Study plan

Name of study plan: PRE studium od 14-15 (spol. ást studia)

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Technology in Transportation and Telecommunications

Type of study: Bachelor full-time

Required credits: 93

Elective courses credits: -3 Sum of credits in the plan: 90

Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 87

The role of the block: Z

Code of the group: 1S PRE 14-15 P

structures. Labour and capital, efficiency, ownership, public choice.

Name of the group: 1. sem. PRE 14-15 povinné p edm ty (spol. ást studia) Requirement credits in the group: In this group you have to gain 30 credits

Requirement courses in the group: In this group you have to complete 12 courses

Credits in the group: 30 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
611LA	Linear Algebra Romana Zibnerová Romana Zibnerová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
611MTA	Mathematical Analysis	Z,ZK	4	2+2	Z	Z
612ZADI	Introduction to Transportation Engineering	Z,ZK	3	2+1	Z	Z
617E	Economics	Z,ZK	3	2+1	Z	Z
618MRI1	Materials 1	Z,ZK	3	2+1	Z	Z
611GIE	Geometry Vít Malinovský Šárka Vorá ová (Gar.)	KZ	3	2P+2C+12B	Z	Z
614KSP	Constructing with Computer Aid Libor Židek	KZ	2	0P+2C+8B	Z	Z
614ZINF	Fundamentals of Informatics	KZ	2	0+2	Z	Z
618TTED	Creation of Technical Documentation	KZ	2	2+1	Z	Z
621ZLD	Introduction to Air Transport	KZ	2	2+1	Z	Z
622UN	Traffic Accidents Introduction	Z	2	2+0	Z	Z
TV-1	Physical Education	Z	1		Z	Z

Characteristics of the courses of this group of Study Plan: Code=1S PRE 14-15 P Name=1. sem. PRE 14-15 povinné p edm ty (spol. ást studia)

611LA	Linear Algebra	Z,ZK	3
Vector spaces (linear co	mbinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and	their solvability. D	eterminants and
their applications. Scala	ar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification.		
611MTA	Mathematical Analysis	Z,ZK	4
Sequences and series	of real numbers and its convergence. Basic properties of functions. Differential and integral calculus of the real function of one	real variable. Pow	er series, Fourier
series and foundations	of Fourier transform.		
612ZADI	Introduction to Transportation Engineering	Z,ZK	3
Traffic survey. Terrestria	i roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic pro	gnosis. Traffic saf	ety. Air transport.
Traffic and environment			
617E	Economics	Z,ZK	3
Microeconomic and ma	responding interpretation of economic relations. Method and subject of the economics. Economic decision making of cons	imers and produc	ers Market

618MRI1	Materials 1	Z,ZK	3
Crystal structure. Ba	tasics of thermodynamics of metals and their alloys. Balanced binary diagrams. Alloys of iron with carbon. Deterioration of soli	d solutions. Heating p	rocessing of
steel and cast irons	s. Physical features. Mechanical features. Dephectostopic testing. Corosion.		
611GIE	Geometry	KZ	3
Orthographic and o	blique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves -	parameterization, arc	of the curve,
torsion and curvatur	ire, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving on	a curved path.	
614KSP	Constructing with Computer Aid	KZ	2
"CAD systems" tern	m determination. CAD role in projecting system model. Existing CAD systems on Czech market. Project creation, basic comm	on work rules in grap	hic applications
and CA systems. Co	co-ordinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting p	ossibilites, AutoCAD	environment
	.: th		
profiles, drawings w	with raster foundaments).		
profiles, drawings w 614ZINF	Fundamentals of Informatics	KZ	2
614ZINF		1	_
614ZINF Introduction to facul	Fundamentals of Informatics	n. Number systems ir	ncl. arithmetic
614ZINF Introduction to facul	Fundamentals of Informatics Ilty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmissio thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pro	n. Number systems ir	ncl. arithmetic
614ZINF Introduction to facul calculations. Algorit	Fundamentals of Informatics Ilty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmissio thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pro	n. Number systems ir	ncl. arithmetic
614ZINF Introduction to facul calculations. Algoritl graphs, calculations 618TTED	Fundamentals of Informatics Ilty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmissio thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions.	n. Number systems ir cedures. Work with M	ncl. arithmetic S-Excel - tables
614ZINF Introduction to facul calculations. Algoritl graphs, calculations 618TTED Technical standards	Fundamentals of Informatics Ilty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions. Creation of Technical Documentation	n. Number systems ir cedures. Work with M	ncl. arithmetic S-Excel - tables
614ZINF Introduction to facul calculations. Algoritl graphs, calculations 618TTED Technical standards	Fundamentals of Informatics Ity network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions. Creation of Technical Documentation s, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, caving sheets, types of schemes and their creation.	n. Number systems ir cedures. Work with M	ncl. arithmetic S-Excel - tables
614ZINF Introduction to facul calculations. Algorith graphs, calculations 618TTED Technical standards arrangement of dray 621ZLD	Fundamentals of Informatics Ilty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions. Creation of Technical Documentation s, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, or	n. Number systems in cedures. Work with M	ncl. arithmetic S-Excel - tables, 2 netrical accuracy,
614ZINF Introduction to facul calculations. Algoriti graphs, calculations 618TTED Technical standards arrangement of drav 621ZLD Air transport as a co	Fundamentals of Informatics Ity network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions. Creation of Technical Documentation s, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, caving sheets, types of schemes and their creation. Introduction to Air Transport	n. Number systems in cedures. Work with M	ncl. arithmetic S-Excel - tables, 2 netrical accuracy,
614ZINF Introduction to facul calculations. Algoriti graphs, calculations 618TTED Technical standards arrangement of drav 621ZLD Air transport as a co	Fundamentals of Informatics Ity network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and pros, functions. Creation of Technical Documentation s, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, caving sheets, types of schemes and their creation. Introduction to Air Transport component of complex transport system. International status of civil aviation. International organizations in Europe and worldw	n. Number systems in cedures. Work with M	ncl. arithmetic S-Excel - tables, 2 netrical accuracy,

Code of the group: 2S PRE 14-15 P

Name of the group: 2. sem. PRE 14-15 povinné p edm ty (spol. ást studia) Requirement credits in the group: In this group you have to gain 30 credits

Requirement courses in the group: In this group you have to complete 12 courses

Credits in the group: 30 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
611FY1	Physics 1	Z,ZK	4	2+2	L	Z
611MVP	Mathematical Analysis of Function of More Variables	Z,ZK	3	2+2	L	Z
612PKD	Rail Transport Designing	Z,ZK	3	2+2	L	Z
617TDL	Transport Technology and Logistics	Z,ZK	3	2+2	L	Z
618ST	Statics	Z,ZK	3	2+1	L	Z
620UIS	Introduction to ITS	Z,ZK	3	2+1	L	Z
614SIAP	Networks and Protocols	KZ	2	1+1	L	Z
614UPRO	Introduction to Programming	KZ	2	0+2	L	Z
617EDOT	Economy, Transport, Telecommunications	KZ	2	2+0	L	Z
618MRI2	Materials 2	KZ	2	2+0	L	Z
611PT	Probability	Z	2	1+1	L	Z
TV-2	Physical Education	Z	1		L	Z

Characteristics of the courses of this group of Study Plan: Code=2S PRE 14-15 P Name=2. sem. PRE 14-15 povinné p edm ty (spol. ást studia)

