuum Dynamics	Z	2
	uction to the mathematical description of continuum dynamics. It summarizes the necessary mathematical apparatus with er ns, and integration on manifolds. It includes the basic concepts of continuum mechanics such as strain and stress tensors o	=	
	derive the fundamental laws of conservation of mass, momentum, angular momentum, and energy in integral and differential		•
these conservation laws	are adapted to the case of viscous and inviscid fluid and linear and nonlinear elastic body.		
16ZIVB	Introduction to Ecology	KZ	2
The subject inform about indicators and sustainal	it basic of the ecologic principles, terms and ideas. It covers overview information regarding to particular components of the er ole development	nvironment and eva	aluate economic
02UFEC	Introduction to Elementary Particle Physics	Z	2
	easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the subject	1 1	_
11UFPLN	Introduction to Solid State Physics	ZK	2
	ure is to introduce the undergraduate students to the study of the solid state physics.	7 714	
17UINZ The course is devoted to	Introduction to Engineering o an introduction to the engineering profession. Students will gradually learn the characteristics and specialties of engineerin	Z,ZK	3 an overview of
	ngineering disciplines, such as the basics of materials science, manufacturing technology, quality control and assurance and	-	
focus on some issues o	f R&D activities organization and on selected parts of technical drawings and the work with AutoCAD code.		
02UKP	Introduction to Curves and Surfaces	Z	2
-	s an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts plained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential p		
calculated by students	prairieu. In the surface theory we introduce hist and second fundamental forms and mean and Gaussian curvature. Essential p	bart of the lecture a	ile tile examples
12ULT	Introduction to Laser Technique	Z,ZK	3
Overview of electromage 12UMF	netic radiation sources; laser principle; classification of lasers; characterization and rough application of various types of lase Introduction to Modern Physics	ers; laser safety pr	ecautions.
_	INTRODUCTION TO INFOGER PHYSICS to be a concise introduction to modern / nonclassical physics for students who have already had basic classical physics cours	. – .	-
in a computational labor		,	
18UOA	Introduction into Object Oriented Architecture	Z,ZK	4
01UTIZ	Introduction to Theoretical Informatics	ZK	2
11UVOD	Introduction to Specialization	Z	2
12VAK	ure is to introduce the undergraduate students to the physical master degree study programmes.	KZ	4
	Vacuum Physics and Technology concepts and relations and relations; flow of rarefied gas. Interaction of gas with surface of solid surface; sorption, desorption; evaporation	1	=
-	cuum generation. Pumping process. Pumps. Vacuum measurements: vacuum gauges of total and partial pressure; pumping	-	-
searching for leaks. Mat	erials and vacuum instalation parts. Practical exercises.		
12PYTH	Scientific Programming in Python	Z	2
	s to learn the fundamentals of the modern Python programming language with a focus on scientific computing. Emphasis is p performed in an interactive form of practical exercises, whose topics can be tailored to the content of other subjects or studi		
•	earch. In the introductory part of the course, students learn the basic features of Python?from basic types to object oriented		
-	se focuses on specific features of Python for scientific programming. Presented are the main numerical libraries NumPy, SciF	Py and the Matplot	lib graphics
-	generate efficient code, how to combine Python with other languages, what tools are available.	7	
12VTV The students get familia	Scientific and Technical Computing Ir with methods of solving of computational problems in the scientific and technical practice, and with methods of their progra	Z amming The cours	e is oriented
-	in the Fortran language.	g sca.c	
12VFT	High Frequency and Impulse Circuitry	Z,ZK	2
-	o collect advanced knowledge in high frequency technics and high speed events. The course is focused on Maxwell equation	n solution, Gunn's	diodes, high
17VYR	rowaves guidelines, striplines, oscillators, amplifiers and pulse generators. Research Reactors	ZK	2
	research reactors and their applications for the need of research and industry. Students get familiar with research reactor types	1	
	equipment needed for particular applications and their specifics. The course is supported by technical visit to research reac	=	. 0
12EPR1	Basic Electronics Practicum 1	KZ	3
· · · · · · · · · · · · · · · · · · ·	n is 1) to acquire basics skills in electronics and 2) to learn independent problem solving, formulation of a task and formulation	on of the results. T	he practicum
consists of blocks lastin	Basic Electronics Practicum 2	KZ	3
	n is 1) to acquire basics skills in electronics and 2) to learn independent problem solving, formulation of a task and formulation	1	_
consists of blocks lastin			
12ZPLT	Basic Laser Technique Laboratory	KZ	6
	AG laser, laser crystal, laser discharge lamp, laser cavity, resonator, free-running, Q-switching, laser amplifier. second harmod: d:YAG laser, CO2 laser marking, laser materials properties, non-linear transmission, laser beam transverse profile, acousto-	-	lischarges, laser
12ZPOP	Basic Optical Laboratory	KZ	6
	es give advanced practical skills by experimental work in optics and optoelectronics. Laboratory records must be elaborated.	112	O
18ZALG	Basics of Algorithmization	Z,ZK	4
	to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of the selected methods for t		
16AMMB Basic principles technic	Fundamentals of Analytical Measurement Methods al performance and utilization of methods of chemical analysis. Basic methodology of analytical determination, gravimetry, t	ZK	2 notentiometry
	etry, polarimetry, UV-VIS spectroscopy, atomic emission and absorption spectroscopy, infrared and Raman spectroscopy, X-		-
	spin resonance, mass spectrometry, thermometric methods, gas and liquid chromatography.		
16ZBAF1	Fundamentals of Human Biology, Anatomy and Physiology 1	Z,ZK	4
	rstems, non-cellular and cellular organisms, prokaryotic and eukaryotic cell. Molecular and cell biology. Biopolymers. Molecul I human anatomy. Basics of medical terminology. Overview of tissues. Skeleton. Muscle anatomy in general. Digestive syster	_	=
-	rnuman anatomy. Basics of medical terminology. Overview of tissues, Skeleton, Muscle anatomy in general, Digestive system of respiration. Excretory and genital tract.	n and its physiolo(yy. rrespiiatury
16ZBAF2	Fundamentals of Human Biology, Anatomy and Physiology 2	Z,ZK	4
Heart and physiology of	cardiac activity. General anatomy of blood vessels, main arteries of the body, overview of veins and physiology of blood, blo	od clotting. Overvi	ew of nerves.
CNS. Visual system and	l physiology of the visual system. Auditory and vestibular system and physiology of hearing and balance. Skin, endocrine gla	ands.	

16ZDOZ1	Fundamentals of Radiation Dosimetry 1	Z,ZK	4
	nd objectives of dosimetry. Quantities and units used for description of sources, fields, interactions of ionizing radiation, ionization,	ations, energy tra	nsfer and
	als of the effects of ionizing radiation.		
16ZDOZ2	Fundamentals of Radiation Dosimetry 2	ZK	. 2
_	cal effects of ionizing radiation. Quantities and units used in radiation protection. Recommendations of ICRP and ICRU. Principl tion of activity and neutron source emission. Measurements of absorbed dose and exposure.	es and methods o	r measurements
17ZEH	Basics of Economic Assessment	ZK	2
	he economic evaluation of Nuclear power plants. Introductory lectures are concerned with an introduction to economy and the		
	es continued with insight into the business and managerial economics, explanation of the concepts of incomes, expenses, etc.	· · · · · · · · · · · · · · · · · · ·	
	ation. Second part of lectures is focused on evaluation of nuclear power plants - the fuel cycle and operations of NPP.		
17ZEL	Basics of Electronics	KZ	3
Lectures provide basic	nformation of electronics. In the beginning, lectures are devoted to passive components - resistors, capacitors, inductors and	solution of electr	ical circuits with
them. Next, lectures dea	Il with semiconductor components (standard, Zener, capacitive, LED), bipolar, unipolar transistors and semiconductor compo	onents with more	layers (thyristors
	ntinue with general amplifiers and operational amplifiers. Finally, lectures deal with digital circuits, digital/analog and analog/d	ligital converters.	Lectures are
completed with electron			
12ZEL1	Basic Electronics 1	Z,ZK	3
	mary knowledge of circuit theory concerning principles of electronic circuits in both stationary and harmonic stable state. Cir and complex method are explained. Proper circuit analysis is also lectured. The subject's final part deals with transient effec	=	
12ZEL2			3
	Basic Electronics 2 vith the Basic Electronics 1. Semiconductor elements basic properties are explained. Thecourse's final part deals with basic	Z,ZK	_
02ZFM1	Foundations of Physical Measurements 1	Z	2
	for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however,		
_	al of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired da		•
basic habits of work in a			
02ZFM2	Foundations of Physical Measurements 2	Z	2
This introductory course	is devoted to the essentials of measurements of the most important physical quantities. It is especially recommended to those	e students who a	re going to study
one of the physicas cur	icula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical	al work with meas	urement devices
is involved. Students lea	rn main rules connected with experimental work in physical laboratory.		
11ZFPL	Basic to Solid State Physics	KZ	2
· ·	ntal properties of solids following the regular long distance ordering of atoms in a crystal lattice. Based on the introduced bon	-	
	rystals and their properties are defined. The model of crystalline lattice dynamics in harmonic approximation is described and b		•
· · · · · · · · · · · · · · · · · · ·	c potential of the crystal lattice is introduced and its relation to the following model describing the energetic state of electrons . The special consequences of band approach to the physical properties of solids are elucidated. The aim of the course is to	-	
	nenological basis of physical properties of crystalline solids	Systematically int	louuce and
02ZJF	Nuclear Physics	Z,ZK	6
	ents formidable challenges both experimentally and theoretically, simply because we are dealing with the submicroscopic do	'	_
	ehaviour of objects fails us. The lecture is a basic introduction to very interesting regions of subatomic physics.	main, whore mae	ror our olabolour
02ZJFB	Nuclear Physics B	KZ	3
	ents formidable challenges both experimentally and theoretically, simply because we are dealing with the submicroscopic do		of our classical
intuition regarding the b	ehaviour of objects fails us. The lecture is a basic introduction to very interesting regions of subatomic physics.		
15ZKJE	Nuclear Power Plants Design and Operation	ZK	3
	ate basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, techn		
	nstruction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material sci	ence, chemistry, h	neat transfer and
dosimetry. Creates know	rledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with		
anvironment and to atro	agic importancy of pudgar sources of appray Cives basis knowledge of construction, appration and decommissioning of pug		• • • • • • • • • • • • • • • • • • • •
	egic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear		• • • • • • • • • • • • • • • • • • • •
high level nuclear waste	and spent fuel and their management.	lear power station	s. Informs about
high level nuclear waste 16MEZB	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology	lear power station	s. Informs about
high level nuclear waste 16MEZB The course summarizes	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and unit	lear power station Z,ZK its in metrology. It	s. Informs about 4 summarizes the
high level nuclear waste 16MEZB The course summarizes	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology	lear power station Z,ZK its in metrology. It	s. Informs about 4 summarizes the
high level nuclear waste 16MEZB The course summarizes theoretical and experim	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and unit	lear power station Z,ZK its in metrology. It	s. Informs about 4 summarizes the
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniqual foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sur	Z,ZK its in metrology. It nmary of relevant	4 summarizes the legislation and
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniqual foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sur	Z,ZK its in metrology. It nmary of relevant	4 summarizes the legislation and
high level nuclear waster 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sur Introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory management.	Z,ZK its in metrology. It nmary of relevant Z happed files. Z,ZK	4 summarizes the legislation and 2
high level nuclear waster 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the very summarized to the covers to the covers to the covers the very summarized to the covers t	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory management is processed.	Z,ZK its in metrology. It nmary of relevant Z happed files. Z,ZK metrical optics. Tr	4 summarizes the legislation and 2 2 lee main goal of
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics at	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics of optics electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and good on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves	Z,ZK its in metrology. It nmary of relevant Z happed files. Z,ZK metrical optics. Tr bect to character of s in vacuum (inclu-	s. Informs about 4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics of optics electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and good on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr oect to character of s in vacuum (inclu- informs on consect	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it experies the experiments of the lecture is to obtain, work.	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and good on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is obtains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interferences.	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Troect to character of in vacuum (incluinforms on consecte processes, expected in the control of the co	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it exports two-wave interferences.	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and good on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is obtains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr oect to character of s in vacuum (inclu- informs on consect ce processes, exp ihical form, includi	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements and fundamentals
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it exports two-wave interference of grating diffraction. Ba	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and good on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is obtains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap seed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr oect to character of s in vacuum (inclu- informs on consect ce processes, exp ihical form, includi imit. It takes notice	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements and fundamentals
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it exports two-wave interference of grating diffraction. Bar approach imaging, substitutions	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geon the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next in the lates to be a parameter of the package of the processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap seed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is titutive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr bect to character of in vacuum (inclu- informs on consecte processes, exp chical form, includi- imit. It takes noticets.	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements are fundamentals are on geometrical
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it exports of grating diffraction. Ba approach imaging, subsepticials.	Fundamentals of Ionizing-Radiation Metrology The basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniterated foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geonenthe bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is plains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap seed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics I titutive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument. Introduction to Computer Security 1	Z,ZK its in metrology. It nmary of relevant Z sapped files. Z,ZK metrical optics. Tr sect to character of sin vacuum (incluinforms on consecte processes, exp shical form, includitimit. It takes noticets. Z	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements and fundamentals
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explost of grating diffraction. Ba approach imaging, subsupposed in the supposed in t	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geon the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next in the lates to be a parameter of the package of the processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap seed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is titutive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr sect to character of s in vacuum (inclu- informs on consect ce processes, exp shical form, includi imit. It takes notice ts. Z Z	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in olains elements ng fundamentals e on geometrical
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explost of grating diffraction. Ba approach imaging, subseptically a subseptically approach imaging, subseptically a subseptically approach in the course is supposed in	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and unitental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic surficted foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic surficted foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic surficted foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic surficted for operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory for parameters of optics opti	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr sect to character of sin vacuum (incluinforms on consect or processes, expendical form, including imit. It takes notice ts. Z evoted to informat	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in olains elements ng fundamentals e on geometrical 2 2 ion systems and
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explost of grating diffraction. Ba approach imaging, subseptically a subsequence of the course is resources available at the software) with exercises	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and unitental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure interpretation to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory methodamentals of Optics ery basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geo on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves an attendant medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is a latin sprocesses induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap sed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is titutive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument introduction to Computer Security 1 Basic Work with PC to acquaint students with the basic skills related to working on a personal computer. The introductory part of the course is defectly in PSPE. Emphasis is placed on effective handling of work with office productivity software (text edi in MS Office. The practical content focuses mainly on further use during studies (laboratory reports, research work, bachelo	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr oect to character of s in vacuum (incluinforms on consect corprocesses, exp chical form, includinimit. It takes notice ts. Z evoted to informat tor, spreadsheet a ur's and diploma th	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements are fundamentals to on geometrical 2 2 ion systems and and presentation neses) and in
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explost of grating diffraction. Ba approach imaging, subseption of the course is resources available at the software) with exercises specific practice (hospit	Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and unitental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure and provided in the processes of operating Systems of operating Systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics of optics. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory memory basics of optics of optics. Processes in the optical physics and material effects, basics of nonlinear effects, and geometrical optics of the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect of the bachelor level, broad and general information of optics, giving an essential orientation in the field, especially with respect of the bachelor level, broad and general information of optics, giving an essential orientation in the field, especially with respect of the bachelor level, broad and general information of place the electrodynamic notion of plane waves are material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is defining the processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a graph sed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics it it titutive schema of a paraxial imaging system, and optical aberrati	Z,ZK its in metrology. It nmary of relevant Z apped files. Z,ZK metrical optics. Tr oect to character of s in vacuum (incluinforms on consect corprocesses, exp chical form, includinimit. It takes notice ts. Z evoted to informat tor, spreadsheet a ur's and diploma th	4 summarizes the legislation and 2 2 ne main goal of of the bachelor ding polarization quences in plains elements are fundamentals to on geometrical 2 2 ion systems and and presentation neses) and in
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explose the value of two-wave interference of grating diffraction. Ba approach imaging, subseptically of the course is resources available at the software) with exercises specific practice (hospit home exercises and paresults).	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniquantities and	Z,ZK its in metrology. It inmary of relevant Z sapped files. Z,ZK metrical optics. Treect to character of in vacuum (inclustion on consect or processes, expedical form, including imit. It takes notice ts. Z sevoted to informat tor, spreadsheet a or's and diploma the curity. Completion	s. Informs about 4 summarizes the legislation and 2 see main goal of of the bachelor ding polarization quences in plains elements are fundamentals are on geometrical 2 2 ion systems and and presentation neses) and in an of independent
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it expof two-wave interference of grating diffraction. Bar approach imaging, subseptically subsequences available at the software) with exercises specific practice (hospit home exercises and particular summarized and particular subsequences available at the software) with exercises specific practice (hospit home exercises and particular subsequences available at the software) with exercises and particular subsequences available at the software of the subsequences available at the software of the subsequences and particular subsequences are subsequences.	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniqual foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory meny properties of optics of electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geodon the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is a lains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap sed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is distinctive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument Introduction to Computer Security 1 Basic Work with PC to acquaint students with the basic skills related to working on a personal computer. The introductory part of the course is defected in MS Office. The practical content focuses mainly on further use during studies (laboratory reports, research work, bachelosis, state administration, companies). Other sections summarize basic information about computer hardware, software, and sectionation in exer	Z,ZK its in metrology. It inmary of relevant Z apped files. Z,ZK metrical optics. The cet to character of sin vacuum (includinforms on consect the processes, expendical form, includinimit. It takes notice ts. Z evoted to informat tor, spreadsheet a chr's and diplomat the curity. Completion	4 summarizes the legislation and 2 2 ae main goal of of the bachelor ding polarization quences in plains elements are fundamentals are on geometrical 2 ion systems and and presentation neses) and in an of independent
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it exploses to the value of two-wave interference of grating diffraction. Bar approach imaging, subseption of the course is resources available at the software) with exercises specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course is specific practice (hospit home exercises and patents of the course i	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniqual foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sur Introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory metrology operating systems and application in the field, especially with respect places of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geore in the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect of protection and their applications in interferoneters. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap sed on this diffraction protection at paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument Introduction to Computer Security 1 Basi	Z,ZK its in metrology. It inmary of relevant Z apped files. Z,ZK metrical optics. The cet to character of sin vacuum (inclusinforms on consect the processes, expendical form, including imit. It takes notice ts. Z evoted to informat tor, spreadsheet a or's and diplomat the curity. Completion Z concepts, in order	s. Informs about 4 summarizes the legislation and 2 2 see main goal of of the bachelor ding polarization quences in plains elements are fundamentals are on geometrical 2 2 ion systems and and presentation neses) and in the of independent 2 er to allow critical
high level nuclear waste 16MEZB The course summarizes theoretical and experim regulations. 01ZOS Introduction to structure 12ZAOP The lecture covers the value of the lecture is to obtain, work. Particular topics a effects), and further from anisotropic media, it explost two-wave interference of grating diffraction. Ba approach imaging, subseptically of two-wave interference of grating diffraction. Ba approach imaging, subseptically of the course is resources available at the software) with exercises specific practice (hospit home exercises and particular to the course is orientation in this field.	and spent fuel and their management. Fundamentals of Ionizing-Radiation Metrology the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and uniqual foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic sure introduction to Operating Systems of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Memory meny properties of optics of electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geodon the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respect further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves a material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next is a lains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a grap sed on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics is distinctive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical instrument Introduction to Computer Security 1 Basic Work with PC to acquaint students with the basic skills related to working on a personal computer. The introductory part of the course is defected in MS Office. The practical content focuses mainly on further use during studies (laboratory reports, research work, bachelosis, state administration, companies). Other sections summarize basic information about computer hardware, software, and sectionation in exer	Z,ZK its in metrology. It inmary of relevant Z apped files. Z,ZK metrical optics. Treect to character of invacuum (inclusinforms on consect the processes, expendical form, including imit. It takes notice that tor, spreadsheet a virs and diplomat the curity. Completion in the consection of the conse	s. Informs about 4 summarizes the legislation and 2 2 see main goal of of the bachelor ding polarization quences in plains elements and fundamentals are on geometrical 2 2 ion systems and and presentation neses) and in the of independent 2 er to allow critical or people, what

02ZSM	Introduction to the Standard Model	ZK	2
Particles, leptons, hadr	ons, baryons, mesons, symmetry, symmetry group, quarks, gluons, partons, standard model of electroweak and strong intera	ctions, quantum	chromodynamics
(QCD), cross section, s	scattering cross section.		
16ZEDB	Basics of Experimental Data Processing	ZK	2
Statistical analysis of e	xperimental data; univariate data; calibration; regression; multivariate data.		
14ZZKS	Testing and Processing of Metals and Alloys	KZ	4
Abstract: Tension tests,	hardness, impact toughness, technological testing, fatigue testing, creep testing. Light microscopy, preparation of specimens	for macro- and m	icro-observation.
Casting, forming, weldi	ng, soldering, brazing, powder metallurgy, mechanical machining. Copper alloys, aluminium alloys, titanium alloys, special allo	s of non-ferrous	metals. Technical
drawing and CAD.			
12ZDP	Data Processing for Publishing	Z	2
Typography, computer	computer-assisted publishing, coding of text, OCR (optical code recognition), DTP (desk top publishing), programming langua	ages for typesettir	ng (TeX, LaTeX,
HTML, XML,, publish	ing into www pages, cloud computing,commonly used graphical formats, formatting of typical data (PDF, PS, DOC, DOCX, P	PS, PPSX, RFT, 2	XLS, XLSX),
multimedial presentation	ons, multimedial formats.		

List of courses of this pass:

Code	Name of the course	Completion	Credits
00EKOT	Economy in Technology	Z	1
	The course introduces the basics of micro- and macroeconomics.	•	
00ETV	Ethics of Science and Technology	Z	1
00MAM1	Essentials of High School Course 1	Z	1
00MAM2	Essentials of High School Math Course 2	Z	1
	Review of basics of high school mathematics.	1	I
00PT	Preparatory Week	Z	2
00RET	Rhetoric	Z	1
The course is foc	used 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	integral part of the	e course.
00UPRA	Introduction to Law	Z	1
00UPSY	Introduction to Psychology	Z	1
01ALG	Algebra	ZK	4
After an introduction	on into the set theory standard algebraic structures are dealt with: groups, rings, fields, modules, linear algebras, lattices, Boolean algebras, Boolean algebras	I .	i nomials ove
	commutative fields.		
01ALGE	Algebra	Z,ZK	6
Firstly, the Peano a	xioms are treated in detail. Elements of the set theory cover only: equivalence and subvalence, the Cantorov-Bernstein theorem, the	axiom of choice an	d equivalen
statements, defini	tion of ordinals and cardinals. Further standard algebraic structures are addressed: semigroups, monoids, groups, rings, integral don	nains, principal idea	al domains,
	fields, lattices. Independent chapters are devoted to divisibility in integral domains and to finite fields.		
01DEM	History of Mathematics	Z	1
The subject has the	e form of regular seminars where the members of the department of mathematics, but also invited speakers - specialists in the field - c	ive their talks on va	roius topics
	from the history of mathematics.		
01DIFR	Differential Equations	Z,ZK	4
The course contain	ns introduction in the solution of ordinary differential equations. It contains a survey of equation types solvable analytically, basics of t	ne existence theory	, solution o
	linear types of equations and introduction in the theory of boundary-value problems.		
01DIM1	Discrete Mathematics 1	Z	2
	The seminar is devoted to elementary number theory and applications. It includes individual problem solving.		
01DIM2	Discrete Mathematics 2	Z	2
	The seminar is devoted to recurrence relations. It includes individual problem solving.		
01DIM3	Discrete Mathematics 3	Z	2
The subject is dev	oted to elementary proofs of non-trivial combinatoriwal identities and to generating functions and their applications. In the seminar st	udents present a p	roblem with
	solution chosen from the given literature.		
01DYK	Introduction to Continuum Dynamics	Z	2
This course is a	n introduction to the mathematical description of continuum dynamics. It summarizes the necessary mathematical apparatus with em	phasis on vector a	nd tensor
	al forms, and integration on manifolds. It includes the basic concepts of continuum mechanics such as strain and stress tensors or su		
of which it is possib	ole to derive the fundamental laws of conservation of mass, momentum, angular momentum, and energy in integral and differential for	m. In the last part of	the course
	these conservation laws are adapted to the case of viscous and inviscid fluid and linear and nonlinear elastic body.		
01DYSY	Theory of Dynamic Systems	ZK	3
•	des an introduction to system theory with emphasis on control theory and understanding of the fundamental concepts of systems and	•	
-	ding of the dynamical behavior of systems as well as provide the necessary mathematical background. Internal and external system	-	
	state variable, impulse response and transfer function, polynomial matrix, and fractional representations. Stability, controllability, obse	•	
•	emphasis always being on fundamental results. State feedback, state estimation, and eigenvalue assignment are discussed in detail. All	•	
<u>-</u>	erized using polynomial and fractional system representations. The emphasis in this primer is on linear time-invariant systems, both		
01FA1	Functional Analysis 1	Z,ZK	3
Continuing course	of mathematical analysis and algebra introduction to the basics of functional analysis. There are the concepts that students need to use and technical disciplines.	nuerstand the vari	ous priysica
	and technical disciplines.		

01FA2	Functional Analysis 2	Z,ZK	4
The course aims	to present selected fundamental results from functional analysis including basic theorems of the theory of Banach spaces, closed or	erators and their	spectrum,
	Hilbert-Schmidt operators, spectral decomposition of bounded self-adjoint operators.		
01FAN1	Functional Analysis 1	Z,ZK	4
Basic notions	and results are addressed concerning successively topological spaces, metric spaces, topological vector spaces, normed and Banac	h spaces, Hilbert	spaces.
01FKP	Functions of Complex Variable	ZK	2
The course develop	os advanced properties of systems of holomorphic functions, Ascoli-Vitali's theorem, advanced properties of conformal mappings, trai	nscendental and m	neromorphic
fui	nctions. Basic properties of complex functions of several complex variables together with improper line integrals and its applications a	re presented.	
01FKPB	Functions of Complex Variable B	Z	2
	os advanced properties of systems of holomorphic functions, Ascoli-Vitali's theorem, advanced properties of conformal mappings, trai		neromorphic
	nctions. Basic properties of complex functions of several complex variables together with improper line integrals and its applications a	re presented.	
01GTDR	Geometric Theory of Ordinary Differential Equations	Z	2
	sts of the qualitative theory of ODEs dealing with the geometric and topological properties of the solution. In this context, we mention su	•	pasic results
	of the existence and uniqueness, continuous dependence on parameters and initial conditions. Main part is devoted to the autonomou	us systems.	
01JEPR	Simple Compilers	Z	2
	Lexical and syntax analysis, code generation, simple optimizations, development environments, reflection.		
01LA1	Linear Algebra 1	Z	1
	The subject summarizes the most important notions and theorems related to the study of vector spaces.		
01LAA2	Linear Algebra A2	Z,ZK	6
The subject is o	evoted to the theory of linear operators on vector spaces (mainly equipped with scalar product). In the same time we introduce the co	orresponding matri	x theory.
01LAB2	Linear Algebra B2	Z,ZK	4
The subject su	mmarizes the most important notions and theorems related to the matrix theory, to the study of vector spaces with a scalar product a		ometry.
01LAL	Linear Algebra 1	Z	2
_	. Linear dependence and independence. 3. Basis and dimension. 4. Subspaces of vector spaces. 5. Linear mappings. 6. Matrices of li	near mappings. 7.	l
	theorem.	5	
01LALA	Linear Algebra A 1, Examination	ZK	5
01LALB	Linear Algebra B 1, Examination	ZK	3
		Z,ZK	5
01LAP	Linear Algebra Plus	Z,ZK	5
041.47	The subject summarizes the most important notions and theorems related to the study of vector spaces.	717	
01LAZ	Linear Algebra 1, Examination	ZK	2
041.15	The content of this subject is the exam in Linear Algebra 1.	7 714	
01LIP	Linear Programming	Z,ZK	3
We study special p	roblems about constrained extremum problems for multivariable functions (the function is linear and the constraint equations are given	by linear equation	is and linear
	inequalities).		
01LNA1	Linear Algebra 1	Z	2
	The subject summarizes the most important notions and theorems related to the study of vector spaces.		ı
01MA1	Calculus 1	Z	4
	Basic course of real analysis (functions of one real variable, differential calculus).		
01MAA2	Calculus A2	Z,ZK	10
	ibject is devoted mainly to the integral calculus of the real functions with one real variable and to the theory of the number series and		
01MAA3	Calculus A3	Z,ZK	10
	Function sequences and series, foundation of topology, and differential calculus of several variables.		
01MAA4	Calculus A4	Z,ZK	10
	Integration of functions of several variables, measure theory, foundation of differential and integral calculus on manifolds and comple	x analysis.	
01MAB2	Calculus B2	Z,ZK	7
	Basic calculus (real analysis, indefinite and definite integrals and series).		
01MAB3	Calculus B3	Z,ZK	7
The course is devo	ted to functional sequences and series, theory of ordinary differential equations, theory of quadratic forms and surfaces, and general th	eory of metric space	ces, normed
	and prehilbert?s spaces.		
01MAB4	Calculus B4	Z,ZK	7
The course is de	evoted properties of functions of several variables, differential and integral calculus. Furthermore, the measure theory and theory of Lo	ebesgue integral is	s studied.
01MAN	Calculus 1	Z	4
	Basic calculus (real analysis, functions of one real variable, differential calculus).		ı
01MANA	Calculus A 1, Examination	ZK	6
	Examination of knowledge about stuff lectured in the 01MAN course.		,
01MANB	Calculus B 1, Examination	ZK	4
0	Examination of knowledge about stuff lectured in the 01MAN course.		
01MAP	Calculus Plus	ZK	6
01MAPR	Markov processes		4
	·	Z,ZK	
01MASC	Mathematical Statistics - Seminar	Z F Eighar informatio	2
	voted to practical use of statistical methods studied in the course Mathematical Statistics 01MAS. The tutorial deals with calculation o inding unbiased estimators with minimal variance, parameter estimation by method of moments and method of maximum likelihood, or		
	inding unblased estimators with minimal variance, parameter estimation by method or moments and method or maximum likelihood, o pothesis testing using the Neyman-Pearson lemma and likelihood ratio, calculation of confidence intervals and non-parametric densi		ii regions iof
-		-	А
01MAZ	Calculus 1, Examination	ZK	4
01MMF	Methods of Mathematical Physics	Z,ZK	6
	es an introduction to the theory of distributions with applications to solutions of partial differential equations with constant coefficients, f		
are discussed for t	he case of a continuous kernel on a compact set as well as Sturm-Liouville operators on bounded intervals, and applications of the s to the solution of some boundary value problems and mixed problems.	eparation of variat	nes method
1	to the solution of some boundary value problems and mixed problems.		

01MMPV	Mathematical Models of Groundwater Flow	KZ	2
The course prov	ides an overview of computational methods for selected groundwater flow problems. The first part of the course is devoted to mathen	natical formulations	s of these
	problems. The second part is aimed at selected numerical methods, emphasizing implementation issues related to these methods	iods.	
01NME2	Numerical Methods 2	KZ	2
	ed to numerical solution of boundary-value problems and intial-boundary-value problems for ordinary and partial differential equations.		s converting
bound	dary-value problems to initial-value problems and finite-difference methods for elliptic, parabolic and first-order hyperbolic partial differ	rential equations.	-
01NUM1	Numerical Mathematics 1	Z,ZK	4
	uces to numerical methods for solving the basic problems arising from technical and research problems. The accent is put on a good	,	the root of
	theoretical methods.	· ·	
01PERI	Programming of Peripherals Devices	Z	2
	rganization, input and output ports, computer bus. Software libraries for computer peripherals, 3D graphic libraries. Principles of perip		
01POGR1	Computer Graphics 1	7	2
	two-semester "Computer Graphics" course is devoted to the specifics of digital display devices spanning from history up to the state of	f the art technolog	
	ental problems in 2D computer graphics is given together with their solutions. Focus is put on mathematical description of problems and ex	_	
	nowledge previously obtained in a variety of subjects available at FNSPE. The final part of the course covers the applications of com	-	
0	the process of authoring scientific documents and presentations.		
01POGR2	Computer Graphics 2	Z	2
	of the two-semester "Computer Graphics" course begins with a brief introduction to signal theory in the context of aliasing - a phenom		
="	a well structured survey of fundamental problems in 3D computer graphics is given together with their solutions, from the description	· ·	
•	put on mathematical description of problems and explanation of the corresponding algorithms using knowledge previously obtained in		
at FNSPE. The algo	orithm implementation aspect such as data structures design etc. is also a matter of concern. In the last lecture, a number of theoretic	al concepts are de	monstrated
· ·	using Blender, an open-source 3D modeling and rendering software instrument.	·	
01POPJ1	Computers and Natural Language 1	Z	2
	mputational processing and understanding of natural languages. Automatic methods of morphological and syntactic analysis including		
	isambiguation will be discussed. Two-level morphology, tagging and language models, Viterbi algorithm, grammars, chart parsing, pro	_	
01POPJ2	Computers and Natural Language 2	Z	2
	urse is to get acquainted with the broad topic of machine translation (MT). Machine translation is a challenging task that can serve as		
-	implex as natural languages. We cover several rather different approaches to the task as well as issues related to automatic and mar	-	- 1
0. 0,0.0 40 00	quality.	ida. ovaldallori o. i.	anolalion
01POPR	Advanced Probability	Z	2
	evoted to advanced Theory of probability and statistics on measure-theoretic level for general distributions of random variables. We do	_	
	of random variables and convergence criteria. Further, the theory of statistical model estimation and testing is extended for parametric		
01PRA1	Probability and Mathematical Statistics 1	Z,ZK	6
-	voted to the introduction to Theory of probability and statistics on measure-theoretic level for discrete models, continuous distributions		_
		ana gonorai alom	ibationio oi
random variables	We deal with sample an integral characteristics of random variables and variants of limit theorems are derived (LLN_CLT). This know	ledge is further an	plied to the
random variables.	We deal with sample an integral characteristics of random variables and variants of limit theorems are derived (LLN, CLT). This know statistical processing of observations and statistical parametric model estimation.	ledge is further ap	plied to the
	statistical processing of observations and statistical parametric model estimation.		-
01PRA2	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2	ZK	2
01PRA2 The subject is devo	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prin	ZK nciple, Uniformly mo	2 ost powerful
01PRA2 The subject is devo tests, Goodne	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood princes of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame	ZK nciple, Uniformly mo	2 ost powerful mples.
01PRA2 The subject is devo tests, Goodne 01PRST	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics	ZK nciple, Uniformly mo of the specific exar Z,ZK	2 ost powerful mples.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics e of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K	2 ost powerful mples. 4 colmogorov
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notice	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics e of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K orems are stated a	2 ost powerful mples. 4 colmogorov
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and cons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elbasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing.	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K orems are stated a ng are explained.	2 ost powerful mples. 4 Colmogorov and proved.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and cons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ	2 ost powerful mples. 4 (olmogorov and proved.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course course definition.	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and cons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory is build gradually beginning with the classical definition and the probability theory and the probability and the probability theory is build gradually	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K	2 post powerful mples. 4 Colmogorov and proved. 4 Colmogorov
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notice On the O1PRSTB It is a basic course definition. The notice O1PRSTB	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the	ZK aciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a	2 post powerful mples. 4 Colmogorov and proved. 4 Colmogorov
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the other course definition. The notion on the other course definition.	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the passing of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the passing of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters.	ZK aciple, Uniformly mo of the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained.	2 ost powerful mples. 4 Colmogorov and proved. 4 Colmogorov and proved.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notice On the O1PRSTB It is a basic course definition. The notice O1PRSTB	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the probability and th	ZK aciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a	2 post powerful mples. 4 Colmogorov and proved. 4 Colmogorov
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion the 01PRSTB It is a basic course definition. The notion the notion the 101PSL	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the course is devoted to the basics and facilities of computer typography, particularly to the system LaTeX.	ZK aciple, Uniformly moof the specific examond the specific examond the specific examond the specific example of the specific	2 ost powerful mples. 4 (olmogorov and proved. 4 (olmogorov and proved. 2
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the notion of the n	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood priress of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the course is devoted to the basics and facilities of computer typography, particularly to the system LaTeX Windows Programming	ZK aciple, Uniformly moof the specific examond the	2 ost powerful mples. 4 Colmogorov and proved. 4 Colmogorov and proved.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the notion on the course definition. The notion on the notion on the 01PSL 01PW Simple	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood pringless of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame and probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit there is basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B are of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit there is basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the parameters and hypothesis testing the parameters and facilities of computer typography, particularly to the system LaTeX. Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identification.	ZK nciple, Uniformly moof the specific example of the	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood pringless of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame and probability theory and mathematical statistics. The probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B are of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of the parameters and hypothesis testing the parameters and hypothesis testing the elephasis of the parameters	ZK nciple, Uniformly moof the specific example of the	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood pring as of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elephasis of this theory the basic methods of mathematical statistics of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated the program of partial differential equations, theory of integral triples.	ZK nciple, Uniformly moof the specific example of the	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF The subject of this	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood pring as of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics a of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elepasm of the properties of t	ZK nciple, Uniformly monof the specific example of the	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6 d solution of
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF The subject of this	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood princes of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elassis of this theory the basic methods of mathematical statistics or computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated in the partial differential equations, theory of generalized functions, classification of partial differential equations, theory of integral tripation of partial differential equations, theory of generalized functions, classification	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6 d solution of
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF The subject of this 01RSWP The course Project	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood princes of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics e of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics Beson of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elephasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing be assisted of mathematical statistics such as estimation of distribution parameters and hypothesis testing be assisted of mathematical statistics of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identification of Mathematical Physics course is solving integral equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equatio	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z z tion and reflection. Z,ZK ansformations, and	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6 d solution of 2 e character.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF The subject of this 01RSWP The course Project	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood princes of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elepasis of this theory the basic methods of mathematical statistics of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated to solving integral equations, theory of generalized functions, classification of partial differential equations, theory of integral trepartial differential equations (boundary value problem for eliptic PDE, mixed boundary problem for eliptic PDE). Project Management of Software Projects management of software projects is ded	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z z tion and reflection. Z,ZK ansformations, and KZ pjects of very divers	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6 d solution of 2 e character.
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the 01PRSTB It is a basic course definition. The notion on the 01PSL 01PW Simple 01RMF The subject of this 01RSWP The course Project The course structure	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood pring as of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one is as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B are of probability theory is build gradually beginning with the classical definition and one is as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elepasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing that the elepasis of this theory the basic methods of mathematical statistics of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated and particularly are partial differential equations, theory of integral transpart of partial differential equations, theory of integral transpart and procedures which are common to many procedures projects in dedicated to an expl	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z z tion and reflection. Z,ZK ansformations, and KZ pjects of very divers nanagement. Speci	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 2 6 d solution of 2 e character. iffic attention
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the old of the	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prires of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepassic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing that the elepassic of the propagation of mathematical statistics such as estimation of distribution parameters and hypothesis testing that the elepassic of the parameters and hypothesis testing that the elepassic of the propagation of mathematical statistics such as estimation of distribution parameters and hypothesis testing that the elepassic of the parameters and hypothesis testing that the elepassic of the propagation of mathematical statistics such as estimation of distribution parameters and hypothesis testing that the elepassic of the propagation of the propagation of the parameters and hypothesis testing that the elepassic of the propagation of the propagation of parameters and hypothesis testing that the elepassic parameters and hypothesis	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and KZ pjects of very divers nanagement. Speci	2 ost powerful mples. 4 folmogorov and proved. 4 folmogorov and proved. 2 2 6 d solution of 2 e character. Iffic attention 2
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the other of t	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prir ses of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepass of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics Beston or random variable and characteristics of random variable are treated and basic limit the elepass of this theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elepass of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing as a statistic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifical graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifical partial differential equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations (boundary value problem for eliptic PDE, mixed	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and KZ sjects of very divers nanagement. Speci	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 2 6 d solution of 2 e character. iffic attention 2 ercises with
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the old of the	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prir sess of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics e of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the e basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and ones as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ebasic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing a basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing a basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing a basic of this theory the basic methods of mathematical statistics of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifications of windows programs for MS Windows, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations (boundary value problem for eliptic PDE). Project Management of Software Projects ma	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very divers nanagement. Speci	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 2 6 d solution of 2 e character. effic attention 2 ercises with effastructure
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the o1PRSTB It is a basic course definition. The notion on the o1PRSTB It is a basic course definition. The notion on the o1PSL 01PW Simple 01RMF The subject of this 01RSWP The course Project of the course structure 01SITE1 Understanding the TCP/IP communication (PKI). Use in present of the subject of the course structure.	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prir ses of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and ons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ele basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ele basis of this theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ele basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basics and facilities of computer typography, particularly to the system LaTeX. Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifications is solving integral equations, theory of generalized functions, classification of partial differential equations, theory of general functions, classification of partial differential equations, theory of general functions, classification of partial differential equations, theory of general feat functions, classification of partial differential equations (boundary value problem for eliptic PDE, mixed boundary	ZK nciple, Uniformly mod the specific exar Z,ZK continuing till the K orems are stated and are explained. KZ continuing till the K orems are stated and are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very diversionangement. Specificated. Z tocols, practical experies, public key interial control lines, not service of the specific control lines, not service and services.	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. iffic attention 2 ercises with iffrastructure nodems)
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the other of t	statistical processing of observations and statistical parametric model estimation. Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood prir ses of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ele basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ele basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the elevation of the properties of the basics and facilities of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated and partial differential equations, theory of generalized functions, classification of partial differential equations, theory of integral trepartial differential equations, theory of generalized functions, classification of partial differential equations (boundary value problem for eliptic PDE, mixed boundary problem for eliptic PDE). Project Management of Software Projects management of software projects is dedicated to an explanation of general ideas, rules and procedures which are common to many profere	ZK nciple, Uniformly mod the specific exar Z,ZK continuing till the K orems are stated and are explained. KZ continuing till the K orems are stated and are explained. Z continuing till the K orems are stated and are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very diversionangement. Specificated. Z tocols, practical exporities, public key interial control lines, referral control lines,	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. iffic attention 2 ercises with infrastructure nodems) 2
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the other of t	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood printers of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the e basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing as a random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ebasis of this theory the basic methods of mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the ebasic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing a basis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing a large of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the particularly to the system LaTeX. Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificates and particularly to the system LaTeX. Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificates and particularly interesting the program of the particular of partial	ZK nciple, Uniformly mod the specific exar Z,ZK continuing till the K orems are stated and are explained. KZ continuing till the K orems are stated and are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very diversionangement. Specificated. Z tocols, practical experies, public key interial control lines, reconstructions, practical experies.	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. iffic attention 2 ercises with ifrastructure nodems) 2 ercises with
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the old of the	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood printers of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics Probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and sons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and sons as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the programming of the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the course is devoted to the basics and facilities of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated to an explanation of partial differential equations, theory of integral transpart and the partial differential equations, theory of generalized functions, classification of partial differential equations, theory of integral transpart of software projects is dedicated to an explanation of general ideas, rules and procedures which are comm	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and KZ ijects of very divers nanagement. Speci zed. Z tocols, practical ex orities, public key in erial control lines, n Z tocols, practical ex orities, public key in erial control lines, n	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. iffic attention 2 ercises with ifrastructure nodems) 2 ercises with ifrastructure
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the other of t	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood printers of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elastic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elastic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of the basics and facilities of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifications are solving integral equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations, theory	ZK nciple, Uniformly mod the specific exar Z,ZK continuing till the K orems are stated and are explained. KZ continuing till the K orems are stated and are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very diversionangement. Specificated. Z tocols, practical exportities, public key in a control lines, not control lines, public key in a control specifical control lines, not control lines, not control specifical control lines, not control	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. ific attention 2 ercises with offastructure modems) 2 ercises with offastructure modems)
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the old of the	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood princes of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and ones as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and ones as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elassis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing as a statistic of this theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and ones as random variable, distribution for fandom variable and characteristics of random variable are treated and basic limit the elasis of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the particular of the statistics of the properties and facilities of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identific	ZK nciple, Uniformly moof the specific exar Z,ZK continuing till the K orems are stated a ng are explained. KZ continuing till the K orems are stated a ng are explained. Z tion and reflection. Z,ZK ansformations, and KZ ijects of very divers nanagement. Speci zed. Z tocols, practical ex orities, public key in erial control lines, n Z tocols, practical ex orities, public key in erial control lines, n	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. iffic attention 2 ercises with ifrastructure nodems) 2 ercises with ifrastructure
01PRA2 The subject is devo tests, Goodne 01PRST It is a basic course definition. The notion on the other of t	Probability and Mathematical Statistics 2 ted to the statistical techniques for estimation and testing within parametric and nonparametric models such as Maximum likelihood printers of fitness tests of models, confidence regions, etc. We focus on real practical applications of these statistical techniques in frame Probability and Statistics of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elastic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing. Probability and Statistics B of probability theory and mathematical statistics. The probability theory is build gradually beginning with the classical definition and one as random variable, distribution function of random variable and characteristics of random variable are treated and basic limit the elastic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of this theory the basic methods of mathematical statistics such as estimation of distribution parameters and hypothesis testing the basic of the basics and facilities of computer typography, particularly to the system LaTeX Windows Programming graphical programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identificated programs for MS Windows. Basic editing controls. File input and output. User defined components, dynamic type identifications are solving integral equations, theory of generalized functions, classification of partial differential equations, theory of generalized functions, classification of partial differential equations, theory	ZK nciple, Uniformly mod the specific exar Z,ZK continuing till the K orems are stated and are explained. KZ continuing till the K orems are stated and are explained. Z tion and reflection. Z,ZK ansformations, and KZ jects of very diversionangement. Specificated. Z tocols, practical exportities, public key in a control lines, not control lines, public key in a control specification.	2 ost powerful mples. 4 colmogorov and proved. 4 colmogorov and proved. 2 6 d solution of 2 e character. ific attention 2 ercises with offastructure modems) 2 ercises with offastructure modems)

01SOS1	Software Seminar 1	Z	2
	Java, Java Beans, Assembly language programming for microprocessors Intel 80x86		T
01SOS2	Software Seminar 2	Z	2
Graphical libraries	GTK+ and Qt. Development of graphical user interface using C and C++ programming languages. Portable applications for Unix like	operating systems	, especially
	for Linux systems. Portability to Microsoft Windows.		
01SSM1	Seminar of Contemporary Mathematics 1	Z	2
	provides a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic		l
01SSM2	Seminar of Contemporary Mathematics 2	Z	2
This seminar p	provides a different approach to those fields of mathematics that are included in curriculum but also to those that are not part of basic	courses of mathe	matics.
01STR	Statistical Decision Theory	ZK	2
	ted to the statistical techniques for general decision procedures based on optimization of suitable stochastic criterion, their mutual col		pect to their
,	properties and applicability.	•	•
01TKO	Theory of Codes	ZK	2
UTIKO	ı	ZN	
	Algebraic methods used in error detecting and error correcting codes.		
01TOP	Topology	ZK	2
	The aim of lecture is the systematization and deepening the knowledge of general topology.		
01UTIZ	Introduction to Theoretical Informatics	ZK	2
			4
01VYMA	Selected Topics in Mathematics	Z,ZK	
Fourier series: com	plete orthogonal systems, expansion of functions into Fourier series, trigonometric Fourier series and their convergence. Complex ana	lysis: derivative of h	nolomorphic
	functions, integral, Cauchy's theorem, Cauchy's integral formula, singularities, Laurent series, residue theorem.		
01ZOS	Introduction to Operating Systems	Z	2
	tion to structure of operating systems. Processes, thread, memory management. Synchronization of multi=threaded applications. Me	mory mapped files	
01ZPB1	Introduction to Computer Security 1	Z	2
02AMS	Atomic and Molecular Spectroscopy	Z,ZK	4
	The lecture is devoted to atomic and molecular spectroscopy.		•
02DEF1	History of Physics 1	Z	2
Physics and its pla	ace in the system of sciences. The relationship of man and nature. Natural sciences in ancient Orientand Greece, Greek natural philo	sophers, Aristotle.	Physics in
	Archimed. Arabic science, European science in Middle Ages. Renaissance - da Vinci, Giordano Bruno. Copernicus, Kepler, Galileo, H	•	•
. reterment period,	as experimental science. Newton and his work.	ia, gonor ino on ar	o. pyo.oo
000550	·	7	0
02DEF2	History of Physics 2	Z	2
· ·	f classical mechanics after Newton, Bernoulli's, Euler, Lagrange. Historical development of optics, corpuscular and wave approach. E		
electrostatics, galv	vanism, electrodynamics and electromagnetism, Faraday and Maxwell. Thermodynamics and its laws, statistical physics, Boltzmann.	The birth of moder	n quantum
and relativistic p	hysics, Planck and Einstein. Discovery of radioaktivity, structure of atom, atomic nucleus, Rutherford and Bohr. The way to nuclear er	nergy, Elementary	particles,
	standard model. The concept of Nature and Universe of today.		
02DRG	Differential Equations, Symmetries and Groups	Z	4
025.10	The purpose of the lecture is to teach students computation of symmetries of the differential equations.	_	
0051144		7.71/	
02ELMA	Electricity and Magnetism	Z,ZK	6
_	pulomb's law, electrostatic field, Gauss' law. Electric dipole, polarization. Conductors anddielectrics. Electric current and circuits, cond	=	he relativity
theory	z Electrodynamic forces,magnetic field. Magnetic dipole, magnetics. Electromagnetic induction, ac currents. Electromagnetic waves, N	Maxwell equations	
02EXF1	Experimental Physics 1	Z	2
Lecture represents	an introductory course in experimental physics. Students will learn methods of measurement of basic physical quantities and method	ds of measuremen	t evaluation.
02EXF2	Experimental Physics 2	ZK	2
_			l
-	an introductory course in experimental physics. Students will learn methods of measurement of basic physical quantities and method		
02FYS1	Physical Seminar 1	Z	2
The seminar is o	devoted to detailed study of interesting physical problems. It should help students to deeper understanding of fundamentals of physical	s presented in the	course of
Mecha	anics. The problems are chosen, studied and presented by the students themselves, with the possibility to use PC and physical labora	atory equipments.	
02FYS2	Physical Seminar 2	7	2
	levoted to detailed study of interesting physical problems. It should help students to deeper understanding of fundamentals of physics	s presented in the	
	d Magnetism. The problems are chosen studied and presented by the students themselves, with the possibility to use PC and physical	•	
02KF	Quantum Physics	Z,ZK	3
State description	n, wave function, postulates of quantum mechanics, Born s statistical interpretation, expectation values, Schrödinger equation, Heise	enberg uncertainty	principle,
	quantization of angular momentum, solution of simple systems, hydrogen atom.		
02KVAN	Quantum Mechanics	Z,ZK	6
	pes the birth of quantum mechanics and description of one particle and more particles by elements of the Hilbert space as well as its		l
	includes description of observable quantities by operators in the Hilbert space and calculation of their spectra.		
001.054		7	2
02LCF1	Experimental Laboratory 1	Z	2
	Cavendish experiment. Elasticity.Thermal capacities. Electric measurements, Acoustic. Oscillations.		
02LCF2	Experimental Laboratory 2	Z	2
	Electric and magnetic field, microwaves, Xray and gamma rays, geometric optics	•	
02MECH	Mechanics	Z	4
	ics, physical quantities and units. Particle kinematics, basic types of motion and theirsuperposition. Particle dynamics, one-dimension		· -
1	eld, forces innoninertial reference frames. Mechanics of system of free particles, two-body problem, collisions. Mechanics of rigid bod	•	
in central lorde II		y, rotation. I unuali	ionais U
001.17.5::-	continuum mechanics, elasticity, hydrodynamics. Sound.		_
02MECHZ	Mechanics - Examination	ZK	2
	The content of the subject is the examination according to the plan of studies.		
02NSAD	Simulations and Data Analysis Tools	Z	2
	Data analysis and simulations of high energy elementary particle collisions. ROOT and Pythia programs.	1	1
0200		ZK	3
02OR	General Relativity	1	
minoduction to ger	neral theory of relativity: principle of equivalence and principle of general covariance, parallel transport and geodesic equation, gravitational law. Schwarzschild solution of the Finstein equations, homogeneous and isotropic cosmological mode		valure and
	Einstein's drayitational law. Schwarzschild solution of the Einstein equations, homogeneous and isotronic cosmological mode	ΔIC .	

