#### Study plan

#### Name of study plan: Bachelor TET-LOG Part-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 combined

Required credits: 180 Elective courses credits: 0 Sum of credits in the plan: 180

Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 91

The role of the block: Z

Code of the group: 1S-BK-TET-24/25

Name of the group: 1st Sem. Bachelor Part-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 OIL THE	<u> </u>					
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 Olga Vraštilová, Tomáš Tasák, Magdalena Hykšová, Bohumil Ková, