Study plan

Name of study plan: Bachelor TET Common Part of Study Full-Time from 2025/26

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: 90 Elective courses credits: 0 Sum of credits in the plan: 90 Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 90 The role of the block: Z

Code of the group: 1S-BP-TET-24/25-DC Name of the group: 1st Sem. Bachelor Full-Time TET from 2024/25 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 9 courses Credits in the group: 30 Note on the group:

Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their Code Completion Credits Scope Semester Role members) Tutors, authors and guarantors (gar.) Calculus 1 611CAL1 Z.ZK 2P+4C+22B 7 7 7 Romana Zibnerová Ond ej Navrátil (Gar.) Linear Algebra 611LA Z,ZK 3 2P+1C+10B Ζ Ζ Romana Zibnerová Romana Zibnerová Martina Be vá ová (Gar.) Introduction to Transportation Engineering 612ZADY Ζ Z,ZK 4 2P+2C Ζ Jana Štikarová, Dagmar Ko árková Dagmar Ko árková (Gar.) Materials Science and Engineering 618MTY Z,ZK 3 2P+1C+10B Ζ Ζ Vít Malinovský Jaroslav Valach (Gar.) Geometry Ζ 611GIE ΚZ 3 2P+2C+12B Ζ Vít Malinovský Šárka Vorá ová (Gar.) Algorithm and Data Structures 614ASD ΚZ 3 0P+2C+8B Ζ 7 Jan Mejst ík **Technical Drawing and Designing** Ζ 618TKK ΚZ 4 2P+2C 7 Vít Malinovský Introduction into Vehicles 616UDOP Ζ 2 2P+0C+8B Ζ z Zuzana Radová Petr Bouchner (Gar.) TV-1 Ζ 1 Ζ 7 **Physical Education**

Characteristics of the courses of this group of Study Plan: Code=1S-BP-TET-24/25-DC Name=1st Sem. Bachelor Full-Time TET from 2024/25

611CAL1	Calculus 1	Z,ZK	7			
Sequence of real number	ers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton in	tegral, Riemann ir	ntegral, improper			
Riemann integral. First-	Riemann integral. First-order differential equations, linear differential equations.					
611LA	Linear Algebra	Z,ZK	3			
Vector spaces (linear combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and their solvability. Determinants and						
their applications. Scala	r product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification.					
612ZADY	Introduction to Transportation Engineering	Z,ZK	4			
618MTY	Materials Science and Engineering	Z,ZK	3			
Basic course of material	s science and engineering explains mechanical properties of structural materials based on their bonding forces and microstru	ucture. However th	e main attention			
is paid to metals as the	is paid to metals as the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and composites. Attention is also paid					
to degradation processe	to degradation processes in materials, to defectoscopy and to main mechanical tests.					
611GIE	Geometry	KZ	3			
Orthographic and obliqu	e projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - para	ameterization, arc	of the curve,			
torsion and curvature, F	renet`s trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving on a c	urved path.				

614ASD	Algorithm and Data Structures	KZ	3
Students will be familia	rized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will ana	lyze problems, pro	pose theoretical
solutions to the set tas	c and the resulting algorithm write by means of flowcharts, practice in reading algorithms recorded by means of the flowchart	and use the basic	cs of Boolean
algebra with forming th	e conditions for the algorithms.		
618TKK	Technical Drawing and Designing	KZ	4
616UDOP	Introduction into Vehicles	Z	2
Vehicles and transport	ation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and w	ater transport. Alt	ernative means
of transport. Lifting equ	ipment and conveyors. Legislation.		
TV-1	Physical Education	Z	1

Code of the group: 2S-BP-TET-23/24-DC Name of the group: 2nd Sem. Bachelor Full-Time TET from 2023/24 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 9 courses Credits in the group: 30

Note on the aroup:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
611CAL2	Calculus 2 Romana Zibnerová, Ond ej Navrátil, Magdalena Hykšová, Olga Vraštilová, Tomáš Tasák Romana Zibnerová Ond ej Navrátil (Gar.)	Z,ZK	5	2P+3C+20E	B L	Z
611STAT	Statistics Pavel Provinský, Evženie Uglickich, Pavla Pecherková, Michal Matowicki Pavla Pecherková Pavel Provinský (Gar.)	Z,ZK	4	2P+2C+12E	B L	Z
612ZTS	Railway Lines and Stations Tomáš Javo ík, Ond ej Trešl	Z,ZK	4	2P+2C+10E	B L	Z
618SAT	Structural Analysis Tomáš Doktor Daniel Kytý (Gar.)	Z,ZK	4	2P+2C+14E	B L	Z
620SYSA	Systems Analysis Petr Bureš, Eva Haj iarová, Ji í R ži ka Zuzana B linová (Gar.)	Z,ZK	5	2P+2C+14E	B L	Z
614PRG	Programming Libor Žídek	KZ	2	0P+2C+8E	B L	Z
617TEDL	Transport Technology and Logistics Michal Drábek Vít Janoš (Gar.)	KZ	3	2P+1C	L	Z
621ZALD	Basics of Air Transport Jakub Hospodka	KZ	2	0P+2C+8E	B L	Z
TV-2	Physical Education	Z	1		L	Z