ast studiaj			
611FY1	Physics 1	Z,ZK	4
Kinematics, particle	dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics, electric field, directed electric	current.	
611MVP	Mathematical Analysis of Function of More Variables	Z,ZK	3
Metric spaces, sequ	ences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of fur	nction, partial deriv	vations, implicitly
defined functions, e	tremes of functions of several variables. Integral calculus of functions of several variables, Riemann integral, integral over curve	s and surfaces in	R3, application
of integral calculus i	n physics.		
612PKD	Rail Transport Designing	Z,ZK	3
Railway lines netwo	k. Vehicle and track relation. Traction. Track geometrical parameters. Clearance profile. Railway lines routing. Superstructure and	d substructure of t	he railway lines.
Switches. Railway s	ations. City rail transport.		
617TDL	Transport Technology and Logistics	Z,ZK	3
Basic terms in trans	oort technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetablin	g. Planning in pasa	anger and freigh
transport. Organisat	on of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public of	city transport. Logi:	stic technologies
and their application	using various transport means.		
618ST	Statics	Z,ZK	3
General system of f	orces. Calculation of reactions of mass objects and compound systems. Assessment of internal forces on statically determinate	beam and simple	framework.

General system of forces. Calculation of reactions of mass objects and compound systems. Assessment of internal forces on statically determinate beam and simple framework. Principle of virtual works. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss construction, method of joints and method of sections. Geometry of cross sections. Plane fiber polygons and catenary cables.

620UIS	Introduction to ITS	Z,ZK	3
Intelligent Transport Sys	stems (ITS), their objectives and vision. ITS in the world, in Europe and in the Czech Republic. Architecture of ITS and the ro	le of standardizati	on. Information
and navigation systems	. ITS in road, rail and combine transport. Design of ITS, organization, preparation and implementation of the project. Current	projects in the Cz	ech Republic.
614SIAP	Networks and Protocols	KZ	2
Basic communication m	odel, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of	of basic network p	rotocols (ARP,
RARP, TCP, UDP, Telnet	, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and func	lamentals of own v	veb presentation
design by the means of	web sites.		
614UPRO	Introduction to Programming	KZ	2
Algorithm development,	methods of structured programming, high-level programming languages, basics of C programming languages (types, variate	oles, conditions, cy	cles, arrays,
functions), programming	g techniques, complexity.		
617EDOT	Economy, Transport, Telecommunications	KZ	2
Transport, telecommuni	cations, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport	modes, ITS, susta	ainability.
618MRI2	Materials 2	KZ	2
Fundamental concepts,	notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the cor	nposite materials.	
611PT	Probability	Z	2
Descriptive statistics. Ba	asic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, proba	bility distribution, p	probability mass
and density, moments,	some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix	 Mixed distribution 	ns, mixture of
distributions. Law of larg	ge numbers, central limit theorem.		
TV-2	Physical Education	Z	1

Code of the group: 3S PRE 15-16 P

Name of the group: 3. sem. bak. PRE 15-16 povinné p edm ty (spol. ást studia)

Requirement credits in the group: In this group you have to gain 27 credits

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

Credits in the group: 27 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
611DAD	Differential and Difference Equations	Z,ZK	3	2+1	Z	Z
611FY2	Physics 2	Z,ZK	4	2+2	Z	Z
611SIS	Statistics	Z,ZK	2	1+1	Z	Z
612MDE	Transport Models and Transport Excesses Josef Kocourek, Tomáš Pad lek Josef Kocourek (Gar.)	Z,ZK	3	2P+1C+8E	3 Z	Z
616UDDM	Introduction to Transportation and Manipulation Technics	ZK	2	2+0	Z	Z
618PZP	Elasticity and Strength Tomáš Doktor Ond ej Jiroušek (Gar.)	Z,ZK	3	2P+1C+10E	3 Z	Z
620SSA	Systems Analysis	Z,ZK	3	2+1	Z	Z
612PPOK	Designing Roads, Highways and Motorways Tomáš Pad lek, Petr Kumpošt	KZ	3	1P+2C+10E	B Z	Z
614UATT	Introduction to Automatization and Telecommunication Systems	KZ	2	3+0	Z	Z
614ZAET	Fundamentals of Electrotechnics	KZ	2	2+1	Z	Z

Characteristics of the courses of this group of Study Plan: Code=3S PRE 15-16 P Name=3. sem. bak. PRE 15-16 povinné p edm ty (spol. ást studia)

(spol. ást studi	a)		,
611DAD	Differential and Difference Equations	Z,ZK	3
	tial equation of the first order and some methods of its solution. Differential equations of the n-th order, linear diferential equatio erential equation of the second order. Systems of linear differential equations. Difference equations, linear difference equations		•
611FY2	Physics 2	Z,ZK	4
Magnetic field, electr solid body physics.	omagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-ele	ectron atoms, the r	nuclei. Basics of
611SIS	Statistics	Z,ZK	2
	perties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression a s, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regress		
612MDE	Transport Models and Transport Excesses	Z,ZK	3
Parameters of the tra	ffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of	f queues, shock w	aves. Quality of
transport and its ass safety and fluency.	essment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the conse	quences. Improvin	g of transport
616UDDM	Introduction to Transportation and Manipulation Technics	ZK	2
Means of transportat	on and transportation systems. Principles, functions and arrangement of means of transportation. Motors and their characteristics.	Water transportation	on. Manipulating
technics. Principles of	f lifting machines and conveyors. Legislature.		
618PZP	Elasticity and Strength	Z,ZK	3
Tension and compres	sion. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam. Design of riveted, b	olted and welded j	oint of structure.
Analysis of deflection	curve of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling. Beam on elastic for	oundation. Strength	ı analysis.

620SSA Systems Analysis
Systems identification. Typical tasks of systems analysis: on the interface, routes in system, decomposition and integration, on systems feedback. Capacity tasks, process analysis.

Task about behaviour, aim behaviour, the genetic code, architecture and identity of systems. Fundamentals of technical cybernetics, stability and reliability of systems.

612PPOK Designing Roads, Highways and Motorways KZ 3

Definition, types, ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standard speed. Route in rural areas.

Range of vision for stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safety device. Crossings, junctions, intersections.

614UATT Introduction to Automatization and Telecommunication Systems KZ 2
Basic axioms of technical cybernetics, automatization in transportation, human as the weakest element, signalling in transpotation, modelling and projecting of transport systems, integrated technological and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modulating methods, multimedial networks and services, NGN networks.

614ZAET Fundamentals of Electrotechnics

K7

Basic electrotechnic terms, circuit quantities. Periodic courses characteristics. Electric circuits elements and basic circuit members. Assignating of bipoles and basic circuit elements. Solution to direct current circuits with a help of circuit analysis elementar methods: method of consecutive reduction, unloaded voltage divider, current divider. Transfiguration star-triplangel and principle of superposition in direct current circuits.

Name of the block: Jazyky

Minimal number of credits of the block: 6

The role of the block: J

Code of the group: JAZ 1 PRE (3.-4.SEM)

Name of the group: Jazyky bak. PRE pro 3. a 4. sem. (1.cizí jazyk)

Requirement credits in the group: In this group you have to gain 6 credits

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

Credits in the group: 6 Note on the group:

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Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
615JZ1A	Foreign Language - English 1 V ra Pastorková	Z	3	0P+4C+10B	Z	J
615JZ2A	Foreign Language - English 2 V ra Pastorková	Z,ZK	3	0P+4C+10B	L	J
615JZ1N	Foreign Language - German 1	Z	3	0+4	Z	J
615JZ2N	Foreign Language - German 2	Z,ZK	3	0+4	L	J
615JZ1R	Foreign Language - Russian 1	Z	3	10	Z	J
615JZ2R	Foreign Language - Russian 2	Z,ZK	3	0+4	L	J

Characteristics of the courses of this group of Study Plan: Code=JAZ 1 PRE (3.-4.SEM) Name=Jazyky bak. PRE pro 3. a 4. sem. (1.cizí jazyk)

615JZ1A	Foreign Language - English 1	Z	3
Grammatical structur	es and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and	communicative s	kills. Elementary
stylistics forms. Oral	and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.		
615JZ2A	Foreign Language - English 2	Z,ZK	3
Grammatical structur	es and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and	communicative s	kills. Elementary
stylistics forms. Oral	and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.		
615JZ1N	Foreign Language - German 1	Z	3
Grammar structure a	nd stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculi	y's fields of stud	y. Focus on
improvement in perce	eptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both ora	al and written form	ns. Technical
texts and their feature	es; practice of oral and written presentation.		
615JZ2N	Foreign Language - German 2	Z,ZK	3
Grammar structure a	nd stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculi	ty's fields of stud	y. Focus on
improvement in perce	eptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both ora	al and written form	ns. Technical
texts and their feature	es; practice of oral and written presentation.		
615JZ1R	Foreign Language - Russian 1	Z	3
Grammar structure a	nd stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Facult	v's fields of stud	v. Focus on

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

615JZ2R Foreign Language - Russian 2 Z,ZK 3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation.