02PRA1	Experimental Laboratory 1	KZ	6
Lecture is intended	d especially for students who intend to study some of the physical specializations of FNSPE(branch Physical Engineering, Nuclear E	ngineering).But it	t can be also
attended by student	ts interested in the otherspecializations. In Experimental laboratory students learn how to prepare for experiments (including work with the	eliterature), the im	nplementation
of the measuremer	nt (acquire of different experimental procedures and routines), willteach writing the records of measurement, processing and evaluati	on of results. At the	ne same time
	practically extendthe knowledge gained in lectures on physics.		
02PRA2	Experimental Laboratory 2	KZ	6
	d especially for students who intend to study some of the physical specializations of FNSPE(branch Physical Engineering, Nuclear E		
	ts interested in the otherspecializations. In Experimental laboratory students learn how to prepare for experiments (including work with th nt (acquire of different experimental procedures and routines), willteach writing the records of measurement, processing and evaluati	•	
of the measuremen	practically extend the knowledge gained in lectures on physics.	on or results. At ti	ie same ume
02RQGP1	Seminar on Quark-Gluon Plasma 1	Z	1 1
02NQO1 1	The aim of the seminar is discuss the selection of the most fundamental articles in heavy ion physics.	_	' '
02RQGP2	Seminar on Quark-Gluon Plasma 2	Z	1
OZINGOI Z	The aim of the seminar is discuss the selection of the most fundamental articles in heavy ion physics.	_	' '
02SMF	Seminar of Mathematical Physics	Z	2
	ne seminar is to iluminate mathematical physics by virtue of solved examples. It is supposed that the teachers of the physics departm	_	
	concerning their scientific activities that could become the topics of the student?s bachelor theses in the next year		
02SPRA1	Special Practicum 1	KZ	6
Physics measurem	nent focused on instrumental techniques that are mainly used in physics and technical professions. Topics of each parts are chosen s	o that students c	an familiarize
	with advanced pats of experimental physics and metrology.		
02SPRA2	Special Practicum 2	KZ	6
Physics measurem	nent focused on instrumental techniques that are mainly used in physics and technical professions. Topics of each parts are chosen s	o that students ca	an familiarize
	with advanced pats of experimental physics and metrology.		
02TEF1	Theoretical Physics 1	Z,ZK	4
	troduction to analytical mechanics. The students acquire knowledge of the basic concepts of the Lagrange and Hamiltonian formalism		
•	dynamics (Newton's, Lagrange, Hamilton and Hamilton-Jacobi equations). The efficiency of these methods is illustrated on elementar		
problem, the moti-	on of a system of constrained mass points, and of a rigid body. Advanced parts of the course cover differential and integral principles the first part of the course of classical theoretical physics (02TEF1, 02TEF2).	or mechanics. Ir	ne subject is
02TEF2	Theoretical Physics 2	Z,ZK	4
	ITIEOTETICAL PHYSICS 2 Isformations in physics. Mechanics of point mass, rigid body and continuum. The special theory of relativity: relativistic mechanics an		1 -
	me. Classical electrodynamics: Maxwell's equations in the Minkowski space-time, electromagnetic waves in dielectric media, electror		
	approximation.	ag.rono radiano.	
02TER	Heat and Molecular Physics	Z.ZK	4
	n of materials, heat transfer; stationary and non-stationary heat conduction, heat transfer and penetration; 1st and 2nd thermodynam	,	and real gas,
	rational contraction and the contraction of the con		
entropy; non-cnemi	ical systems: dielectric and magnetic materials; Maxwell relations and thermodynamic potentials; kinetic theory: Maxwell's velocity dis	tribution,equiparti	tion theorem.
02TSFA	ical systems: dielectric and magnetic materials; Maxwell relations and thermodynamic potentials; kinetic theory: Maxwell's velocity dis Thermodynamics and Statistical Physics	tribution,equiparti	tion theorem.
02TSFA Foundation of therm	Thermodynamics and Statistical Physics nodynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel	Z,ZK ier principle. Statis	4 stical entropy.
02TSFA Foundation of therm	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical	Z,ZK ier principle. Statis	4 stical entropy.
02TSFA Foundation of thern Basics of many boo	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena.	Z,ZK ier principle. Stati ensemble, Ferm	4 stical entropy. i gas, models
02TSFA Foundation of therm Basics of many boo	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics	Z,ZK ier principle. Statie ensemble, Fermi	4 stical entropy. i gas, models
02TSFA Foundation of therm Basics of many boo 02UFEC The cours	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se	Z,ZK ier principle. Statis ensemble, Fermi Z ubject are presen	4 stical entropy. i gas, models 2 ted.
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the su Introduction to Curves and Surfaces	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present	4 stical entropy. i gas, models 2 ted. 2
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are	4 stical entropy. i gas, models 2 ted. 2 introduced
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are	4 stical entropy. i gas, models 2 ted. 2 introduced
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the su Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are of the lecture are	4 stical entropy. i gas, models 2 ted. 2 introduced the examples
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le Frenets formulae an	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are of the lecture are	4 stical entropy. i gas, models 2 ted. 2 introduced the examples
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le Frenets formulae an	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the su Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are of the lecture are Z,ZK ation, interference	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction,
02TSFA Foundation of therm Basics of many boo 02UFEC The cours 02UKP The goal of the le Frenets formulae an	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Bro equation, stationary states and spectra of finite systems.	Z,ZK ier principle. Static ensemble, Fermi Z ubject are presen Z or the curves are of the lecture are Z,ZK ation, interference	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction,
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broequation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK attion, interference uglie waves,the So	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desi	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the set Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogen equation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it can be a controlled to the provided that the provided the provided physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it can be a controlled to the provided that	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the So an be attended b	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desi	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the set Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguntion, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it can be a controduced to the lecture is to introduce the basics of physical measurements, the methods of processing and evaluation of acquired dates.	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the So an be attended b	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desirent other branches. T	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarized metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogen optics introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogen optics introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogen optics introduced by the stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introduce basics of physical measurements, the methods of processing and evaluation of acquired data basic habits of work in a physics lab.	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the So Z an be attended b a on a PC. Studen	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desi other branches. T	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state of the sta	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the Solution on a PC. Student	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desirent of the lecture is desirent of the lecture is desirent of the lecture of the lectu	Thermodynamics and Statistical Physics modynamics and statistical Physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics and Atomic Physics and Atomic Physics and Atomic Physics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogentation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introduce the basics of physical measurements, the methods of processing and evaluation of acquired data basic habits of work in a physics lab. Foundations of Physical Measurements 2 pourse is devoted to the essentials of measurements of the most important physical quantities. It is especially recommended to those so	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So a on a PC. Student Z tudents who are guited.	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desirent of the lecture is desirent of the lecture is desirent of the lecture of the lectu	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics and in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarized metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogenia of Physical Measurements Foundations of Physical Measurements Tomography of Physical Measurements Foundations of Physical Measu	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So a on a PC. Student Z tudents who are guited.	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the le Frenets formulae an 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desi other branches. T 02ZFM2 This introductory co	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state of the sum of the differential geometry of simple manifolds - curves and Surfaces recture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the sum of the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential partical calculated by students Waves, Optics and Atomic Physics In mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarized metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference aglie waves,the So Z an be attended be a on a PC. Student Students who are gork with measure	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the st Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarize metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Bro equation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introduce the basics of physical measurements, the methods of processing and evaluation of acquired dat basic habits of work in a physical physical processing and evaluation of acquired dat basic habits of work in a physical quantities. It is especially recommended to those s curricula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical w is involved. Students learn main rules connected with experimental work in physical laboratory. Nuclear Physics	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference orglie waves, the So a on a PC. Students who are gork with measure Z,ZK	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics see provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state of the sum of the differential geometry of simple manifolds - curves and Surfaces recture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the sum of the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential partical calculated by students Waves, Optics and Atomic Physics In mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarized metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broguetical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So Z an be attended be a on a PC. Students who are gork with measure Z,ZK n, where much of	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the se introduction to the differential geometry of simple manifolds - curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarizate metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Brogerial optics in the physics of physical Measurements 1 Introduction to ferminal production toquantum physics lab.	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So Z an be attended be a on a PC. Students who are gork with measure Z,ZK n, where much of	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the si Introduction to Curves and Surfaces ecture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Bro equation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 Gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired dat basic habits of work in a physical quantities. It is especially recommended to those so curricula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical w is involved. Students learn main rules connected with experimental work in physical laboratory. Nuclear Physics presents formidable challenges both experimentally and theoretically, simply because we are dealing with the submi	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So a on a PC. Student Z tudents who are gork with measure Z,ZK n, where much of hysics.	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the si Introduction to Curves and Surfaces secture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarizal metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broequation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired dat basic habits of work in a physical laboratory. Foundations of Physical Measurements 2 Durse is devoted to the essentials of measurements of the most important physical quantities. It is especially recommended to those is a curricular - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical we is involved. Students learn main rules connected with experimental work in physical labo	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So a on a PC. Student Z tudents who are gork with measure Z,ZK n, where much of hysics. KZ n, where much of	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the st Introduction to Curves and Surfaces secture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polarize metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Bro equation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it of the goal of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired dat basic habits of work in a physical application of acquired dat basic habits of work in a physical quantities. It is especially recommended to those is curricula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical w is involved. Students learn main rules connected with experimental work in physical laboratory. Nuclear Physics Nuclear Physics B presents formidable challenges	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference or glie waves, the So a on a PC. Student Z tudents who are gork with measure Z,ZK n, where much of hysics. KZ n, where much of	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 c, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter formulae and the second control of the lefter formulae and the second control of the physicas 02ZFM1 The lecture is designated of the physicas 02ZFM2 This introductory of the physicas 02ZJF This scientific field 02ZJFB This scientific field	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the st Introduction to Curves and Surfaces secture is an introduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts of the explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential part calculated by students Waves, Optics and Atomic Physics a in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Bro equation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it or he goal of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired dat basic habits of work in a physics lab. Foundations of Physical Measurements 2 purse is devoted to the essentials of measurements of the most important physical quantities. It is especially recommended to those s is curricula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical w is involved. Students learn main rules connected with experimental work in physical laboratory.	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the Se a on a PC. Student Z tudents who are g ork with measure Z,ZK n, where much of hysics. ZK	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical 3 f our classical
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the second of the lefter of the physicas 02ZFM2 This introductory of the physicas 02ZJF This scientific field 02ZJFB This scientific field 02ZSM Particles, leptons, for the lefter of the physicas	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the sintroduction to the differential geometry of simple manifolds - curves and two-dimensional surfaces. The basic concepts for explained. In the surface theory we introduce first and second fundamental forms and mean and Gaussian curvature. Essential partical calculated by students Waves, Optics and Atomic Physics and in mechanics and electromagnetism: modes, standing and travelling waves, wave packets indispersive media. Wave optics: polariza metrical optics. Introduction toquantum physics: black body radiation, quantum of energy, photoeffect, the Compton effect, the de Broequation, stationary states and spectra of finite systems. Foundations of Physical Measurements 1 gned for students of physical specializations (Experimental particle physics, Physical engineering, Nuclear engineering), however, it to the goal of the lecture is to introducethe basics of physical measurements, the methods of processing and evaluation of acquired data basic habits of work in a physics lab. Foundations of Physical Measurements 2 Source is devoted to the essentials of measurements of the most important physical quantities. It is especially recommended to those is curricula - Physical engineering and Nuclear engineering. Also the methods of evaluation of statistical data using PC and practical wis involved. Students learn main rules connected with experimental work in physical laboratory. Nuclear Physics Presents formidable challenges bo	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the Se a on a PC. Student Z tudents who are g ork with measure Z,ZK n, where much of hysics. ZK ons, quantum chro	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical 3 f our classical 2 pmodynamics
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the second of the physicas 02ZFM2 This introductory of the physicas 02ZJF This scientific field 02ZJFB This scientific field 02ZSM Particles, leptons, for the second of the physicas	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state o	Z,ZK ier principle. Statistic ensemble, Fermion of the lecture are of	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical 2 pmodynamics 5
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the cours 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desirent other branches. T 02ZFM2 This introductory of the physicas 02ZJF This scientific field 02ZJFB This scientific field 02ZSM Particles, leptons, h 04ABZK The course conte	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state of the service o	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the Se a on a PC. Student Z tudents who are g ork with measure Z,ZK n, where much of hysics. ZK ons, quantum chro ZK or if he/she has pa	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical 2 pmodynamics 5 ssed all the
02TSFA Foundation of therm Basics of many bod 02UFEC The cours 02UKP The goal of the lefter of the cours 02VOAF Wave phenomena coherence. Geo 02ZFM1 The lecture is desirent other branches. T 02ZFM2 This introductory of the physicas 02ZJF This scientific field 02ZJFB This scientific field 02ZSM Particles, leptons, h 04ABZK The course conte	Thermodynamics and Statistical Physics modynamics and statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical physics. Thermodynamic potential, the Joule Thomson effect, conditions of equilibrium, the Braun-Le Chatel dy descriptionfrom a statistical point of view (classical and quasiclassical regime within the frame of a canonical and grand-canonical of crystals and the black body radiation). The Boltzmann equation is used to discusses simple transport phenomena. Introduction to Elementary Particle Physics se provides an easily accessible introduction to elementary particle physics. Development, methods, goals and perspectives of the state o	Z,ZK ier principle. Static ensemble, Fermi Z ubject are present Z or the curves are of the lecture are Z,ZK ation, interference eglie waves,the Se a on a PC. Student Z tudents who are g ork with measure Z,ZK n, where much of hysics. ZK ons, quantum chro ZK or if he/she has pa	4 stical entropy. i gas, models 2 ted. 2 introduced the examples 6 d, diffraction, chrodinger 2 y students of intslearn the 2 going to study ment devices 6 f our classical 2 pmodynamics 5 ssed all the

	English Conversation	_ Z	1
thair waaahulani fa	relop the student's communication skills acquired throughout their previous studies. It aims to improve all aspects of oral communication studies are related to the studies of the studie		-
· · · · · · · · · · · · · · · · · · ·	various communication situations and will master their communication strategy. They will also practise their listening skills in order to scussions. The student will be trained to express their ideas clearly and according to current English usage, and become a more conf		ı pai iicipate
04AM1	English for Intermediate Students M1	7	1
	ned for students who have successfully completed the full secondary school English language course at least at the A2 level of the Co	ommon Europear	
	nguages (CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into fundamentals of v		
professional oral a	nd written communication situations. Thus it covers topics related to the student's life and needs as well as topics of subtechnical inte	rest. Attention is	also paid to
	extending the knowledge of grammar issues used in EAP.		
04AM2	English for Intermediate Students M2	Z	1
	expects the student to have completed the 04AM1 course. It develops their skills for work with subtechnical texts, focusing also more of		
and lexical items typ	ical of ESP and EAP (e.g., definition, existence and classification of phenomena, object descriptions). Part of the course is also guided	writing. If necessa	ary, grammar
04AM3	revision is included.	Z	1
	English for Intermediate Students M3 s the skills that enable students to cope with features typical of professional style. Increasing attention is paid to developing subtechnica	_	
	professional texts. Great emphasis is placed on distinguishing different levels of formal and informal oral and written communication a	-	-
_	urse also includes studying abstracts and rules for writing them as well as basic rules for preparing and giving a short presentation or		
	student's field.		
04AMZK	English for Intermediate Students Examination	ZK	4
	is the examination as given by the study plan. The examination covers the 04AM1, 04AM2, and 04AM3 courses and consists of two		
•	-30 min). The student is expected to master the AM syllabus and demonstrate the ability to apply their knowledge gained in the three		
04AP1	English for Advanced Students P1	Z	1
-	ned for students who have successfully completed the full secondary school English language course (at least the B1 level of the Co	•	
	anguages - CEFR). It provides an introduction into English for Specific and Academic Purposes (ESP, EAP), i.e., into the fundaments	=	
, ,	oral and written communication on topics related to the undergraduate's life and needs. It develops skills for free professional writing (wr		,
oovoro protocoloriai	polite request). If necessary, revision of selected grammar topics is included.	ung a o v, louor o	гарриоскогі,
04AP2	English for Advanced Students P2	Z	1
The 04AP2 course i	s based on 04AP1, thus extending the student's skills for working with subtechnical texts, and even with professional texts of chosen by	anches of scienc	e. According
to the students' ne	eeds it concentrates on chosen grammar topics, but mainly intends to develop understanding of syntactic structures and typical rheto	rical functions (e.	g., various
	ons, and, if possible, a case study). Increasing emphasis is placed on the undergraduate's independent work with and reading of ling	•	•
materials. The cou	rse extends the student's subtechnical vocabulary, and includes fundamental notions of chosen branches of science. It is focused or	formal writing in	cluding the
	sentence and paragraph structure, linking, cohesion and coherence in texts.		Ι.
04AP3	English for Advanced Students P3	Z	1
	s based on 04AP2 and expects the student to work without any guidance with authentic professional materials and to interpret the texation skills and functions (e.g., expressing an opinion, agreement, and objections; taking part in discussion, note-taking; summarizing		•
	aring a project on a given or chosen topic and presenting it. The course places emphasis on distinguishing levels of formal and inform		
peccipie, also prop	written communication.	.a. ia. igaago 201	· ··· orai aria
04APZK	English for Advanced Students Examination	ZK	5
The course conte	nt is the examination as given by the study plan. The student is supposed to demonstrate mastering the 04AP3 syllabus and the abili	ty to apply their k	nowledge
obtained in the thre	e 04AP courses. The examination consists of 2 parts - written (110 min) and oral (30 min) and includes also oral presentation of a to	oic from the stude	ent's field of
	study.		
04CESM1	Czech for foreigners - Intermediate	Z	1
The course is focus	ed on correct pronunciation, important morphological phenomena, prepositional phrases, and verb forms as well as on extending the str		ry for various
	social situations.	ident s vocabula	y ioi various
			·
04CESM2	Intermediate Czech 2	Z	1
	s the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading	Z	1
The course develop	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas.	Z g skills and trains	1 the student
The course develop	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3	Z g skills and trains Z	1 the student
The course develop	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especia	Z g skills and trains Z	1 the student
The course develop 04CESM3 The last course re	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills.	Z g skills and trains Z lly focused on sty	1 the student
The course develop 04CESM3 The last course re 04CESMZK	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especia	Z g skills and trains Z lly focused on sty ZK	1 the student 1 distics and
O4CESM3 The last course re	is the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination	Z g skills and trains Z lly focused on sty ZK	1 the student 1 distics and
The course develop 04CESM3 The last course re 04CESMZK	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES	Z g skills and trains Z lly focused on sty ZK	1 the student 1 distics and
The course development of the last course results of the last course results of the course content of the course content of the last course course the last course course of the last course	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher.	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses	1 the student 1 distics and 4 and can only
The course development of the last course results of the last course of the course content of the prerequisite of the focused partly	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework conce. Students are	1 the student 1 distics and 4 and can only 1 f Reference.
The course development of the last course results of the last course of the course content of the prerequisite of the focused partly	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scients at style of engineering and professional communication, both in spoken and written form. The topics include University Studies and S	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework conce. Students are	1 the student 1 distics and 4 and can only 1 f Reference.
The course development of the last course of the last course of the course content of the prerequisite of the focused partly basics of function	Intermediate Czech 3 Exists morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europeon revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie al style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators.	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework once. Students and	1 the student 1 distics and 4 and can only 1 f Reference. e taught the en practice
The course development of the last course results of the last course results of the course content of the prerequisite of the prerequisite of the last course of function of the last course of the last co	Intermediate Czech 3 Exists morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie al style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a z ean Framework conce. Students are tudent Life. Writte	1 the student 1 distics and 4 and can only 1 f Reference. e taught the en practice
The course development of the last course of the last course of the course content of the prerequisite of the focused partly basics of function of the course content of the prerequisite of the prerequisite of the course of the	Intermediate Czech 3 Exists morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europeon revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of sciental style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and standard language in CESP1 and focuses on difficult language phenomena. It practises working with technical and standard language phenomena. It practises working with technical and standard language phenomena. It practises working with technical and standard language phenomena. It practises working with technical and standard language phenomena. It practises working with technical and standard language phenomena.	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a z ean Framework conce. Students are tudent Life. Writte	1 the student 1 distics and 4 and can only 1 f Reference. e taught the en practice
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of t	Intermediate Czech 3 Exists morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of sciental style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work.	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework conce. Students are tudent Life. Writte Z pecialist texts pla	1 the student 1 distics and 4 and can only 1 f Reference. e taught the en practice
The course development of the last course reconstruction of the last course reconstruction of the last course content of the last course content of the last course content of the last course of function of the last course extends of the last course	Intermediate Czech 3 Exists morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of science at style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework c nce. Students are tudent Life. Writte Z pecialist texts pla Z	the student 1 distics and 4 and can only 1 f Reference. e taught the en practice 1 acing greater
The course development of the last course reconstruction of the last course reconstruction of the last course content of the last course content of the last course content of the last course of function of the last course extends of the last course of the las	Intermediate Czech 3 vises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scielal style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced sthe student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, as	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Z ean Framework c nce. Students are tudent Life. Writte Z pecialist texts pla Z	the student 1 distics and 4 and can only 1 f Reference. e taught the en practice 1 acing greater
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of lit is focused partly basics of function 04CESP2 This course extends 04CESP3 The course develop	Intermediate Czech 3 Evises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of sciental style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced In the topics of the Cambridge and professional communication with teachers and faculty administrators. Czech for Foreigners - Advanced In the topics working with technical and semphasis on individual work. Czech for Foreigners - Advanced In the topics working with technical and semphasis on individual work. Czech for Foreigners - Advanced In the topics working with authentic specialist materials, their interpretation and presentation, a student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained.	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Eaan Framework conce. Students are tudent Life. Writte Z pecialist texts pla Z nd, finally, preser	1 the student 1 distics and 4 and can only 1 freference. a taught the en practice 1 cing greater 1 tation of the
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of lit is focused partly basics of function 04CESP2 This course extends 04CESP3 The course develop 04CESPZK	Intermediate Czech 3 vises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scielal style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced sthe student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, as	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Ean Framework conce. Students are tudent Life. Writte Z pecialist texts pla Z nd, finally, present	1 the student 1 distics and 4 and can only 1 freference. The en practice 1 coing greater 1 thation of the
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of lit is focused partly basics of function 04CESP2 This course extends 04CESP3 The course develop 04CESPZK	Intermediate Czech 3 wises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie al style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced sthe student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained. Czech for Foreign Students - Advanced Examination	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Ean Framework conce. Students are tudent Life. Writte Z pecialist texts pla Z nd, finally, present	1 the student 1 distics and 4 and can only 1 freference. The en practice 1 coing greater 1 thation of the
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of lit is focused partly basics of function 04CESP2 This course extends 04CESP3 The course develop 04CESPZK	Intermediate Czech 3 wises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of sciental style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced sthe student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained. Czech for Foreign Students - Advanced Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES	Z g skills and trains Z lly focused on sty ZK M1,2,3 courses a Ean Framework conce. Students are tudent Life. Writte Z pecialist texts pla Z nd, finally, present	1 the student 1 distics and 4 and can only 1 freference. The en practice 1 coing greater 1 thation of the
The course develop 04CESM3 The last course re 04CESMZK The course content 04CESP1 The prerequisite of lit is focused partly basics of function 04CESP2 This course extends 04CESP3 The course develop 04CESPZK The course content 04FM1	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 vises morphological topics covered earlier and extends the student's knowledge of more difficult language phenomena. It is especial exicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie al style of engineering and professional communication, both in spoken and written form. The topics include University Studies and S includes communication with teachers and faculty administrators. Czech for Foreigners - Advanced sthe student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and s emphasis on individual work. Czech for Foreigners - Advanced sthe student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained. Czech for Foreign Students - Advanced Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher.	Z g skills and trains Z lly focused on sty ZK sM1,2,3 courses and students and students and students and students and student Life. Written and st	1 the student 1 distics and 4 and can only 1 f Reference. a taught the en practice 1 distinct of the 5 and can only
The course develop O4CESM3 The last course re O4CESMZK The course content O4CESP1 The prerequisite of the street of the stree	in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 Intermediate Student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination he course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europe on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of sciental style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced Intermediate Student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced In the student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained. Czech for Foreign Students - Advanced Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. French for Intermediate Students M1 te FM The objective of this three-semester co	Z g skills and trains Z lly focused on sty ZK iM1,2,3 courses and trains Z ean Framework of the course of the c	1 the student 1 distics and 4 and can only 1 free Reference. a taught the en practice 1 tation of the 5 and can only 1 m. Students it technical
The course develop O4CESM3 The last course re O4CESMZK The course content O4CESP1 The prerequisite of the street of the stree	In the topics covered in CESM1 and is then focused on more difficult grammar phenomena. It practices writing, speaking, and reading in understanding common abbreviations, abbreviated words, and mathematical terms and formulas. Intermediate Czech 3 Intermediate Czech 3 Intermediate Student's knowledge of more difficult language phenomena. It is especial lexicology and on developing the student's writing skills. Czech for Intermediate Students Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. Czech for Foreign Students - Advanced Examination the course is very good knowledge of the Czech language, i.e., communicative competences at least at level B2 of the Common Europ on revision of standard language structures, but mainly on practising more complex grammatical structures typical of the style of scie all style of engineering and professional communication, both in spoken and written form. The topics include University Studies and Sincludes communication with teachers and faculty administrators. Czech for Foreigners - Advanced Is the student's knowledge acquired in CESP1 and focuses on difficult language phenomena. It practises working with technical and semphasis on individual work. Czech for Foreigners - Advanced Is the student's knowledge from CESP2. It includes working with authentic specialist materials, their interpretation and presentation, a student's project. Writing skills necessary for professional communication are trained. Czech for Foreign Students - Advanced Examination is the examination as given by the study plan. The examination consisting of a written and oral part covers all the topics of the 04CES be taken after successful completion of the 3 courses. Detailed information is to be obtained from the teacher. French for Intermediate Students M1 te FM The objective of this t	Z g skills and trains Z lly focused on sty ZK iM1,2,3 courses and trains Z ean Framework of the course of the c	1 the student 1 distics and 4 and can only 1 free Reference. a taught the en practice 1 tation of the 5 and can only 1 m. Students it technical

