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

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:

vote on the gr	oup.					
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
11CAL1	Calculus 1 Tomáš Tasák, Olga Vraštilová, Magdalena Hykšová, Bohumil Ková, Ond ej Navrátil Bohumil Ková Ond ej Navrátil (Gar.)	Z,ZK	7	2P+4C+22E	Z	Z
11LA	Linear Algebra Magdalena Hykšová, Lucie Kárná, Pavel Provinský, Martina Be vá ová Magdalena Hykšová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10E	Z	Z
12ZADY	Introduction to Transportation Engineering Zuzana arská, Dagmar Ko árková, Jana Štikarová Dagmar Ko árková (Gar.)	Z,ZK	4	2P+2C	Z	Z
18MTY	Materials Science and Engineering Tomáš Doktor, Jaromír Kylar, Veronika Drechslerová, Nela Kr má ová, Jitka ezní ková, Jaroslav Valach, Vít Malinovský, Jaromír Kylar Jaroslav Valach Tomáš Doktor (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
11GIE	Geometry Pavel Provinský, Old ich Hykš, Šárka Vorá ová Old ich Hykš Old ich Hykš (Gar.)	KZ	3	2P+2C+12E	Z	Z
14ASD	Algorithm and Data Structures Tomáš Brandejský, Michal Je ábek, Alena Kubá ová, Jan Procházka, Vít Fábera, Martin Fiala, Lukáš Svoboda, Tereza Panská Vít Fábera Vít Fábera (Gar.)	KZ	3	0P+2C+8B	Z	Z
18TKK	Technical Drawing and Designing Jitka ezní ková, Vít Malinovský, Lukáš Svoboda, Jan Šleichrt, Martin Brumovský, Jan Mejst ík, Drahomír Schmidt, Jan Vogl, Ji í Zeisek, Jan Šleichrt Jan Šleichrt (Gar.)	KZ	4	2P+2C+16E	Z	Z
16UDOP	Introduction into Vehicles Zuzana Radová, Petr Bouchner	Z	2	2P+0C+8E	Z	Z
TV-1	Physical Education	Z	1		Z	Z

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

11CAL1	Calculus 1	Z,ZK	7				
Sequence of real numbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integral, Riemann integral, improper							
Riemann integral. First-order differential equations, linear differential equations.							
11LA	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. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification.

12ZADY Introduction to Transportation Engineering Z,ZK 4

18MTY	Materials Science and Engineering	Z,ZK	3				
Basic course of materials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructure. However the main attention							
is paid to metals as the	most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and	composites. Atten	tion is also paid				
to degradation processe	es in materials, to defectoscopy and to main mechanical tests.						
11GIE	Geometry	KZ	3				
Differential geometry of	curves - parameterization, the arc of the curve, torsion and curvature, Frenet's trihedron. Kinematics - a curve as a trajector	y of the motion, th	e velocity, and				
acceleration of a particle	e moving on a curved path.						
14ASD	Algorithm and Data Structures	KZ	3				
Students will analyze pro	oblems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading a	lgorithms written i	using flowcharts,				
and use basic Boolean	algebra to construct constraints in algorithms. Students will be introduced to the basics of the Python programming language	- variable, branch	ning, loops, they				
will learn to work with va	ariables of basic data types (integer, floating point and string) and the list data structure in their programs.						
18TKK	Technical Drawing and Designing	KZ	4				
16UDOP	Introduction into Vehicles	Z	2				
Vehicles and transportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water transport. Alternative means							
of transport. Lifting equipment and conveyors. Legislation.							
TV-1	Physical Education	Z	1				

Code of the group: 2S-BP-TET-20/21

Name of the group: 2nd Sem. Bachelor Full-Time TET from 2020/21

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:

Airlines and economics. Space technologies.

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
11CAL2	Calculus 2 Magdalena Hykšová	Z,ZK	5	2P+3C+20E	B L	Z
11STAT	Statistics	Z,ZK	4	2P+2C+12E	B L	Z
12ZTS	Railway Lines and Stations	Z,ZK	4	2P+2C+10E	L L	Z
18SAT	Structural Analysis	Z,ZK	4	2P+2C+14E	B L	Z
20SYSA	Systems Analysis	Z,ZK	5	2P+2C+14E	L L	Z
14PRG	Programming Jana Kaliková	KZ	2	0P+2C+8E	B L	Z
17TEDL	Transport Technology and Logistics	KZ	3	2P+1C	L	Z
21ZALD	Basics of Air Transport	KZ	2	0P+2C+8E	B L	Z
TV-2	Physical Education	Z	1		L	Z