Characteristics of the courses of this group of Study Plan: Code=2S-BP-TET-23/24-DC Name=2nd Sem. Bachelor Full-Time TET from 2023/24

6110010		7 71/	5
611CAL2	Calculus 2	Z,ZK	Э
	ions and their systems, differential calculus of functions of several real variables. Riemann integral in Rn. Line and surface int		
611STAT	Statistics	Z,ZK	4
Definition of probability,	random variable and its description, known distributions, random vector, function of random variable. Methods of point estimatic	on. Testing of statis	tical hypothesis.
Regression and correlat	ion, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linea	ar regression, anal	ysis of variance,
multiple regression, the	use of matrices in regression.		
612ZTS	Railway Lines and Stations	Z,ZK	4
Rail transport. Railway t	rack geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure.	Spatial layout of r	ailway lines.
Railway control systems	in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail transport.		
618SAT	Structural Analysis	Z,ZK	4
General system of force	s in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determina	ate beams and sin	nple girders.
Principle of virtual work.	Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constructio	ns. Cross-section	al characteristics
of planar shapes. Fiber	polygons and chains.		
620SYSA	Systems Analysis	Z,ZK	5
Introduction to system s	ciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interface ta	sks, processes, s	stem behaviour
and its analysis, strong	functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decision ta	ables, algorithms	for structural
tasks. Soft and hard sys	tems, methods for soft system analysis.		
614PRG	Programming	KZ	2
Algorithm development,	methods of structured programming, high-level programming languages, basics of C programming languages (types, variable)	les, conditions, cy	cles, arrays,
functions), programming	y techniques, complexity.		
617TEDL	Transport Technology and Logistics	KZ	3
Basic terms in transport	technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight t	ransport, organisa	ation of traffic in
each transport modus, t	echnologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication u	sing various trans	port modus.
621ZALD	Basics of Air Transport	KZ	2
History, definitions, term	inology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigati	on. Weight, baland	ce, performance.
Flight planning, optimiza	ttion of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, g	round handling, s	ecurity. Air crew.
Airlines and economics.	Space technologies.		
TV-2	Physical Education	Z	1

Code of the group: 3S-BP-TET-24/25-DC Name of the group: 3rd Sem. Bachelor Full-Time TET from 2024/25 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 8 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
611FYZ	Physics Goce Chadzitaskos Zuzana Malá (Gar.)	Z,ZK	5	2P+2C+18B	Z	Z
612MDE	Transport Models and Transport Excesses Josef Kocourek, Tomáš Pad lek Josef Kocourek (Gar.)	Z,ZK	3	2P+1C+8B	Z	Z
611TGA	Graph Theory and its Applications in Transport Denisa Mocková, Dušan Teichmann, Andrea Hrní ková Denisa Mocková Denisa Mocková (Gar.)	Z,ZK	4	2P+2C+12B	z	Z
618PZP	Elasticity and Strength Tomáš Doktor Ond ej Jiroušek (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
620UITS	Introduction to Intelligent Transport Systems Vladimír Faltus Pavel Hrubeš (Gar.)	Z,ZK	7	3P+2C+20B	Z	Z
612PPOK	Designing Roads, Highways and Motorways Josef Kocourek, Tomáš Pad lek, Petr Kumpošt	KZ	3	1P+2C+10B	Z	Z
614DATS	Database Systems Ond ej Smíšek Jana Kaliková (Gar.)	KZ	2	1P+1C+10B	Z	Z
615JZ1A	Foreign Language - English 1 Jan Feit	Z	3	0P+4C+10B	Z	Z

Characteristics of the courses of this group of Study Plan: Code=3S-BP-TET-24/25-DC Name=3rd Sem. Bachelor Full-Time TET from 2024/25

202-1/20			
611FYZ	Physics	Z,ZK	5
Kinematics, dynamics,	Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and electric current.		
612MDE	Transport Models and Transport Excesses	Z,ZK	3
Parameters of the traffic	flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of	i queues, shock v	vaves. Quality of
transport and its assess	sment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consec	juences. Improvir	ig of transport
safety and fluency.			
611TGA	Graph Theory and its Applications in Transport	Z,ZK	4
Basic terms of graph th	eory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in oth	ner scientific disc	plines.
618PZP	Elasticity and Strength	Z,ZK	3
Tension and compression	n. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam. Design of riveted, bo	olted and welded	joint of structure.
Analysis of deflection c	urve of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling. Beam on elastic fo	undation. Strengt	h analysis.
620UITS	Introduction to Intelligent Transport Systems	Z,ZK	7
Terminology and legisla	tive framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of ir	nformation and tel	ecommunication
systems for ITS. Princip	les and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examp	les of possible ap	oplications of the
principles of ITS.			
612PPOK	Designing Roads, Highways and Motorways	KZ	3
Definition, types, owner	ship, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standa	ard speed. Route	in rural areas.
Range of vision for stop	ping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. So	afety device. Cros	ssings, junctions,
intersections.			
614DATS	Database Systems	KZ	2
Basic concepts of datab	ase systems, conceptual model, relational data model, the principles of normal forms, relational database design, security a	nd integrity of dat	a, database
queries, relational algeb	ora, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via the WWW.		
615JZ1A	Foreign Language - English 1	Z	3
Grammatical structures	and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and	communicative s	kills. Elementary
stylistics forms. Oral and	d written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.		

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

Code of the group: VP-BP-TET-24/25-DC Name of the group: Bachelor Full-Time TET voluntary from 2024/2025 Requirement credits in the group: Requirement courses in the group: Credits in the group: 0 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
614DPK	Digital Support for Designing of Roads and Highways	Z	0	0P+2C	Z	V
614DZT	Digital Support for Railway Lines	Z	0	0P+2C	L	V
611SCFZ	Seminar of Physics	Z	0	0P+2C	Z	V
621SLD	Seminar of Air Transport	Z	0	0P+2C	L	V
618SPP	Seminary from Elasticity and Strength	Z	0	0P+2C	Z	V
618STKK	Seminary from Technical Drawing and Designing	Z	0	0P+2C	Z	V
618SS	Seminary from Structural Analysis	Z	0	0P+2C	L	V
611SSF	Secondary School Physics Course	Z	0	0P+2C	L	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V
TVKLV	Physical Education Course	Z	0	7dní	L	V

Characteristics of the courses of this group of Study Plan: Code=VP-BP-TET-24/25-DC Name=Bachelor Full-Time TET voluntary from 2024/2025

614DPK	Digital Support for Designing of Roads and Highways	Z	0
Seminars possibilities of	f technical processing problems focused on designing of roads and highways.		
614DZT	Digital Support for Railway Lines	Z	0
Seminars possibilities of	f technical processing problems solved in the field of railway lines.		
611SCFZ	Seminar of Physics	Z	0
Solving problems on kir	ematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics.		
621SLD	Seminar of Air Transport	Z	0
History, definitions, tern	inology, basic rules. VFR / IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio nav	igation. Weight, I	balance,
	nning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic m	anagement, grou	und handling,
security. Air crew. Airline	as and economics. Space technologies.		
618SPP	Seminary from Elasticity and Strength	Z	0
	ension and compression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of be	am. Analysis of c	deflection curve
of beam. Torsion of circ	e cross section. Combined loading. Stability of compressed bar and buckling.		
618STKK	Seminary from Technical Drawing and Designing	Z	0
618SS	Seminary from Structural Analysis	Z	0
Examples for practise.	Seneral system of forces. Reactions of mass objects and compound systems. Internal forces on statically determinate beam a	nd simple frame	work. Application
of principle of virtual wo	rks for calculation of reactions of staticaly determinate systems. Determination of axial forces in truss construction - method c	of joints and meth	nod of sections.
Geometry of cross sect	ions. Plane fiber polygons.		
611SSF	Secondary School Physics Course	Z	0
Basics of kinematics, dy	namics, thermodynamics, electric field and magnetic field.		
TVKZV	Physical Education Course	Z	0
TVKLV	Physical Education Course	Z	0

List of courses of this pass:

Code	Name of the course	Completion	Credits
611CAL1	Calculus 1	Z,ZK	7
Sequence of real n	umbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integ Riemann integral. First-order differential equations, linear differential equations.	ral, Riemann integr	al, improper
611CAL2	Calculus 2	Z,ZK	5
Linea	r differential equations and their systems, differential calculus of functions of several real variables. Riemann integral in Rn. Line and	surface integrals.	
611FYZ	Physics	Z,ZK	5
	Kinematics, dynamics, Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and elec	tric current.	
611GIE	Geometry	KZ	3
Orthographic and	oblique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - paran	neterization, arc of	the curve,
torsion	and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle movin	g 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 the	ir solvability. Deterr	minants and
	their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classificat	ion.	
611SCFZ	Seminar of Physics	Z	0
	Solving problems on kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermody	ynamics.	1
611SSF	Secondary School Physics Course	Z	0
	Basics of kinematics, dynamics, thermodynamics, electric field and magnetic field.		

	Statistics		
		Z,ZK	4
Regression and col	ility, random variable and its description, known distributions, random vector, function of random variable. Methods of point estimation. T		
0	rrelation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear re	gression, analysi	s of variand
	multiple regression, the use of matrices in regression.		
611TGA	Graph Theory and its Applications in Transport	Z,ZK	4
Basic terms of	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c	ther scientific dis	ciplines.
612MDE	Transport Models and Transport Excesses	Z,ZK	3
Parameters of the	traffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of qu	eues, shock wav	es. Quality
transport and its a	assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequences of th	ences. Improving	of transpor
	safety and fluency.		
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. Safet	y device. Crossin	gs, junctior
	intersections.		
612ZADY	Introduction to Transportation Engineering	Z,ZK	4
612ZTS	Railway Lines and Stations	Z,ZK	4
	ailway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. S	,	ilwav lines
	Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail t		
614ASD	Algorithm and Data Structures	KZ	3
	niliarized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will analyze		-
	et task and the resulting algorithm write by means of flowcharts, practice in reading algorithms recorded by means of the flowchart ar		
	algebra with forming the conditions for the algorithms.		J. 2001041
614DATS		KZ	2
	Database Systems of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an		
basic concepts c	queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via		i, ualabase
			0
614DPK	Digital Support for Designing of Roads and Highways	Z	0
	Seminars possibilities of technical processing problems focused on designing of roads and highways.	_	
614DZT	Digital Support for Railway Lines	Z	0
	Seminars possibilities of technical processing problems solved in the field of railway lines.		-
614PRG	Programming	KZ	2
Algorithm develo	pment, methods of structured programming, high-level programming languages, basics of C programming languages (types, variable	s, conditions, cyc	cles, arrays
	functions), programming techniques, complexity.		
615JZ1A	Foreign Language - English 1	Z	3
Grammatical struct	ures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co	mmunicative skills	s. Elementa
	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of	of rhetoric.	
616UDOP	Introduction into Vehicles	Z	2
	portation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and wate		
		r transport. Alterr	-
	of transport. Lifting equipment and conveyors. Legislation.	r transport. Alterr	
617TEDL	of transport. Lifting equipment and conveyors. Legislation.		native mean
617TEDL Basic terms in tran	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics	KZ	hative mean
Basic terms in tran	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics Isport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran	KZ sport, organisatio	ative mean 3 on of traffic
Basic terms in tran each transport m	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics Isport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi	KZ sport, organisation ng various transp	ative mean 3 on of traffic
Basic terms in tran each transport m 618MTY	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics Isport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Materials Science and Engineering	KZ sport, organisation ng various transp Z,ZK	ative mea 3 on of traffic port modus 3
Basic terms in tran each transport m 618MTY Basic course of ma	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Materials Science and Engineering terials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructu	KZ sport, organisation ng various transp Z,ZK re. However the n	ative mea
Basic terms in tran each transport m 618MTY Basic course of ma	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Materials Science and Engineering terials science and engineering materials, also other major classes of materials are presented, namely ceramics, polymers and con	KZ sport, organisation ng various transp Z,ZK re. However the n	ative mean 3 on of traffic oort modus 3 nain attenti
Basic terms in tran each transport m 618MTY Basic course of ma s paid to metals as	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Materials Science and Engineering terials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructu s the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and con to degradation processes in materials, to defectoscopy and to main mechanical tests.	KZ sport, organisation ng various transp Z,ZK re. However the n aposites. Attention	ative mean 3 on of traffic oort modus 3 nain attenti n is also pa
Basic terms in tran each transport m 618MTY asic course of ma paid to metals as 618PZP	of transport. Lifting equipment and conveyors. Legislation. Transport Technology and Logistics sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Materials Science and Engineering terials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructu s the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and con to degradation processes in materials, to defectoscopy and to main mechanical tests. Elasticity and Strength	KZ sport, organisation ng various transp Z,ZK re. However the m nposites. Attention Z,ZK	ative mea 3 on of traffic oort modus 3 nain attenti n is also pa 3
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History, definiti	ons, terminology, basic rules. VFR / IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio na	vigation. Weight, b	alance,
performance. Flig	ht planning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic ma	anagement, ground	l handling,
	security. Air crew. Airlines and economics. Space technologies.		
621ZALD	Basics of Air Transport	KZ	2
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Flight planning, opt	imization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, grou	nd handling, secu	ity. Air crew
	Airlines and economics. Space technologies.		
TV-1	Physical Education	Z	1
TV-2	Physical Education	Z	1
TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0

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