List of courses of this pass:

Code	Name of the course	Completion	Credits
611DAD	Differential and Difference Equations	Z,ZK	3
	ential equation of the first order and some methods of its solution. Differential equations of the n-th order, linear differential equations. In linear differential equations, linear difference equations, linear difference equations, linear difference equations.		
611FY1	Physics 1	Z,ZK	4
	Filysics natics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics, electric field, directed	,	4
611FY2	Physics 2	Z,ZK	4
	rictromagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-electrosolid body physics.	on atoms, the nucle	ei. Basics of
044015		1/7	
611GIE Orthographic and	Geometry I oblique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - param	KZ eterization, arc of	3 the curve,
torsion a	and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving	on a curved path	
611LA	Linear Algebra	Z,ZK	3
Vector spaces (line	ar combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and their their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classifications.	r solvability. Deterr	ninants and
611MTA	Mathematical Analysis	Z,ZK	4
	ries of real numbers and its convergence. Basic properties of functions. Differential and integral calculus of the real function of one real series and foundations of Fourier transform.		ries, Fourier
611MVP	Mathematical Analysis of Function of More Variables	Z,ZK	3
Metric spaces, seq	uences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of function		ns, implicitly
defined functions,	extremes of functions of several variables. Integral calculus of functions of several variables, Riemann integral, integral over curves ar of integral calculus in physics.	nd surfaces in R3,	application
611PT	Probability	Z	2
Descriptive statistic	cs. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability	distribution, prob	ability mass
and density, mom	ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. M distributions. Law of large numbers, central limit theorem.	lixed distributions,	mixture of
611SIS	Statistics	Z,ZK	2
Point estimation, p	properties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and o	correlation, linear	egression,
correlation coefficie	ent, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression,	use of matrices in	regression.
612MDE	Transport Models and Transport Excesses	Z,ZK	3
	traffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of quassessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequence safety and fluency.		
612PKD	Rail Transport Designing	Z.ZK	3
	ork. Vehicle and track relation. Traction. Track geometrical parameters. Clearance profile. Railway lines routing. Superstructure and sul Switches. Railway stations. City rail transport.		
612PPOK		KZ	3
	Designing Roads, Highways and Motorways wownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standard		_
	stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safety intersections.	-	
612ZADI	Introduction to Transportation Engineering	Z,ZK	3
	strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognos Traffic and environment.		
614KSP	Constructing with Computer Aid	KZ	2
"CAD systems" ter	m determination. CAD role in projecting system model. Existing CAD systems on Czech market. Project creation, basic common work Co-ordinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting possibitions).	k rules in graphic a	applications
and CA systems.	profiles, drawings with raster foundaments).		
	· · · · · · · · · · · · · · · · · · ·	K7	2
614SIAP Basic communica	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of bases.		
614SIAP Basic communica RARP, TCP, UDP, To	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of backers, ETP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundame design by the means of web sites.	asic network proto ntals of own web p	cols (ARP, presentation
614SIAP Basic communica RARP, TCP, UDP, To 614UATT Basic axioms of to	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of belief, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundame	asic network proto intals of own web p KZ ecting of transport	cols (ARP, presentation 2 systems,
614SIAP Basic communica RARP, TCP, UDP, To 614UATT Basic axioms of to	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of be elnet, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundame design by the means of web sites. Introduction to Automatization and Telecommunication Systems technical cybernetics, automatization in transportation, human as the weakest element, signalling in transpotation, modelling and projugical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modelling and projugical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modelling and projugical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modelling and projugical systems.	asic network proto intals of own web p KZ ecting of transport	cols (ARP, presentation 2 systems,
614SIAP Basic communica RARP, TCP, UDP, To 614UATT Basic axioms of t integrated technolo 614UPRO Algorithm develop	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of be elnet, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundame design by the means of web sites. Introduction to Automatization and Telecommunication Systems technical cybernetics, automatization in transportation, human as the weakest element, signalling in transpotation, modelling and projugical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modelling and services, NGN networks.	KZ ecting of transport dulating methods, KZ s, conditions, cycle	cols (ARP, presentation 2 systems, multimedial 2
614SIAP Basic communica RARP, TCP, UDP, To 614UATT Basic axioms of t integrated technological	Networks and Protocols tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of be elnet, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundame design by the means of web sites. Introduction to Automatization and Telecommunication Systems technical cybernetics, automatization in transportation, human as the weakest element, signalling in transpotation, modelling and projugical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, more networks and services, NGN networks. Introduction to Programming pment, methods of structured programming, high-level programming languages, basics of C programming languages (types, variables)	asic network proto entals of own web p KZ ecting of transport dulating methods,	cols (ARP, presentation 2 systems, multimedial 2

614ZINF	Fundamentals of Informatics	KZ	2
	culty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission. Nur		
aiculations. Algor	ithms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and procedures graphs, calculations, functions.	s. vvork with MS-E	xcei - tables
615JZ1A	Foreign Language - English 1	Z	3
	tures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co		_
Oraninalioa oli do	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles		o. Elomoritar j
615JZ1N	Foreign Language - German 1	Z	3
	ture and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty	ı y´s fields of study.	Focus on
improvement in	perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral	and written forms	s. Technical
	texts and their features; practice of oral and written presentation.	_	_
615JZ1R	Foreign Language - Russian 1	Z	_ 3
	ture and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Facult perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral		
improvement in	texts and their features; practice of oral and written presentation.	and writter forms	s. recillical
615JZ2A	Foreign Language - English 2	Z,ZK	3
	tures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co	'	-
	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles	of rhetoric.	-
615JZ2N	Foreign Language - German 2	Z,ZK	3
Grammar struct	ture and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty	y's fields of study.	Focus on
improvement in	perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral	and written forms	s. Technical
0.4.5.17.0.5	texts and their features; practice of oral and written presentation.	7.71	
615JZ2R	Foreign Language - Russian 2 ture and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Facult	Z,ZK	3
	perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral		
improvement in	texts and their features; practice of oral and written presentation.	and writter forms	s. recillical
616UDDM	Introduction to Transportation and Manipulation Technics	ZK	2
	tation and transportation systems. Principles, functions and arrangement of means of transportation. Motors and their characteristics. Wat		
	technics. Principles of lifting machines and conveyors. Legislature.		
617E	Economics	Z,ZK	3
Microeconomic	and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consur	ners and produce	ers. Market
	structures. Labour and capital, efficiency, ownership, public choice.		
617EDOT	Economy, Transport, Telecommunications	KZ	2
<u>-</u>	communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport		
	The count Technology and Logistics		
617TDL Basic terms in tran	Transport Technology and Logistics Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Planting.	Z,ZK	3
Basic terms in tran	isport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Pl	Z,ZK anning in pasang	3 er and freight
Basic terms in tran		Z,ZK anning in pasang	3 er and freight
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Basic terms in tran transport. Organis: 618MRI1 Crystal structure 618MRI2 Fundamer 618PZP	Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city to and their application using various transport means. Materials 1 Basics of thermodynamics of metals and their alloys. Balanced binary diagrams. Alloys of iron with carbon. Deterioration of solid solutions steel and cast irons. Physical features. Mechanical features. Dephectostopic testing. Corosion. Materials 2 Intal concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the Elasticity and Strength	Z,ZK anning in pasangeransport. Logistic Z,ZK utions. Heating pre KZ a composite mater Z,ZK	3 er and freight technologies 3 occessing of 2 rials. 3
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Physical Education