2020/21	s of the courses of this group of Study Plan: Code=2S-BP-TET-20/21 Name=2nd Sem. Bach	eioi Full-Tillie IE	1 110111
11CAL2	Calculus 2	Z,ZK	5
Linear differential e	quations and their systems, differential calculus of functions of several real variables. Riemann integral in Rn. Line and surfac	e integrals.	
11STAT	Statistics	Z,ZK	4
Basics of probabilit	y Descriptive statistics Population and sample, limit theorem Point estimate, construction and properties Interval estimates Pa	arametric tests Nonpara	ametric tests
Regression and co	relation analysis		
12ZTS	Railway Lines and Stations	Z,ZK	4
Rail transport. Rail	vay track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstruct	ure. Spatial layout of ra	ilway lines.
Railway control sys	tems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail transport.		
18SAT	Structural Analysis	Z,ZK	4
General system of	forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically deter	minate beams and simp	ple girders.
Principle of virtual v	ork. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constr	uctions. Cross-sectional	characteristic
of planar shapes. F	iber polygons and chains.		
20SYSA	Systems Analysis	Z,ZK	5
Introduction to syst	em sciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interfac	ce tasks, processes, sys	stem behaviou
and its analysis, sti	ong functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decisi	ion tables, algorithms fo	or structural
tasks. Soft and har	d systems, methods for soft system analysis.		
14PRG	Programming	KZ	2
The Course Progra	mming builds on and fully extends the course 14ASD (Algorithmization and Data Structures). The knowledge of the Python p	rogramming language i	s expanded
here so that the pa	ticipant gains skills and can apply them to solve various follow-up tasks. Main topics: lists, multidimensional arrays, sorting ar	nd searching, tuples, se	ts, dictionaries
working with date a	nd time, regular expressions, functions and procedures, working with files (CSV, JSON, XML).		
17TEDL	Transport Technology and Logistics	KZ	3
Basic terms in tran	sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and frei	ght transport, organisat	ion of traffic in
each transport mod	lus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplicati	on using various transp	ort modus.
21ZALD	Basics of Air Transport	KZ	2
History, definitions,	terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio nav	rigation. Weight, balance	e, performance
Flight planning, opt	imization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic manageme	nt, ground handling, se	curity. Air crev

TV-2 Physical Education

Code of the group: 3S-BP-TET-24/25

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:

Note on the grou						
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
11FYZ	Physics Old ich Hykš, Pavel Demo, Zuzana Malá, Tomáš Vít , Jana Kuklová Jana Kuklová Pavel Demo (Gar.)	Z,ZK	5	2P+2C+18B	Z	Z
12MDE	Transport Models and Transport Excesses Tomáš Pad lek, Josef Kocourek	Z,ZK	3	2P+1C+8B	Z	Z
11TGA	Graph Theory and its Applications in Transport Alena Rybi ková, Denisa Mocková, Dušan Teichmann Alena Rybi ková Alena Rybi ková (Gar.)	Z,ZK	4	2P+2C+12B	Z	Z
18PZP	Elasticity and Strength Tomáš Doktor, Jitka ezni ková, Jan Šleichrt, Josef Jíra, Jan Vy ichl, Daniel Kytý, Ond ej Jiroušek Ond ej Jiroušek Ond ej Jiroušek (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
20UITS	Introduction to Intelligent Transport Systems Martin Šrotý, Martin Langr, Ji í R ži ka, Patrik Horaž ovský, Vladimír Faltus, Pavel Hrubeš, Kristýna Navrátilová, Eva Haj iarová Martin Langr	Z,ZK	7	3P+2C+20B	Z	Z
12PPOK	Designing Roads, Highways and Motorways Tomáš Pad lek, Josef Kocourek, Petr Kumpošt Josef Kocourek (Gar.)	KZ	3	1P+2C+10B	Z	Z
14DATS	Database Systems Jan Kr ál, Jana Kaliková Jana Kaliková (Gar.)	KZ	2	1P+1C+10B	Z	Z
15JZ1A	Foreign Language - English 1 Markéta Vojanová, Dana Boušová, Marie Michlová, Marek Tome ek, Jan Feit, Markéta Musilová, Peter Morpuss, Jitka He manová, Eva Rezlerová Lenka Monková (Gar.)	Z	3	0P+4C+10B	Z	Z

11FYZ	Physics	Z,ZK	5
Kinematics, dynam	ics, Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and electric curren	ıt.	
12MDE	Transport Models and Transport Excesses	Z,ZK	3
Parameters of the t	raffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. The	eory of queues, shock wa	aves. Quality o
transport and its as	sessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the	consequences. Improving	g of transport
safety and fluency.			
11TGA	Graph Theory and its Applications in Transport	Z,ZK	4
Basic terms of grap	oh theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graph	s in other scientific discip	olines.
18PZP	Elasticity and Strength	Z,ZK	3
Tension and compr	ession. Bending of beam. Shear stress in bending of beam. Design and analysis of cross section of beam. Design of riveted	d, bolted and welded join	ts of structure
Analysis of deflection	on curve of beams. Torsion of circular cross sections. Combined loading. Stability.		
20UITS	Introduction to Intelligent Transport Systems	Z,ZK	7
Terminology and le	gislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamenta	als of information and tele	ecommunication
systems for ITS. Pr	inciples and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real	examples of possible ap	plications of th
principles of ITS.			
12PPOK	Designing Roads, Highways and Motorways	KZ	3
Definition, types, ov	wnership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and	standard speed. Route ir	n rural areas.
Range of vision for	stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of ro	ads. Safety device. Cross	sings, junction
intersections.			
14DATS	Database Systems	KZ	2
Basic concepts of o	latabase systems, conceptual model, relational data model, the principles of normal forms, relational database design, sec	urity and integrity of data	i, database
ueries relational s	algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via the WWW		
queries, relationar	ingobia, ext language, onone, conven, manager are incorated, alembated database eyeteme. According to all the vivivi	•	
15JZ1A	Foreign Language - English 1	Z	3

Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementary

stylistics forms. Oral and 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

Name of the group: Bachelor Full-Time TET voluntary from 24/25

Requirement credits in the group:

Requirement courses in the group:

Credits in the group: 0

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
14DPK	Digital Support for Designing of Roads and Highways Drahomír Schmidt, Libor Žídek Drahomír Schmidt Drahomír Schmidt (Gar.)	Z	0	0P+2C	Z	V
14DZT	Digital Support for Railway Lines Martin Brumovský	Z	0	0P+2C	L	V
11SCFZ	Seminar of Physics Old ich Hykš, Zuzana Malá, Tomáš Vít , Jana Kuklová Zuzana Malá Zuzana Malá (Gar.)	Z	0	0P+2C	Z	V
21SLD	Seminar of Air Transport	Z	0	0P+2C	L	V
18SPP	Seminary from Elasticity and Strength Tomáš Doktor, Jan Vy ichl Jan Vy ichl (Gar.)	Z	0	0P+2C	Z	V
18STKK	Seminary from Technical Drawing and Designing Jitka ezní ková, Vít Malinovský Jitka ezní ková Jitka ezní ková (Gar.)	Z	0	0P+2C	Z	V
18SS	Seminary from Structural Analysis	Z	0	0P+2C	L	V
11SSF	Secondary School Physics Course Zuzana Malá	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 Name=Bachelor Full-Time TET voluntary from				
14DPK	Digital Support for Designing of Roads and Highways	Z	0	
Seminars possibilities of technical processing problems focused on designing of roads and highways.			'	
14D7T	7			

14DZT	Digital Support for Railway Lines	Z	0			
Seminars possibilities	of technical processing problems solved in the field of railway lines.					
11SCFZ	Seminar of Physics	Z	0			
Solving problems on kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics.						
21SLD	Seminar of Air Transport	Z	0			

History, definitions, terminology, basic rules. VFR / IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation. Weight, balance, performance. Flight planning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, ground handling, security. Air crew. Airlines and economics. Space technologies.

1	18SPP Seminary from Elasticity and Strength	Z	0
1	Excersise for practice. Tension and compression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam.	eam. Analysis of c	leflection curve
	of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling.		

18STKK	Seminary from Technical Drawing and Designing	Z	0
18SS	Seminary from Structural Analysis	Z	0
Examples for practise. (General system of forces. Reactions of mass objects and compound systems. Internal forces on statically determinate beam a	and simple frame	work, Application

Examples for practise. General system of forces. Reactions of mass objects and compound systems. Internal forces on statically determinate beam and simple framework. Application of principle of virtual works 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.

11SSF	Secondary School Physics Course	į Z		0	
Basics of kinematics, dynamics, 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		
11CAL1	Calculus 1	Z,ZK	7		
Sequence of real r	Sequence of real numbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integral, Riemann integral, improper				
Riemann integral. First-order differential equations, linear differential equations.					
11CAL2	Calculus 2	Z,ZK	5		
Linear differential equations and their systems, differential calculus of functions of several real variables. Riemann integral in Rn. Line and surface integrals.					
11FYZ	Physics	Z,ZK	5		
Kinematics, dynamics, Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and electric current.					
11GIE	Geometry	KZ	3		
Differential geometry of curves - parameterization, the 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 moving on a curved path.				