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.
04FM2 French for Intermediate Students M2 Z 1
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.
04FM3 French for Intermediate Students M3 Z 1
The course is focused on improvement and further development of linguistic competence acquired during the follow-up courses. Syntactic structures (subordinate and infinitive clauses,
participle structures, compound tenses). Text summaryStudents prepare a written paper which will be delivered in form of an oral presentation in-class. The paper is linked to the 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 work compiled from French articles
and one's own knowledge/experienceLonger monologues on topics /situations set for the examination are prepared. Text structure, cohesion and coherence.
04FMZK French for Intermediate Students Examination ZK 4
The content is the examination as given by the study programme. The whole French programme is ended with an examination covering the contents of FM1-FM3. The examination
consists of a written and oral part and is organized according to Examination Instructions, a document available on the web. O4FP1 French for Advanced Students P1 Z 1
04FP advanced course 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 work environment. They will be able to use the language to transmit general and technical information
and to solve problems. 04FP1 The course builds on and further develops linguistic competence acquired at secondary school. Difficult grammar topics are repeated and expanded:
subjonctif, passé composé-imparfait, pronouns. The following specific topics are covered: University studies in our country and in France, writing of transactional letters, CV, personal statement, request, answer to an advert, environmental issues, success of French science and technology, chosen topics from French regional culture, Paris. Topics of specialization:
mathematics, internet, physics, chemistry. Reading of technical and popular science texts, further work with these texts and interpretation.
04FP2 French for Advanced Students P2 Z 1
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. Features typical of
technical and scientific communication are stressed (passive voice, nominalization, word formation). 04FP3 French for Advanded Students P3 Z 1
The course is focused on systemization and improvement of acquired linguistic competence, skills and knowledge, and their use for communication in engineering environment. 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 covers a technical /applied science
topic. It is a creative work compiled from 3 French sources. Preparation of several set topics for oral examination.
04FPZK French for Intermediate Students Examination ZK 5
The whole French program is ended with an examination covering the contents of FP1-FP3. The examination consists of a written and/or an oral part and is organized according to Examination Instructions, a document available on the web. Assessment of the presentation is included into the examination grading.
04FZ1 French for Beginners Z1 Z 1
French for beginners 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 socializing and in professional life.
The course includes French for specific / technical communication and reading of popular science and scientific texts. 04FZ1 The objective is to be able to communicate at elementary level, actively using the knowledge of chosen elementary language. The contents is roughly outlined by lessons 1 - 7 of the textbook Pravda - Pravdová, French for beginners
(Francouzština pro za áte ky). It is extended with situations of communication and functions from the textbook Espaces I, lessons 1-4: introductions, personal information, asking and
giving the directions, simple instructions and questions. Special attention is paid to pronunciation. Spelling is explained in connection with pronunciation and grammar.
04FZ2 French for Beginners Z2 Z 1
The course is linking up with 04FZ1. Elementary linguistic knowledge and communication skills are expanded. The scope is given by lessons 8 - 13 of the textbook: Pravda - Pravdová : French for Beginners . Additional topics and skills are filled in from the textbook Espaces I, lesson 1 - 5 (introductions, invitation, welcoming, agreement - disagreement, apology,
thanking, travelling, map of France, food, expression of will, wish, order, prohibition, pleasure). Correct pronunciation is practiced. Stress on oral communication. Specific topics covered:
How does the machine work? A few expressions concerning the study. Name of University and Faculty.
04FZ3 French for Beginners Z3 Z 1
The course builts upon 04FZ2. Basic linguistic knowledge and skills are developed. The contents is given by lessons 14 - 18 of the textbook: Pravda - Pravdová: French for Beginners. Topics, functions and situations are complemented from other materials. Stress is put on oral communication in dialogues and on reading, both for information and loud as part of
pronunciation practice. Reading covers short adapted texts of general interest first, and later popular science texts.
04FZ4 French for Beginners Z4 Z 1
The course builds up on 04FZ3. Basic linguistic knowledge and skills are further developed. Oral communication and reading skills are practiced. The contents is roughly covered with
lessons 19 - 23 of the textbook French for Beginners, and is expanded with topics and functions from other materials. Reading is developed from the lecture notes French for Engineering Students of FJFI. The course covers generals and specific topics: health-illness, sport, free time, environment, study, travelling in France, Paris, shopping, weather, university in our
country and in France, how to write CV, application, topics in mathematics, reading physics - mechanics, informatics, internet.
04FZ5 French for Beginners Z5 Z 1
All four skills acquired in FZ4 are further developed, as well as technical language. Students prepare a paper on a chosen popular science topic. They present it orally in the class. The
general contents is covered by lessons 24 - 26 of the textbook: Pravda-Pravdova, French for Beginners, and is complemented from other materials. Topics: on physics from lecture notes, success of French science and technology, information about France. Grammar is systemized and complemented with syntax (subordinate clauses, typical conjunctions,
subjunctive clauses, gerund, passive.
04FZZK 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 is ruled by the document
Instruction for examination. Its content covers the levels FZ1 - FZ5. O4NM1 German for Intermediate Students M1 Z 1
The objective of the course is to level off the students' skills in the German language. The course focuses on revision of more difficult phenomena and structures (e.g. the passive) and
word formation processes (e.g. importance of verb prefixes). In the lexical part, it covers topics referring to higher education in both the Czech Republic and Germany, current
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability.
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2 German for Intermediate Students M2 Z 1
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2 German for Intermediate Students M2 Z 1 The course introduces other more complex grammatical structures and their application in communication based on technical texts, such as the relation between technology and society, the world at the beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and car technology etc. Students practise reading for information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematically revises other grammatical
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2 German for Intermediate Students M2 Z 1 The course introduces other more complex grammatical structures and their application in communication based on technical texts, such as the relation between technology and society, the world at the beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and car technology etc. Students practise reading for information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematically revises other grammatical phenomena important for professional discourse (participles, relative clauses).
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2 German for Intermediate Students M2 Z 1 The course introduces other more complex grammatical structures and their application in communication based on technical texts, such as the relation between technology and society, the world at the beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and car technology etc. Students practise reading for information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematically revises other grammatical
environmental issues together with all necessary expressions and phrases, expressions and phrases needed to chemists, mathematicians, physicists, and the fundamentals of IT terminology. It develops communication on related topics and is aimed at correct pronunciation, grammatical correctness and understandability. O4NM2 German for Intermediate Students M2 Z 1 The course introduces other more complex grammatical structures and their application in communication based on technical texts, such as the relation between technology and society, the world at the beginning of the 21st century, linguistically more demanding texts on the environment, the language of mathematics, computers and car technology etc. Students practise reading for information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematically revises other grammatical phenomena important for professional discourse (participles, relative clauses). German for Intermediate Students M2 Z 1

practise reading for information and reading aloud, and appropriate language for various purposes in oral and written communication. The course systematically revises other grammatical phenomena important for professional discourse (participles, relative clauses). 04NMZK German for Intermediate Students Examination 7K 4 The course content is the examination as given by the study plan. The whole German for Intermediate Students Course is completed by an examination consisting of two parts - written and oral, which cover the courses 04NM1 - 04NM3. The oral part follows after passing the written part successfully and after obtaining the 04NM3 assessment. More detailed information is to be obtained from the teacher. 04NP1 German for Advanced Students P1 This course requires good grammar knowledge, extended general vocabulary, and good communication skills acquired at secondary school to be levelled off at the beginning of the course. The course is then focused on working with technical and scientific texts and practising reading techniques (skimming, scanning, reading for detail). It revises and develops more difficult grammar structures necessary for understanding a subtechnical text (passive voice, participles, participle structures) and it also focuses on practical everyday communication, i.e., telephoning. 04NP2 German for Advanced Students P2 7 The course develops the students' skills in working with professional scientific texts (understanding, summarising, note-taking, interpreting) while extending their general and subtechnical vocabulary range. It introduces mathematical expressions and texts of nuclear power engineering. Increasing emphasis is placed on understanding and practising formal communication, both written and oral (CV, letter of application, interview, scholarship), and more complex grammatical structures (i.e., subjunctive, indirect speech). 04NP3 German for Advanced Students P3 The course consists of 3 main parts (general communicative situations, grammar and technical topics). Students will develop their vocabulary in a variety of less common situations (traffic problems and car accidents, accident report, filling in a form, complaints). Based on presentations and technical and subtechnical texts, the vocabulary range in fields such as nuclear power engineering, the environment, computer science, and car technology, will also be extended. Only authentic professional texts are used. By means of a presentation, 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 course also includes translation practice to and from German. 04NPZK German for Advanced Students Examination 5 The course content is the examination as given by the study plan. The whole German for Advanced Students Course is completed by an examination consisting of two parts - written and oral, which cover the courses 04NM1 - 04NM3. The oral part follows after passing the written part successfully and after obtaining the 04NP3 ungraded assessment. More detailed information is to be obtained from the teacher. Russian for Intermediate Students M1 04RM1 The course is designed for students with previous knowledge of Russian from secondary schools. Students are supposed to know the Russian alphabet (both printed and handwritten). basic vocabulary for communication in everyday situations (introductions, socializing, greetings, shopping for food and objects of everyday need, asking the way and giving directions), they can use basic grammar structures (verbal and nominal forms, irregular verbs, pronouns). The initial knowledge corresponds to the achievement level of the RZ2 course. The contents and scope of the course correspond approximately to the RZ3 course, but for half of the time allotted in the timetable. 04RM2 Russian for Intermediate Students M2 7 1 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 timetable 04RM3 Russian for Intermediate Students M3 Z 1 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, however, for half of the time allotted in the timetable 04RMZK Russian for Intermediate Students Examination 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 knowledge and skills acquired 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 instructions by the teacher. 04RP1 Russian for Advanced Students P1 The entrance requirement for the course is to achieve the B1 CEFR level. The objective of the course is revision of standard language structures, practicing more difficult grammar structures, understanding the fundamentals of technical language and training writing skills. Russian for Advanced Students P2 The course is based on RP1. It expands grammatical structures important for understanding technical texts (verbal adjectives, participles, passives, verb aspects, specific syntactic structures). Stress is put on independent oral and written communication. 04RP3 Russian for Advanced Students P3 7 The course is based on RP2 and is mainly focused on working with technical and scientific texts (reading comprehension, oral and written paraphrasing, translation). The RP1 - RP3 courses require good previous knowledge of general language at secondary level (listening, reading, correct communication in everyday situations). The courses develop and expand these skills. Further study is aimed at professional and technical skills (reading technical literature according to the students' specialization, oral and written interpretation). Students develop their subtechnical vocabulary and practice quick and correct communication in professional situations. They will be able to both speak write accurately and with confidence on technical topics. 04RP7K Russian for Intermediate Students Examination 7K 5 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 knowledge and skills acquired in RP1 - RP3. Students are eligible for the oral examination only after a prior pass in RP3 and a successful written examination. Students are given instructions by the teacher Russian for Beginners Z1 The course represents the first stage of the five-semester programme, its final aim being reading and understanding professional texts written in Russian. Thus it begins with mastering the Russian alphabet (for both reading and writing skills) and fundamentals of grammar necessary for everyday communication (listening and speaking). Students will be able to read a short text with marked stress, understand its contents and summarize it. 04RZ2 Russian for Beginners Z2 The second semester of the programme is designed to teach skills for basic communication in everyday situations and for reading easy and short subtechnical texts. Students will be able to communicate using short sentences and appropriate structures, and read aloud with confidence a short text without marked stress. They will also develop their vocabulary and master further grammatical structures. They will have mastered with confidence the Russian alphabet and will be able to use it in writing. 04RZ3 Russian for Beginners Z3 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 reading 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. 04RZ4 Russian for Beginners Z4 Ζ The course is based on 04RZ3. It improves and expands the knowledge of general language in all four skills (reading and understanding longer texts with a certain percentage 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 how to fill in forms, look up the information from the timetable, learn about Russian holidays and typical meals.