11LA	Linear Algebra	Z,ZK	3
Vector spaces (line	ear combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and the	-	rminants and
	their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classifications.		
11SCFZ	Seminar of Physics	<u>Z</u>	0
44005	Solving problems on kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermody		
11SSF	Secondary School Physics Course	Z	0
11STAT	Basics of kinematics, dynamics, thermodynamics, electric field and magnetic field.	Z,ZK	4
	Statistics Statistics Statistics Statistics Statistics		1
basics of probab	Regression and correlation and sample, limit theorem for the sample, construction and properties interval estimates farameters.	no tests Nonpara	inetric tests
11TGA	Graph Theory and its Applications in Transport	Z,ZK	4
	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c		1 -
12MDE	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	ieues, shock wav	es. Quality o
transport and its	assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequ	ences. Improving	of transport
	safety and fluency.		_
12PPOK	Designing Roads, Highways and Motorways	KZ	3
	ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standard	•	
cange of vision to	stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safet intersections.	y device. Crossin	ys, junction
12ZADY	Introduction to Transportation Engineering	Z,ZK	4
12ZADT	Railway Lines and Stations	Z,ZK	4
	ailway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. S		1 -
	Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail to		.,
14ASD	Algorithm and Data Structures	KZ	3
Students will analy	ze problems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading algor	ithms written usir	ng flowchart
and use basic Boo	olean algebra to construct constraints in algorithms. Students will be introduced to the basics of the Python programming language - v	ariable, branching	g, loops, the
	will learn to work with variables of basic data types (integer, floating point and string) and the list data structure in their progra		_
14DATS	Database Systems	KZ	2
Basic concepts	of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an		i, database
44000	queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via		
14DPK	Digital Support for Designing of Roads and Highways Seminars possibilities of technical processing problems focused on designing of roads and highways.	Z	0
14DZT	Digital Support for Railway Lines	Z	0
14021	Seminars possibilities of technical processing problems solved in the field of railway lines.		0
14PRG	Programming	KZ	2
	ramming builds on and fully extends the course 14ASD (Algorithmization and Data Structures). The knowledge of the Python prograr		
nere so that the pa	irticipant gains skills and can apply them to solve various follow-up tasks. Main topics: lists, multidimensional arrays, sorting and searc	hing, tuples, sets	, dictionarie
	working with date and time, regular expressions, functions and procedures, working with files (CSV, JSON, XML).		
15JZ1A	Foreign Language - English 1	Z	3
Grammatical Struc	tures and Style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co		s. Elementa
1011000	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles		1 0
16UDOP	Introduction into Vehicles	Z	2
venicies and trans	sportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and wate of transport. Lifting equipment and conveyors. Legislation.	r transport. Alterr	iative mean
17TEDL	Transport Technology and Logistics	KZ	3
	nsport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran	I	1
	nodus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication us		
18MTY	Materials Science and Engineering	Z,ZK	3
Basic course of ma	aterials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructu	re. However the n	nain attentio
s paid to metals a	s the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and con	nposites. Attentio	n is also pai
	to degradation processes in materials, to defectoscopy and to main mechanical tests.		_
18PZP	Elasticity and Strength	Z,ZK	3
Tension and comp	ression. Bending of beam. Shear stress in bending of beam. Design and analysis of cross section of beam. Design of riveted, bolted a	ind welded joints	of structure
400AT	Analysis of deflection curve of beams. Torsion of circular cross sections. Combined loading. Stability.	7.71/	1 4
18SAT	Structural Analysis of forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determinat	Z,ZK	d nle girders
=	or forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determinate work. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constructions.		-
	of planar shapes. Fiber polygons and chains.		
18SPP	Seminary from Elasticity and Strength	Z	0
	tice. Tension and compression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of bear	I	_
<u> </u>	of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling.		
18SS	Seminary from Structural Analysis	Z	0
	ise. General system of forces. Reactions of mass objects and compound systems. Internal forces on statically determinate beam and	-	
of principle of virt	ual works for calculation of reactions of staticaly determinate systems. Determination of axial forces in truss construction - method of j	oints and method	of sections
100=::::	Geometry of cross sections. Plane fiber polygons.		T -
18STKK	Seminary from Technical Drawing and Designing	Z	0
40TI/I/	Technical Drawing and Designing	KZ	4
18TKK	Teermear Drawing and Designing		

20SYSA	Systems Analysis	Z,ZK	5				
Introduction to syste	Introduction to system sciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interface tasks, processes, system behaviour						
and its analysis, s	and its analysis, strong functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decision tables, algorithms for structural						
	tasks. Soft and hard systems, methods for soft system analysis.						
20UITS	Introduction to Intelligent Transport Systems	Z,ZK	7				
Terminology and leg	Terminology and legislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of information and telecommunication						
systems for ITS. Pri	inciples and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examples	of possible applic	ations of the				
	principles of ITS.						
21SLD	Seminar of Air Transport	Z	0				
History, definition	ons, terminology, basic rules. VFR / IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio na	vigation. Weight, b	balance,				
performance. Flight planning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, ground handling,							
security. Air crew. Airlines and economics. Space technologies.							
21ZALD	Basics of Air Transport	KZ	2				
History, definitions, terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation. Weight, balance, performance.							
Flight planning, opt	imization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, grou	nd handling, secu	rity. 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				

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2025-11-05, time 20:28.