04RZ5	Russian for Beginners Z5	Z	1			
The course expects	s the student to have completed RZ4. It concentrates predominantly on reading skills (working with professional texts, i.e. understandir	g, extracting and s	ummarizing			
information from a	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. S	Studying grammar is based on professional and technical texts and only includes items typically used in professional communication (verbal adjectives, r	participles,			
passiv	ve voice). Students develop their technical and economic vocabulary, and are also trained in some professional skills (writing a CV, po	olite request, etc.)				
04RZZK	Russian for Beginners Examination	ZK	3			
The course conten	it is the examination as given by the study plan. The course is completed by taking a written and oral examination testing the knowled	lge and skills acqu	ired in RZ1			
- RZ5. Stud	lents are eligible for the oral examination only after a prior pass in RZ5 and a successful written examination. Students are given instr	uctions by the teac	cher.			
04SM1	Spanish for Intermediate Students M1	Z	1			
The course is des	signed for students whose competence is at level B1 of CEFR, i.e. those who studied Spanish in the secondary school. The 3-semesi	er course develops	s standard			
vocabulary and pa	ays attention to further grammar topics (e.g., perífrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negativ	e form of the imper	rative, and			
subjunctive), to written and oral communication on a given everyday or easy subtechnical topic, for which the students are trained by reading tea	ts or listening to th	iem.			
04SM2	Spanish for Intermediate Students M3	Z	1			
The course develo	ops the students´knowledge from the previous course (SM1). Students are gradually acquainted with fundamentals of Spanish for sp	ecific purposes in	order to be			
	able to work with specialized texts on the Internet.					
04SM3	Spanish for Intermediate Students M3	Z	1			
	are supplemented with additional subtechnical materials, so the students will be gradually acquainted with the peculiarities of academi		e competent			
	Internet in Spanish and search for information of their specialization or field of interest. Students will use the information to write short					
g	final part of the programme, general Spanish course based on course books, covers presentations and, finally, a written and oral ex					
04SMZK	Spanish for Intermediate Students Examination	ZK	4			
	ent is the examination as given by the study plan. 04SMZK examination consists of two parts - written and oral; to be eligible for the w	l I	-			
The course conte	obtained non-graded assessment for course 04SM3.Oral examination follows the written part.	interripart, students	3 Will Have			
04004		Z				
04SP1	Spanish for Advanced Students P1		I I			
Course concentrate	es on more difficult grammar topics, revision of vocabulary, basics of Spanish for specific purposes as well as written communication.	Course prerequisit	tes: level B2			
	of CEFR.					
04SP2	Spanish for Advanced Students P2	Z	1			
Course SP2 is the	second part of the advanced Spanish course, extending Spanish for specific purposes topics. It comprises more grammar and synta	x and focuses on ir	ndependent			
	written communication.					
04SP3	Spanish for Advanced Students P3	Z	1			
Course 04SP3 is th	ne final part of the advanced Spanish course. It is based on texts chosen by the students according to their future specialization. It is focu	used on written com	nmunication			
	based on what students will need in their career.					
04SPZK	Spanish for Advanced Students Examination	ZK	5			
The course conte	nt is the examination as given by the study plan. Examination 04SPZK consists of two parts, namely oral and written. The prerequisit	e for admission to	oral part is			
ha	aving passed the written test. Examination content is based on syllabi of courses SP1, SP2, and SP3 or on an individual study plan o	f the student.				
04SZ1	Spanish for Beginners Z1	Z	1			
	ne first stage of the five-semester programme of Spanish studies; during the first stage the students will master phonetics and fundan	nental grammar str	uctures and			
	o communicate at an elementary level on topics of everyday life. They will acquire and extend fundamental vocabulary of general Spa	-				
04SZ2	Spanish for Beginners Students Z2	Z	1			
	based on course 04SZ1, and expects students to develop and extend the knowledge and skills acquired so far. Grammar structures a	_				
	understand short adapted written texts and speech. Attention is also paid to cultural differences between Spanish-speaking countries					
to oriable trioiri to c	Republic. Realia of Spanish-speaking countries are also included.	and outloid oddin at	0 1110 020011			
04SZ3	Spanish for Beginners Z3	Z	1			
	partist for beginners 23 and develops the student's vocabulary and grammar structure. The course covers realia (history and culture) of the	l I				
	It pays attention to further grammar topics (pretérito perfecto, pretérito indefinido, pretérito imperfecto, the gerund and the imperative		- 1			
mainly of Spain.		,. it includes writter	i and orai			
0.407.4	communication on a given general topic, for which the student is trained by reading texts or listening to them.	-				
04SZ4	Spanish for Beginners Z3	Z	1 1			
	ed on course SZ3. It develops the student's vocabulary and extends the knowledge of the culture and social customs of the Spanish	-				
	ntion to further grammar topics (perifrasis verbales, futuro imperfecto, direct object and indirect object pronouns, negative form of the	-	ubjunctive),			
	to written and oral communication on a given general or subtechnical topic, for which the student is trained by reading texts or listeni					
04SZ5	Spanish for Beginners Z5	Z	1			
The course books	are supplemented with additional subtechnical materials, so the students will be gradually acquainted with peculiarities of Spanish for		s. In its final			
	part, the general Spanish course based on the course book will end with presentations and, finally, a written and oral examination					
04SZZK	Spanish for Beginners Examination	ZK	3			
The course conte	ent is the examination as given by the study plan. Examination consists of two parts - written and oral. Student can register for oral ex	amination only if he	e/she has			
	passed the written examination test.					
11ANEL	Linear Circuit Analysis	Z,ZK	4			
The course is the	introduction to the linear electronics for physicists. In the first part it describes basic methods of linear circuit analysis. It is especially	oriented to the und	lerstanding			
	of the computer methods of analysis. The second part gives a short list of most commonly used circuits in experimental equipr	nent.				
11APLG	Applications of Group Theory in Solid State Physics	ZK	2			
	atomic system symmetry allows, without any quantitative calculations, rigorously and precisely determine how many energy states th		nteractions			
and transitions bet	tween them may occur. Therefore, the main purpose of this course is to describe the methods by which we can extract the informatio	n on the object that	t symmetry			
	The application of these methods is illustrated by an example of molecular orbitals, inner orbitals of ions in the crystal field environme					
	vibrations, and selection rules for optical absorption transitions.					
11ELEA	Instrumentation and Measurement	Z,ZK	2			
_ ,	The course is the introduction to the instrumentation and measurement for physicists.	_,	_			
11MIK	Logical Circuits and Microprocessors	Z,ZK	4			
	e introduction to the digital electronics for physicists. It describes the function principles of combination circuits, simple sequential circ					
The source is the	microprocessors. The microcomputer architecture and principles of interfacing is shown.	and complex of	ວູດແວ ແເເວ			
11SFBM	Structure and Function of Biomolecules	Z,ZK	3			
	I					
Tallowieuge Of HidCl	romolecular structure is crucial for the understanding of its function. The subject is focused on the introduction to building blocks of ma	Jonnoiecules, over	an structure			
	and its structure:function relationship including macromolecular complexes.					

	Introduction to Solid State Physics	ZK	2
	The purpose of this lecture is to introduce the undergraduate students to the study of the solid state physics.		
11UVOD	Introduction to Specialization The purpose of this lecture is to introduce the undergraduate students to the physical master degree study programmes.	Z	2
11ZFPL	Basic to Solid State Physics	KZ	2
	amental properties of solids following the regular long distance ordering of atoms in a crystal lattice. Based on the introduced bonding		1
	s of crystals and their properties are defined. The model of crystalline lattice dynamics in harmonic approximation is described and basic		
	periodic potential of the crystal lattice is introduced and its relation to the following model describing the energetic state of electrons in		-
-	cplained. The special consequences of band approach to the physical properties of solids are elucidated. The aim of the course is to s	=	
onergy bands on	interpret a broad phenomenological basis of physical properties of crystalline solids	yoromanoany man	oudoo unu
12APL	Application of Lasers	Z,ZK	2
	!!		2
	plication of lasers in industrial technologies, medicine, remote sensing, energetics, telecommunication, military, entertainment and oth		
12AUX	Administration of UNIX System	KZ	2
	Basic and more advanced administration of Unix operating system		
12BPIF1	Bachelor Thesis 1	Z	5
ne course concer	ns the topic, given by the bachelor work supervisor. The successful defense of the bachelor thesis is the integral part of the particular ba	achelor curriculun	n, dependin
n the specializat	ion. The bachelor work submission is agreed upon by the departmental head and the faculty dean. A student pursues the background	research, based	on journal
ernet as well as	special book literature, given by the bachelor work advisor, included in the official bachelor work submission, and further independently	searched out by	the studer
ith a supervisor a	agreement, the student further solves given particular problems, based on the studied and recommended literature sources. The thesi:	s is reviewed by	one (typical
ernal) reviewer v	who is an expert in the field. Contact hours represent individual communications with the bachelor work advisor where current needs a	are discussed and	d solved. Th
•	course is thus not regularly scheduled.		
12BPIF2	Bachelor Thesis 2	Z	10
	ns the topic, given by the bachelor work supervisor. The successful defense of the bachelor thesis is the integral part of the particular bachelor.		-
	ion. The bachelor work submission is agreed upon by the departmental head and the faculty dean. A student pursues the background		
•		,	,
	special book literature, given by the bachelor work advisor, included in the official bachelor work submission, and further independently		
="	agreement, the student further solves given particular problems, based on the studied and recommended literature sources. The thesis	=	
ernal) reviewer v	who is an expert in the field. Contact hours represent individual communications with the bachelor work advisor where current needs a	ire discussed and	d solved. If
	course is thus not regularly scheduled.		
12EPR1	Basic Electronics Practicum 1	KZ	3
he aim of the pr	acticum is 1) to acquire basics skills in electronics and 2) to learn independent problem solving, formulation of a task and formulation	of the results. The	practicum
	consists of blocks lasting 4 hours.		
12EPR2	Basic Electronics Practicum 2	KZ	3
	acticum is 1) to acquire basics skills in electronics and 2) to learn independent problem solving, formulation of a task and formulation		
	consists of blocks lasting 4 hours.		
12INS1		Z,ZK	2
	Information Systems 1	•	1
	logy, architecture of the databases, network databases, cloud application Google, Microsoft, information managament, aproaches to sol		
12INS2	Information Systems 2	Z,ZK	2
Graduation of In	nformation systems 1 is required. In more details: Information technology, architecture of the databases, network databases, cloud app	lication Google,	Microsoft,
	information managament, aproaches to solve task of information systems		
12LAS	Laser Systems	Z,ZK	3
Pulsed solid state	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. O	ptical parametric	generators
Pulsed solid state	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. O Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravio	ptical parametric olet lasers. X-ray	generators
Pulsed solid state nd raman lasers.	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravio power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la	ptical parametric blet lasers. X-ray asers.	generators lasers. Higl
Pulsed solid state nd raman lasers.	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1	ptical parametric plet lasers. X-ray asers. Z,ZK	generators lasers. High
Pulsed solid state nd raman lasers. 12LT1 pen resonators. S	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravious power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an approximate the state of the second state lasers. Amplified spontaneous emission. Ultravio	ptical parametric olet lasers. X-ray asers. Z,ZK roximation of the	generators lasers. High
Pulsed solid state nd raman lasers. 12LT1 pen resonators. \$ mode. ABCD m	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravious power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion	ptical parametric blet lasers. X-ray asers. Z,ZK coximation of the a, saturation. Coh	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical	ptical parametric olet lasers. X-ray asers. Z,ZK oximation of the n, saturation. Coh I resonator.	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD markets	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2	ptical parametric blet lasers. X-ray asers. Z,ZK coximation of the a, saturation. Coh	generators lasers. Hig 3 fundament
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical	ptical parametric clet lasers. X-ray asers. Z,ZK examination of the a, saturation. Coh I resonator. Z,ZK	generators lasers. Hig 3 fundament erent and
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2	ptical parametric olet lasers. X-ray asers. Z,ZK oximation of the n, saturation. Coh I resonator.	generators lasers. Hig 3 fundament erent and
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK	generators lasers. Hig 3 fundament erent and 2
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure-to-physical properties relations.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK re determination.	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. 9 mode. ABCD m r 12LT2 12MOF Basic i 12MPF1	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron last according to the Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure Methods of Computational Physics 1	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK re determination. Z,ZK	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. S mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation	enanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron later than the laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure to-physics 1 On and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics properties are solid to the physics of the physic	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK re determination. Z,ZK roblems. Compute	generators lasers. Hig 3 fundament erent and 2 2 2 er language
Pulsed solid state and raman lasers. 12LT1 pen resonators. S mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation	enanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravious power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron lateral Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamics	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK re determination. Z,ZK roblems. Compute	generators lasers. Hig 3 fundament erent and 2 2 2 er language
Pulsed solid state and raman lasers. 12LT1 pen resonators. S mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation physics. Numeric	enanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravious power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron lateral Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the a saturation. Coh I resonator. Z,ZK ZK ZK re determination. Z,ZK roblems. Compute simulations. High-	generators lasers. Hig 3 fundament erent and 2 2 2 2 er language performane
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation physics. Numerical 12MPF2	enanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron lateral Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics properties and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK ZK re determination. Z,ZK roblems. Compute simulations. High-	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation physics. Numerical 12MPF2 the first part conditions.	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamic control of the methods used in systems of many interacting particles - Molecular dynamic control of the methods.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation physics. Numerical 12MPF2 the first part conditions.	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron late Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure of the physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagate in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagate in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagate in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagate in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagate in physics, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 Determine the methods of computation in plasma physics (astrophysics). The second is using the Monte Carlo method for particle transport problems and particle simulations in plasma phys	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numerical 12MPF2 the first part cond	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamic control of the methods used in systems of many interacting particles - Molecular dynamic control of the methods.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numeric 12MPF2 The first part concidence is simulation	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron lasers Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation 12MPF2 The first part concidence simulation 12MPR1	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron le Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optica Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics In and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamics computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 Dentrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the n, saturation. Coh I resonator. Z,ZK ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numeric 12MPF2 the first part conditionation simulation 12MPR1 dicroprocessor al	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravior power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optica Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics In and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics propagation and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 Pentrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 Ind microcomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, indirect).	ptical parametric clet lasers. X-ray asers. Z,ZK coximation of the control of th	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numeric 12MPF2 The first part conditionation simulation 12MPR1 dicroprocessor al	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravice power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron late and the power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron late and the power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron late and the power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron later and the power lasers. Threshold of laser oscillations. Gausian beam as an appretend. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 1 Laser Techn	ptical parametric clet lasers. X-ray asers. Z,ZK coximation of the control of th	generators lasers. Hig 3 fundament erent and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numeric 12MPF2 The first part concidence is simulation 12MPR1 dicroprocessor all emory, procedure	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravia power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion-non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optica Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics dideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics proceal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 Indicatory of the program control, interrupt. Microprocessor Microchip PIC16F877A, Instruction codes- Assembler and Macroassem RISC processors - principles	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the in, saturation. Cohil resonator. Z,ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulation r physics. Numeric 12MPF2 The first part conditionation simulation 12MPR1 dicroprocessor all emory, procedure	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravir power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics Ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics potal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 Dentrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 Individual proprocessor 1 Individual proprocessor 1 Individual proprocessor 2 Microprocessors 2 Microprocessors 2	ptical parametric clet lasers. X-ray asers. Z,ZK coximation of the control of th	generators lasers. Hig 3 fundament erent and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 umerical simulatior r physics. Numeric 12MPF2 The first part conc kinetic simulatior 12MPR1 Alicroprocessor at a gemory, procedure 12MPR2 Ar	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravic power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability, Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optica Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics Ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 In di microcomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, indire e calls, IO devices - program control, interrupt.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the an asturation. Coh I resonator. Z,ZK roximation of the an asturation. Coh I resonator. Z,ZK redetermination. Z,ZK roblems. Compute simulations. High-	generators lasers. High 3 fundament erent and 2 2 er language performand 2 rlo method to Maxwell 4 ve,, stack g language
Pulsed solid state and raman lasers. 12LT1 pen resonators. \$ mode. ABCD m r 12LT2 12MOF Basic i 12MPF1 unerical simulation r physics. Numeric 12MPF2 the first part conditionation simulation 12MPR1 Alicroprocessor and emory, procedure 12MPR2 Ar 12NME1	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravic power continuous lasers. Infrared high power lasers. Submillimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability. Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optical Laser Technique 2 Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamics computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 Ind microcomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes(direct, indire et alls, IO devices - program	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the clean saturation. Coh I resonator. Z,ZK roximation of the clean saturation. Z,ZK redetermination. Z,ZK roblems. Compute simulations. High- Z,ZK cs and Monte Ca d part is devoted ZK ret, register, relatibler, programmin. Z,ZK r. description. Z,ZK	generators lasers. High a sers.
Pulsed solid state and raman lasers. 12LT1 Den resonators. \$\frac{1}{2}\text{mode. ABCD mr.} \text{T2LT2} 12MOF Basic in 12MPF1 merical simulation physics. Numerical simulation physics in the simulation physics in the simulation physics. Table 12MPR1 licroprocessor and physics in the simulation physics in the simulation physics. Table 12MPR1 12MPR1 12MPR2 Ar 12NME1	e nanosecond lasers. Picosecond lasers. High energy laser systems. Laser fusion. Diode-pumped solid state lasers. Tunable lasers. Of Semiconductor lasers for pumping of solid state lasers and diode pumped solid state lasers Amplified spontaneous emission. Ultravic power continuous lasers. Infrared high power lasers. Submilimeter lasers. Lasers with high degree of coherence. Free electron la Laser Technique 1 Stability, Transverse and Longitudinal Modes. Elements of Open Resonators. Threshold of laser oscillations. Gausian beam as an apprethod. Optical radiation propagation in resonant medium. Two-level approximation. Equations for polarisation and inversion, dispersion non-coherent pulse propagation. Optical solitons. Photon echo. Superradiation. Amplified spontaneous emission Lasers without optica Laser Technique 2 Laser oscillator, the rate equation, the laser amplifier, Q-switching, mode-locking Molecular Physics Ideas on multi-atomic molecules and molecular matter, and on structure-to-physical properties relations. Methods of molecular structure on and its role in physics, methodology of writing computer codes. Numerical and programming techniques for simulations of physics procal libraries and program libraries for physics. Computer tools for scientific visualization. Simulations of continuous systems, hydrodynamic computing, parallel computing, software for parallel simulations. Integrated computing environments. Methods of Computational Physics 2 centrates on particle simulation methods. This includes the methods used in systems of many interacting particles - Molecular dynamics using the Monte Carlo method for particle transport problems and particle simulations in plasma physics (astrophysics). The second equation problems, quantum physics simulations and selected artificial intelligence algorithms. Microprocessors 1 In di microcomputer, microprocessor types, memory types CPU, memory, Input output. Code and data, addressing modes (direct, indire e calls, IO devices - program control, interrupt.	ptical parametric clet lasers. X-ray asers. Z,ZK roximation of the clean saturation. Coh I resonator. Z,ZK roximation of the clean saturation. Z,ZK redetermination. Z,ZK roblems. Compute simulations. High- Z,ZK cs and Monte Ca d part is devoted ZK ret, register, relatibler, programmin. Z,ZK r. description. Z,ZK	generators lasers. Hig 3 fundament erent and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

12NT	Nanotechnology	ZK		2
	duce students mainly to modern technological methods of preparation of semiconductor, metal and dielectric nanostructures. Physical			
	gies (MBE, MOVPE, EBL, sol-gel and colloidal solution) will be explained. Substantive attention will be devoted to epitaxial technolog			
	paration. Particular emphasis will be focused on detail characterization of "in situ" and "ex situ" techniques, their applications for heter cussed as well. Some supportive technical methods - lithography, diffusion, evaporation, ion implantation, contact and dielectric layer			I
growths will be dis	as well as soldering and encasement.	preparation will be	HICH	lioneu
12PDR1	Data Communication and Interfaces 1	Z		2
IZI DIKI	Principles of computer networks, networks architectures and data transfer. Specification of existing network architectures.	_		_
12PDR2	Data Communication and Interfaces 2	Z		2
	Principles of Ethernet standards and basics of protocol suite TCP/IP.	_		_
12PIN1	Practical Informatics for Technics 1	Z		2
	perating systems. Personal computer, workstation and supercomputers. Processor, memory, bus, devices, hard disk, network interfac	ce. Hardware and	l	
Principles of operat	ing systems. Requirements on operating system for research and technical computing. Operating system UNIX. Basic principles, kernel, ke	ernel services. Doc	umen	tation.
File system, file atr	butes, working with files. Text editors: vi, emacs. Command interpreter (shell) sh, csh and its programming (scripts). Controlling proces	ses, process statu	s, con	nputer
load a process p	riorities. Standard tools. Graphical user interface X-windows. Computer networks. Local computer networks. Global computer networks.		sses a	and
	protocols TCP/IP. Network configuration of a computer. Network services: hardware sharing, mail, ftp, etc. Network application			
12PIN2	Practical Informatics for Technics 2	Z	l	2
Practically oriented	d three semester course of basics and applications of informatics for science and engineering included as obligatory alternative cours	e. Constituent par	t is rea	alized
4001110	in computer classrooms. The second part of the course is "Introduction to computer algebra systems?.	7		
12PIN3	Practical Informatics for Technics 3	Z	l	2
Practically oriented	If three semester course of basics and applications of informatics for science and engineering included as obligatory alternative cours in computer classrooms. The third part of the course is "Introduction to scientific computing?.	e. Constituent par	t is rea	alized
12POAL		KZ		2
_	Computer Algebra of basic objects (integers, rational and algebraic numbers, polynomials, rational functions, radicals, algebraic functions), arithmetics, si		l	
	derivation, series summation, integration, ordinary differential equations, factorization, equations solving, quantifier elimination, subst	-		
	ning, graphics, Maple - detailed introduction and solving of practical examples, applications, overview of other systems (Axiom, Macsyr	-		- 1
12PSEM	Problem Seminary	Z		2
	h topics from the region of solid materials engineering, physical electronics, materials science, nuclear reactors, dosimetry and applic	_		
12PYTH	Scientific Programming in Python	7		2
	rse is to learn the fundamentals of the modern Python programming language with a focus on scientific computing. Emphasis is place	d on effective solu	tions t	to real
problems. The co	purse is performed in an interactive form of practical exercises, whose topics can be tailored to the content of other subjects or studer	nt theses. Students	are a	also
involved in ongoir	ng research. In the introductory part of the course, students learn the basic features of Python?from basic types to object oriented or	functional program	ıming.	The
greater part of th	e course focuses on specific features of Python for scientific programming. Presented are the main numerical libraries NumPy, SciPy	and the Matplotlib	grapl	hics
	library. We show how to generate efficient code, how to combine Python with other languages, what tools are available.			
12TAIS	Ion Beam Techniques and Applications.	ZK		3
401117	Production and forming of ion beam, charged particle optics, interaction of ion with solid matter, technological and analytical appli			
12ULT	Introduction to Laser Technique	Z,ZK	l	3
12UMF	ctromagnetic radiation sources; laser principle; classification of lasers; characterization and rough application of various types of laser	s; laser salety pre		
_	Introduction to Modern Physics ded to be a concise introduction to modern / nonclassical physics for students who have already had basic classical physics course. A	part of the course	l	3 ivered
The course is interi	in a computational laboratory.	part of the course	is uci	ivereu
12VAK	Vacuum Physics and Technology	KZ		4
	: basic concepts and relations; flow of rarefied gas. Interaction of gas with surface of solid surface; sorption, desorption; evaporation,			
_	tter; Vacuum generation. Pumping process. Pumps. Vacuum measurements: vacuum gauges of total and partial pressure; pumping s	=		1
	searching for leaks. Materials and vacuum instalation parts. Practical exercises.			
12VFT	High Frequency and Impulse Circuitry	Z,ZK		2
The goals of cou	rse is to collect advanced knowledge in high frequency technics and high speed events. The course is focused on Maxwell equation s	olution, Gunn's did	odes,	high
	frequency technics, microwaves guidelines, striplines, oscillators, amplifiers and pulse generators.			
12VTV	Scientific and Technical Computing	Z		2
The students get	familiar with methods of solving of computational problems in the scientific and technical practice, and with methods of their program	ming. The course i	s orie	nted
407465	mainly to programming in the Fortran language.	··		$\overline{}$
12ZAOP	Fundamentals of Optics	Z,ZK		2
	the very basics of optics - electromagnetic theory, linear optical physics and material effects, basics of nonlinear effects, and geome stain, on the bachelor level, broad and general information on optics, giving an essential orientation in the field, especially with respec	-	_	I
	ics are further elaborated during departmental masters program. The lecture stems from the electrodynamic notion of plane waves in v			
	ther from material medium. It explains basics of linear and nonlinear response in material medium and dispersion properties. It next in	, ,	•	
•	it explains processes induced by boundary conditions at interfaces. It also discusses the consequences of statistics on interference processes in the consequence proces	· · · · · · · · · · · · · · · · · · ·		
=	ence and their applications in interferometers. Based on the Fresnel diffraction integral, diffraction processes are presented in a graphical	· ·		
of grating diffraction	n. Based on this diffraction principle, basic functioning of holography is clarified. Finally, the lecture unravels the geometrical optics limit.	It takes notice on	geom	etrical
	proach imaging, substitutive schema of a paraxial imaging system, and optical aberrations. It shows fundamentals of imaging in optical	al instruments.		
12ZDP	Data Processing for Publishing	Z		2
	uter computer-assisted publishing, coding of text, OCR (optical code recognition), DTP (desk top publishing), programming language	- · · · · · · · · · · · · · · · · · · ·		
HTML, XML,, p	bublishing into www pages, cloud computing,commonly used graphical formats, formatting of typical data (PDF, PS, DOC, DOCX, PP)	S, PPSX, RFT, XL	S, XLS	SX),
16==:	multimedial presentations, multimedial formats.			
12ZEL1	Basic Electronics 1	Z,ZK		3
	des primary knowledge of circuit theory concerning principles of electronic circuits in both stationary and harmonic stable state. Circu			I
12ZEL2	e symbolic and complex method are explained. Proper circuit analysis is also lectured. The subject's final part deals with transient effe Basic Electronics 2	Z,ZK		3
	BASIC Electronics 2 vs up with the Basic Electronics 1. Semiconductor elements basic properties are explained. Thecourse's final part deals with basic th	,		-
The subject follow		emes or iooicar ciri	CUITS T	ieio i

	Final an antala of Flacture di mannica	7 71/	2		
12ZELD	Fundamentals of Electrodynamics	Z,ZK	2		
	derivation of Maxwell-Lorentz microscopic equations followed by transition to Maxwell macroscopic theory. Using special theory of re	· ·			
transformation of field vectors between two inertial systems of coordinates with appropriate invariants. Wave and Helmholtz equations are derived. By expansion into plane monochromatic waves methods of solving these equations are studied in homogeneous media with gradually increasing complexity: isotropic without losses, with absoption, with dispersion, and					
•	ic. Finally, solution in weakly non-homogeneous madia is presented using the method of eiconal. Individual chapters are illustrated by				
12ZFP	Principles of Plasma Physics	Z,ZK	4		
	gh temperature plasmas is explained using particle, kinetic and fluid approaches. It includes drift motions and adiabatic invariants, line	•	· .		
	f electromagnetic waves in inhomogeneous plasmas. Basic non-linear effects, such as ponderomotive force, self-focusing and parameters and the self-focusing and parameters are self-focusing and parameters.		e explained.		
	comprises brief introduction into magnetohydrodynamics and nuclear fusion. Basics of atomic physics od multiply-ionized plasmas ar	e introduced.			
12ZPLT	Basic Laser Technique Laboratory	KZ	6		
Lasers, solid state	Nd:YAG laser, laser crystal, laser discharge lamp, laser cavity, resonator, free-running, Q-switching, laser amplifier. second harmonic,	He-Ne glow discha	arges, laser		
diode, dio	de pumped Nd:YAG laser, CO2 laser marking, laser materials properties, non-linear transmission, laser beam transverse profile, acou	usto-optic modulato	ors.		
12ZPOP	Basic Optical Laboratory he practical laboratories give advanced practical skills by experimental work in optics and optoelectronics. Laboratory records must b	KZ e elaborated	6		
			_		
14ELMI	Electron Microscopy	Z,ZK	3		
	students are introduced to the microscopic methods used for the characterization of materials, thin layers or nanoparticles. The introduced to the interaction of different to				
	and electron microscopy and to various types of microscopes. An important part of the course is given to the interaction of different ty	-			
	ulations and tools used in microscopy and to the description of particular parts of the microscopes. Introduction to kinematic and dyna	=			
	, and diffraction and imaging techniques are also covered. A particular attention is given to analytical methods and imaging technique				
14TEM	Engineering Mechanics	Z,ZK	6		
Abstract: The cour	rse represents a link-up between the theoretical mechanics of rigid bodies and engineering disciplines dealing with stress and strain a	inalysis of real stru	cture parts		
	(elasticity, plasticity, fracture mechanics, etc.). Principles of statics, kinematics, and dynamics and their application.				
14TM	Engineering Mechanics	Z,ZK	4		
The course repr	resents a link-up between the theoretical mechanics of rigid bodies and engineering disciplines dealing with the stress and strain ana	lysis of real structu	ire parts.		
14ZZKS	Testing and Processing of Metals and Alloys	KZ	4		
Abstract: Tension to	ests, hardness, impact toughness, technological testing, fatigue testing, creep testing. Light microscopy, preparation of specimens for i	macro- and micro-	observation.		
Casting, forming, w	velding, soldering, brazing, powder metallurgy, mechanical machining. Copper alloys, aluminium alloys, titanium alloys, special alloys o	f non-ferrous metal	ls. Technical		
	drawing and CAD.				
15CH1	General Chemistry 1	Z	3		
The most importan	t concepts, quantities and units used in chemistry are introduced in the course General Chemistry I. Their significance and practical u	se are illustrated b	y examples		
	solved in exercises.				
15CH2	General Chemistry 2	Z,ZK	3		
	continuation of the course General chemistry I. The main attention is paid to general principles governing chemical processes. Using		_		
-	e principles is not restricted only to chemical processes is documented. The significance and practical use of explained principles are		II.		
	. -				
	in exercises.				
15CHEM		7K	2		
15CHEM	Analytical Calculations and Chemometry Principals	ZK	2 one- and		
Lecture deals with	Analytical Calculations and Chemometry Principals hasic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic	c data distributions	s, one- and		
Lecture deals with two-tailed signification	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basiance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem	c data distributions inar part consists	s, one- and of equation		
Lecture deals with two-tailed signification	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, semon stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in p	c data distributions inar part consists	s, one- and of equation		
Lecture deals with two-tailed signification solving, titration	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, serror stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paper spectrophotometry and separation methods, solving of complex forming equilibria.	c data distributions inar part consists o otentiometry, could	s, one- and of equation ometry,		
Lecture deals with two-tailed significated solving, titration 15DALCH	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in parametric spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry	c data distributions inar part consists o otentiometry, could	s, one- and of equation ometry,		
Lecture deals with two-tailed significated solving, titration 15DALCH This course provious	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sements on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in parametric spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and F	c data distributions inar part consists o otentiometry, coulc ZK dellenistic world is	s, one- and of equation ometry, 2 discussed.		
Lecture deals with two-tailed significated solving, titration 15DALCH This course provious	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basis ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paper spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach	c data distributions inar part consists o otentiometry, coulc ZK dellenistic world is	s, one- and of equation ometry, 2 discussed.		
Lecture deals with two-tailed significates solving, titration 15DALCH This course provious The last part of the	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paper spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fecourse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated.	c data distributions inar part consists o otentiometry, coulc ZK dellenistic world is nes development of	s, one- and of equation ometry, 2 discussed. nto crafts		
Lecture deals with two-tailed significate solving, titration 15DALCH This course provious The last part of the 15INPR	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paspectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fecurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods	c data distributions inar part consists o otentiometry, could ZK dellenistic world is nes development of	s, one- and of equation ometry, 2 discussed. nto crafts		
Lecture deals with two-tailed significate solving, titration 15DALCH This course provious The last part of t	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paspectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fecurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other states.	c data distributions in a part consists of otentiometry, could be determined by the control of the could be development of the could be development of the could be development. The	s, one- and of equation ometry, 2 discussed. nto crafts 4 training is		
Lecture deals with two-tailed significate solving, titration 15DALCH This course provion The last part of t	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in propagation of propagation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fedurase is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the second control of the s	c data distributions in a part consists of otentiometry, could be define the control of the could be determined by the could be development of the could be development. The could be development. The could be development.	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is		
Lecture deals with two-tailed significate solving, titration 15DALCH This course provious The last part of t	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in paspectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fecurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other states.	c data distributions in a part consists of otentiometry, could be determined by the control of the could be development of the could be development of the could be development. The	s, one- and of equation ometry, 2 discussed. nto crafts 4 training is		
Lecture deals with two-tailed significate solving, titration 15DALCH This course proving The last part of t	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in propagation of propagation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fedurase is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the second control of the s	c data distributions in a part consists of otentiometry, could be determined by the could be determine	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the solving so	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in propagation propagation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation	c data distributions in a part consists of otentiometry, could be determined by the could be determine	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3 construction		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the solving so	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technological create basic knowledge of physics of nuclear reactors utilizing fission.	c data distributions in a part consists of otentiometry, could be determined by the control of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3 construction transfer and		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the solving so	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, semental science of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic created basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technological construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science.	c data distributions in a part consists of otentiometry, could be determined by the control of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the solving so	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sementations and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in property of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in property of property and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Hocourse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic created basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic created basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic test knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with	c data distributions in a part consists of otentiometry, could be determined by the control of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the solving so	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sements on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of redox, acid-base, complex and precipitation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and he course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic test showledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management.	c data distributions in a part consists of otentiometry, could be determined by the content of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving solving solving the last part of the solving sol	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basist ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sements stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. PH calculations, calculations in paspectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Fecurise is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic test knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management. Fundamentals of Analytical Measurement Methods	c data distributions in a part consists of otentiometry, could be determined by the content of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3 construction transfer and energy, to forms about		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the last part of the last part of the solving	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sements on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in property of redox, acid-base, complex and precipitation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and he course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologic test showledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management.	c data distributions in a part consists of otentiometry, could be determined by the content of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3 construction transfer and energy, to forms about		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the last part of the last part of the solving	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, semble on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in propagation of precipitation methods, solving of complex forming equilibria. History of Alchemy and Chemistry	c data distributions in a part consists of otentiometry, could be determined by the content of the country of t	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is 3 construction transfer and energy, to forms about		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving. The last part of the last part of the last part of the solving	Analytical Calculations and Chemometry Principals In basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, send on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in propagation of errors, basic and certain propagation of propagation propagation propagation propagation of propagation of propagation propagation propagation propagation of propagation of propagation propagation propagation propagatio	c data distributions in a part consists of otentiometry, could be consisted of the country of th	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving solving solving solving the last part of the last part of the solving so	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sembon stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, PH calculations, calculations in propagation of propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sembon stoichiometry of redox, acid-base, complex and propagation of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of out in the laboratories of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technological construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with obstrategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nucle	c data distributions in a part consists of otentiometry, could be consisted of the country of th	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving solving solving solving the last part of the last part of the solving so	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, semental probability of propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, semental stocking of experimental probability of propagation methods, solving of complex forming equilibria. History of Alchemy and Chemistry does the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and oth out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Sesion and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologing of created basic knowledge of physics of nuclear physics, physics of shielding, theory of regulation, material science tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with the strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with the strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with the strategic importancy of nuclear sources of energy. Gives basic knowledge of construction,	c data distributions in a part consists of otentiometry, could be consisted of the country of th	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the last part of core. Function a dosimetry. Create environment and to the last polarography, refundamental the last polarography, refundamental the last polarography, refundamental the last part of the last polarography, refundamental the last polarography.	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. Pt calculations, calculations in property of redox, acid-base, complex and precipitation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Procurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technological sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the create basic knowledge of physics of physics of nuclear safety and radiation on ruclear energy, reliability and economy for comparison with a strategic importancy of nuclear safety and radiation protecti	c data distributions in a part consists of otentiometry, could be consisted of the country of th	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 diagnosis		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the last part of core. Function a dosimetry. Create environment and to the last polarography, refundamental the last polarography, refundamental the last polarography, refundamental the last polarography, refundamental the last polarography.	Analytical Calculations and Chemometry Principals a basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in property property of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in property of redox, acid-base, complex and precipitation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technoloal construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with other strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with other strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy f	c data distributions in a part consists of otentiometry, could be consisted of the country of th	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 diagnosis		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the last part of the last p	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basiance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. Pt calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ot out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Science (Institute of Physical Chemistry) and partly in laboratory at the Department of the create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologote tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with ostrategic importancy of nuclear sacrets and radiation protection in nuclear energy, reliability and economy for comparison with ostrategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management. Fundamentals of Analytical Measurement Methods technical performance and utilization of methods of chemical analysis. Basic methodology of analytical determ	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted of the could be consisted of the could be could	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 diagnosis 2 cochronology,		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the last part of the last p	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basicance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sem on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. Pt calculations, calculations in postoriometry of redox, acid-base, complex and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Focurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of the Instrumental Science (Institute of Physical Chemistry) and partly in laboratory at the Department of the create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technologicates knowledge of revaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear s	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted of the could be consisted of the could be could	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 diagnosis 2 cochronology,		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the last part of the last p	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basic ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, seen an stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Hocurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ot out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of out create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolon do construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with ostrategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with ostrategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear reactometry, polarimetry, UV-VIS spectroscopy, atomic em	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted of the could be consisted of the could be consisted of the could be could	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear and indigenous construction transfer and energy to forms about about the construction of transfer and energy to forms about about the construction of transfer and energy to forms about about the construction of transfer and energy to forms about about the construction of transfer and energy to forms about about the construction of transfer and energy to form about the construction of the cons		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving, titration of the solving solvin	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basis ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, seen on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. Pt calculations, calculations in postoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. Pt calculations, calculations in postoichiometry of redox, acid-base, complex and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Hecourse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ottout in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolo and construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material scienc tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with a strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management. Fundamentals of Analytical Measurement Methods technic	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted otentiometry, could be consisted of the could be consisted of the could be could be consisted of the could be	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 and diagnosis 2 contronology, methods),		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving, titration of the solving solvin	Analytical Calculations and Chemometry Principals n basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basis ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sen on stoichiometry of redox, a cid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and Hocurse is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and other out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolo and construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science tes knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with strategic importancy o	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted otentiometry, could be consisted of the could be consisted of the could be could be consisted of the could be	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is construction transfer and energy, to forms about 2 entiometry, is, nuclear 5 and diagnosis 2 contronology, methods),		
Lecture deals with two-tailed significate solving, titration of the solving solving, titration of the solving solving, titration of the solving solvin	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basi ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sense to stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and H course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ott out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of unclear basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolot or create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolot or strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with o strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management. Fundamentals of Analytical Measurement Methods letchnical performance and utilization of methods of chemical analysis. Basic methodology of analytical determination, gravimetry, titra ractometry, polarimetry, UV-VIS spectroscopy, atomic emission and absorp	c data distributions in a part consists of otentiometry, could be consisted otentiometry, could be consisted otentiometry, could be consisted of the country of the country of the country of the country of the country, heat the country of the coun	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about about 5 and diagnosis 2 entiometry, is, nuclear 5 and diagnosis 2 cochronology, methods),		
Lecture deals with two-tailed significate solving, titration of the solving of the	Analytical Calculations and Chemometry Principals hasic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basis ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, ser on stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry, pH calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and I course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ott out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of Nuclear Power Plants Design and Operation to create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolo and construction of all components are defined wit regard to nuclear physics, physics of shielding, theory of regulation, material science test knowledge for evaluation of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with o strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with o strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with o strategic importancy of nuclear safety and radiation protection in nuclear methods. Fundamentals of Analytical Measurement Methods technical per	c data distributions innar part consists obtentiometry, could like the content of	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear and diagnosis 2 cochronology, methods), 2 of magnetic 2		
Lecture deals with two-tailed significate solving, titration of the solving of the	Analytical Calculations and Chemometry Principals h basic principles of chemometry including errors in classical and instrumental analysis, probability theory, propagation of errors, basi ance testing, hypothesis testing, least squares regression and correlation, calibration and fitting methods, non-parametric testing, sense to stoichiometry of redox, acid-base, complex and precipitation reactions, gravimetric stoichiometry. pH calculations, calculations in p spectrophotometry and separation methods, solving of complex forming equilibria. History of Alchemy and Chemistry des the overview of crafts with chemical and/or metallurgical basis. Development of alchemy from ancient times in China, India, and H course is dedicated to Alchemy in Arabic world and various aspects of alchemy in Latin Europe. The influence of alchemical approach advancement is illustrated. Laboratory Practice in Instrumental Methods of students in the use of selected modern instrumental methods and techniques for solving some physico-chemical analytical and ott out in the laboratories of Czech Academy of Sciences (Institute of Physical Chemistry) and partly in laboratory at the Department of unclear basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolot or create basic knowledge of physics of nuclear reactors utilizing fission. Further explains arrangement of nuclear fuel, purpose, technolot or strategic importancy of nuclear safety and radiation protection in nuclear energy, reliability and economy for comparison with o strategic importancy of nuclear sources of energy. Gives basic knowledge of construction, operation and decommissioning of nuclear high level nuclear waste and spent fuel and their management. Fundamentals of Analytical Measurement Methods letchnical performance and utilization of methods of chemical analysis. Basic methodology of analytical determination, gravimetry, titra ractometry, polarimetry, UV-VIS spectroscopy, atomic emission and absorp	c data distributions innar part consists obtentiometry, could like the content of	s, one- and of equation ometry, 2 discussed. Into crafts 4 training is a construction transfer and energy, to forms about 2 entiometry, is, nuclear and diagnosis 2 cochronology, methods), 2 of magnetic 2		

16MCRB	Transport of Ionizing Radiation and Monte Carlo Method	Z,ZK	4
•	ciples of Monte Carlo method and its use for radiation transport simulation, selected concepts of probability theory and mathematical	•	
	ent types of radiation and their use for stochastic modeling of their substance transport. Model description concepts, geometric mode ing of measured variables and parameters. Statistical evaluation of reliability of modeling results, variance reduction methods, progra	=	- 1
	MCNP program, its possibilities and use. Procedures for the practical use of the program for typical tasks in the field of dosimetry, a		
1 37	detection and detection systems, radiation protection and medical applications.		
16MEZB	Fundamentals of Ionizing-Radiation Metrology	Z,ZK	4
	izes the basic objectives and content of ionizing radiation metrology. It deals with the interpretation of radiation quantities and units in		
theoretical and expe	erimental foundations of metrology, the determination of basic parameters of radiation. Lectures are supplemented with basic summ regulations.	ary of relevant legis	lation and
16SED1	Dosimetry Seminar 1	7	2
	posed to motivate the student's interest in the field of dosimetry, especially in medical physics. Introductory lectures will be devoted	to support for future	
a bachelor's thesis.	The following lectures are given by the former students of DDAIR, who are currently employed in various organizations (SÚRO, v.v.)	i., ÚJF AV R v.v.i.,	ÚJV ež,
	MI, Hospital Na Homolce, FN v Motole, PTC Czech s.r.o.).		
16SED2	Dosimetry Seminar 2		2
	2 follows-up SED1. In this seminary students will listen to the lectures of the older students of DDAIR. The older students give lecture earch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of their theses. The course also introduces the principles of creating good presentation and advice for working with scier arch topic of the principle good presentation and the principle good good presentation and the principle good good presentation and the principle good good good good good good good goo		ress on the
16UAZB	Principles of Ionizing-Radiation Applications	ZK	2
	f applications, review of interaction of radiation with a matter, radiation sources, detectors and instrumentation, evaluation of radionum	ı uclide measurement	ts, use of
penetration ar	nd scattering of radiation beams, selected radioanalytical methods, tracer methods, radionuclide dating, further possibilities for the u	ise of ionizing radia	tion.
16ZBAF1	Fundamentals of Human Biology, Anatomy and Physiology 1	Z,ZK	4
	ng systems, non-cellular and cellular organisms, prokaryotic and eukaryotic cell. Molecular and cell biology. Biopolymers. Molecular		
trieli regulation. Gei	neral human anatomy. Basics of medical terminology. Overview of tissues. Skeleton. Muscle anatomy in general. Digestive system a system and physiology of respiration. Excretory and genital tract.	ilia its priysiology. K	espiratory
16ZBAF2	Fundamentals of Human Biology, Anatomy and Physiology 2	Z,ZK	4
	gy of cardiac activity. General anatomy of blood vessels, main arteries of the body, overview of veins and physiology of blood, blood		of nerves.
CNS.	Visual system and physiology of the visual system. Auditory and vestibular system and physiology of hearing and balance. Skin, en	docrine glands.	
16ZDOZ1	Fundamentals of Radiation Dosimetry 1	Z,ZK	4
History, developr	nent, and objectives of dosimetry. Quantities and units used for description of sources, fields, interactions of ionizing radiation, ioniz	ations, energy trans	fer and
16ZDOZ2	absorption. Fundamentals of the effects of ionizing radiation. Fundamentals of Radiation Dosimetry 2	ZK	2
I	logical effects of ionizing radiation. Quantities and units used in radiation protection. Recommendations of ICRP and ICRU. Principles		
. unuamoniaio ei bio	in dosimetry. Determination of activity and neutron source emission. Measurements of absorbed dose and exposure.		
16ZEDB	Basics of Experimantal Data Processing	ZK	2
<u>'</u>	Statistical analysis of experimental data; univariate data; calibration; regression; multivariate data.	<u>'</u>	
16ZIVB	Introduction to Ecology	KZ	2
The subject inform a	bout basic of the ecologic principles, terms and ideas. It covers overview information regarding to particular components of the envirc indicators and sustainable development.	nment and evaluate	e economic
16ZJTB	Nuclear Energy Facilities and Accelerators	ZK	2
1	nuclear reactor and nuclear power plant, chain fission reaction development, main components of nuclear energetic reactor, most im	l I	
high-voltage accel	erators, linear high-frequency accelerators, accelerators based on cyclotron, microtron, betatron, electron and proton synchrotrons,	electron and ion so	urces for
407000	accelerators, targets.		
16ZPSP	Basic Work with PC se is to acquaint students with the basic skills related to working on a personal computer. The introductory part of the course is devot	Z	2 estems and
	at the CTU in Prague and the FNSPE. Emphasis is placed on effective handling of work with office productivity software (text editor,	=	
	rcises in MS Office. The practical content focuses mainly on further use during studies (laboratory reports, research work, bachelor's		
specific practice (hos	spitals, state administration, companies). Other sections summarize basic information about computer hardware, software, and secur	ity. Completion of in	dependent
107010	home exercises and participation in exercises above 60% is a necessary condition for passing the course.		
16ZRAO	Basics of Radiation Protection se is to familiarize students with the general principles of radiation protection. The main emphasis is put on basic mechanisms and co	Z	2
	le is to lamiliance students with the general principles of radiation protection. The main emphasis is put on basic mechanisms and collections. The course provides answers to the cardinal questions: What is ionizing radiation (IR), where it comes from, whether and how it	-	
	g of protective units (Gray, Sievert), how to prevent malicious effect of IR and many others. The content of the lectures does not requ		
17ENF	Experimental Neutron Physics	KZ	2
	nainly focused on detailed characterisation of neutron properties, characteristics of neutron (reactor and non reactor) sources, properties,		- 1
	detection methods, neutron induced nuclear reactions, modification and adjustment of neutron field, science and industry neutron at	•	
•	ita processing and analysis. The lectures are supplemented with experimental practices in the field of neutron detection, determination Ision in various materials, preparation and characterisation of photo-neutron source and neutron source calibration. Experimental prac	=	
,	reactor VR-1 and in the neutron laboratory.		,
17JARE	Nuclear Reactors	ZK	2
-	ower issue. Previous evolution of power reactor. Nuclear fission reactors, fuel assemblies, active core, control systems, safety systems		
•	enerations. Standard types of nuclear power reactors: concept, description, layout, previous evolution, world share, perspectives. Pres		` '
	WR (Westinghouse, KWU, Framatom). VVER-type reactors , Temelín nuclear power plant. Boiling water reactors. Heavy water react as cooled reactors. Second nuclear era. reactors of generation III (EPR, AP-1000, VVER 1200). Reactors of generation IV: GIF and		
	election of proposed systems. Six selected concepts. ICRP scenarios of word evolution, hydrogen power, role of nuclear power in lo		
17UINZ	Introduction to Engineering	Z,ZK	3
	ted to an introduction to the engineering profession. Students will gradually learn the characteristics and specialties of engineering v		
the basics of selecte	ed engineering disciplines, such as the basics of materials science, manufacturing technology, quality control and assurance and en		course will
17\/\D	focus on some issues of R&D activities organization and on selected parts of technical drawings and the work with AutoCAl		
17VYR Course is devoted to	Research Reactors research reactors and their applications for the need of research and industry. Students get familiar with research reactor types and	ZK their experimental r	2 programme
	experimental equipment needed for particular applications and their specifics. The course is supported by technical visit to research		- 1
along with			

17ZEH	Basics of Economic Assessment	ZK	2
The course focu	ses on the economic evaluation of Nuclear power plants. Introductory lectures are concerned with an introduction to economy and the	e basic component	parts of
microeconomics. Lo	ectures continued with insight into the business and managerial economics, explanation of the concepts of incomes, expenses, etc. and	their applications	in electrical
	energy resources evaluation. Second part of lectures is focused on evaluation of nuclear power plants - the fuel cycle and operation	s of NPP.	
17ZEL	Basics of Electronics	KZ	3
Lectures provide b	asic information of electronics. In the beginning, lectures are devoted to passive components - resistors, capacitors, inductors and sol	lution of electrical o	circuits with
them. Next, lecture	s deal with semiconductor components (standard, Zener, capacitive, LED), bipolar, unipolar transistors and semiconductor componer	nts with more layers	s (thyristors
and triacs). Lectu	res continue with general amplifiers and operational amplifiers. Finally, lectures deal with digital circuits, digital/analog and analog/dig	ital converters. Led	tures are
	completed with electronic laboratory exercises.		
18EKO1	Mathematical Economics 1	Z,ZK	5
The course introdu	ces selected models and methods for economic decision making. The main attention is given to optimization models of linear program	ming, possibilities	of their real
	applications and their solving by means of the current software products.		
18EKO2	Mathematical Economics 2	Z,ZK	5
The course intro	uces selected models and methods for economic decision making. The main attention is given to optimization models in graphs, pro	ject management,	inventory
	management with deterministic and stochastic demand, queuing theory and simulation models.	_	
18ESPG1	European Computer Driving Licence 1	Z	2
	ators are an important tool, especially for students and graduates in Software engineering in economics. The winter semester introduc	l l	
•	ccent is put on advanced functions of MS Excel (names, functions and expressions, pivot table and graph). Next, the VBA language w		
	and user functions will be addressed.		
18ESPG2	European Computer Driving Licence 2	Z	2
	ators are an important tool, especially for students and graduates in Software engineering in economics. Summer semester follows the v	_	_
	g topics (charts, objects, graphical user interface, add-ins programming) and introduces some applications in economics, mathematic		
V B/ C programmin	computer science.	o, operational reco	aron, and
18INTA	Development of internet applications	KZ	4
	e an overview of modern technologies for the development of web applications. Students will learn basic web languages and concept		
•	e an overview of modern recrinologies for the development of web applications. Students will learn basic web languages and concept ced to relational database systems. The tutorials are dedicated to practical examples of building web applications, from the simplest to		
wiii also be ilitioda	is oriented primarily towards backend technologies and using the Python languages, but covers also frontend frameworks and Jav		THE COURSE
18MAK1		· · ·	
-	Macroeconomics 1	Z,ZK	4
	I provides students with a fundamental theoretical basis for understanding how an economy works. It introduces main macroeconom		
	uilibrium theory, fundamentals of open economy theory, inflation, unemployment, economic growth, economic fluctuations, basic mac		
A5-AD and their im	plications for economic policies. The learning outcomes of the course is to equip students with ability to analyze macroeconomic phenom	ena and their interc	connections
40144160	and subsequently to use them under the conditions of modern economic life.	7 71/	
18MAK2	Macroeconomics 2	Z,ZK	4
	Il extends theoretical knowledge acquired from Macroeconomics I of its students with the latest knowledge of contemporary macroec		
•	especially those with an emphasis on the role of human capital and technological progress. Furthermore, it introduces students to me recommendate derived from microscopamic behavior of subjects and economics and their rational expectations. It also provides at		
modeling, i.e., mac	oeconomic models derived from microeconomic behavior of subjects and economics and their rational expectations. It also provides stu of labor market modeling.	idenis with modern	Kilowieage
401411/4	·	7 71/	_
18MIK1	Microeconomics 1	Z,ZK	5
	a set of theories, which help us to understand processes by which the scarce resources are allocated among alternative uses. Microscopials in the control of		
prices and mark	ets in these processes, and makes more clear behaviour of the economic agents. This course of Microeconomics I consist of introduc	tion in wilcroecono	illics allu
40141170	Consumer Theory.	7 71/	_
18MIK2	Microeconomics 2	Z,ZK	5
	a set of theories, helping us to understand process by which scarce resources are allocated among alternative uses. Microeconomics	-	
	n this process and make clear economic agents behaviour. The lectures of Microeconomics II are oriented on Theory of Firm and Ind	ustriai Organisatioi	
18MPT	Programming in MATLAB		
The subject acqua		KZ	5
	aints students with various programming techniques in the Matlab environment. The emphasis is placed on the differences in program	KZ	5
	compared to classical languages.	KZ nming methodology	5 in Matlab
18MTL	compared to classical languages. Programming in MATLAB	KZ mining methodology	5 in Matlab
	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analysis	KZ mining methodology	5 in Matlab
Introducing Matlab	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analysis and geometric representation of results.	KZ KZ Mining methodology Z,ZK Sis, statistics, algor	5 in Matlab 5 ithmization
Introducing Matlab	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming	KZ KZ mining methodology Z,ZK Sis, statistics, algor	5 in Matlab 5 ithmization 4
Introducing Matlab	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming It familiarizes the students with the basic concepts in program	KZ KZ mining methodology Z,ZK Sis, statistics, algor	5 in Matlab 5 ithmization 4
18PAS This lecture is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming It familiarizes the students with the basic concepts in programming language.	KZ ming methodology Z,ZK sis, statistics, algor Z mming and with the	5 in Matlab 5 ithmization 4
Introducing Matlab	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming It familiarizes the students with the basic concepts in program	KZ KZ mining methodology Z,ZK Sis, statistics, algor	5 in Matlab 5 ithmization 4
18PAS This lecture is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming It familiarizes the students with the basic concepts in programming language.	KZ ming methodology Z,ZK sis, statistics, algor Z mming and with the	5 5 th Matlab 5 thmization 4 Pascal
18PAS This lecture is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in programming language. Programming in Java	KZ ming methodology Z,ZK sis, statistics, algor Z mming and with the	5 5 th Matlab 5 thmization 4 Pascal
18PAS This lecture is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming It familiarizes the students with the basic concepts in programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform.	KZ MX MX MX MX MX MX MX M	5 5 sithmization 4 Pascal
18PAS This lecture is in 18PJ 18PRC1	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language.	KZ KZ mining methodology Z,ZK sis, statistics, algor Z mining and with the Z,ZK Z	5 5 ithmization 4 Pascal 5
18PAS This lecture is in 18PJ 18PRC1 18PRC2	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2	KZ KZ KIND MINING METHODOLOGY Z,ZK Sis, statistics, algor Z MINING And With the Z,ZK Z KZ KZ	5 5 sithmization 4 Pascal
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This c	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analyst and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard	KZ KZ KZ KSis, statistics, algor Z KS KZ KSZK Z KSZK Z KZ	5 in Matlab 5 ithmization 4 Pascal 5 4
18PAS This lecture is it 18PJ 18PRC1 18PRC2 This co 18UOA	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analyst and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture	KZ KZ Naming methodology Z,ZK Sis, statistics, algor Z Naming and with the Z,ZK Z KZ Z	5 Sthmization 4 Pascal 5 4 4 4
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analyst and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization	KZ ming methodology Z,ZK sis, statistics, algor Z mming and with the Z,ZK Z Template Library. Z,ZK Z,ZK Z,ZK	5 in Matlab 5 ithmization 4 Pascal 5 4 4 4
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analyst and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 Programming in C++ 2 Programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of	KZ ming methodology Z,ZK sis, statistics, algor Z mining and with the Z,ZK Z KZ Template Library. Z,ZK Z,ZK the algorithm comp	5 sith Matlab 5 sith Matlab 4 Pascal 5 4 4 4 4 olexity.
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is 18ZPRO	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analyst and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 Programming in C++ 2 Programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming	KZ ming methodology Z,ZK sis, statistics, algor Z ming and with the Z,ZK Z Template Library. Z,ZK Z,ZK the algorithm comp	5 sithmization 4 Pascal 5 4 4 4 4 olexity. 4
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is 18ZPRO	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming. It familiarizes the students with the basic concepts in programming.	KZ ming methodology Z,ZK sis, statistics, algor Z ming and with the Z,ZK Z Template Library. Z,ZK Z,ZK the algorithm comp	5 sithmization 4 Pascal 5 4 4 4 4 olexity. 4
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is in 18ZPRO This course is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming Intended mainly for students with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language.	KZ MXZ Mining methodology Z,ZK Sis, statistics, algor Z Mining and with the Z,ZK Z KZ Template Library. Z,ZK Z,ZK the algorithm components of the components of th	5 sithmization 4 Pascal 5 4 4 4 A plexity. 4 Python
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is 18ZPRO This course is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming ntended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming. It familiarizes the students with the basic concepts in programming.	KZ KZ Mining methodology Z,ZK Sis, statistics, algor Z mming and with the Z,ZK Z KZ Template Library. Z,ZK Z,ZK the algorithm companing and with the	5 sithmization 4 Pascal 5 4 4 4 4 olexity. 4
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is in 18ZPRO This course is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming Intended mainly for students with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language.	KZ MXZ Mining methodology Z,ZK Sis, statistics, algor Z Mining and with the Z,ZK Z KZ Template Library. Z,ZK Z,ZK the algorithm components of the components of th	5 sithmization 4 Pascal 5 4 4 4 A plexity. 4 Python
18PAS This lecture is in 18PJ 18PRC1 18PRC2 This co 18UOA 18ZALG This course is 18ZPRO This course is in	compared to classical languages. Programming in MATLAB environment as efficient tool for computation in complex arrays and symbolic variables, namely for linear algebra, mathematic analys and geometric representation of results. Pascal Programming Intended mainly for students, with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Programming in Java This course is devoted to the Java platform and to the development of the basic types of applications for this platform. Programming in C++ 1 This course covers mainly the C programming language and non-object oriented features of the C++ language. Programming in C++ 2 purse covers the object oriented programming and othesr advanced constructs in the C+;+ programming language and the Standard Introduction into Object Oriented Architecture Basics of Algorithmization devoted to selected algorithms and methods for algorithm design. This course intruduces selected methods for the determination of Basics of Programming netended mainly for students with little or no experience in programming. It familiarizes the students with the basic concepts in program programming language. Physical Education	KZ KZ Mining methodology Z,ZK Sis, statistics, algor Z mming and with the Z,ZK Z KZ Template Library. Z,ZK Z,ZK the algorithm companing and with the	5 sithmization 4 Pascal 5 4 4 4 slexity. 4 Python 1

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

Generated: day 2024-05-19, time 12:52.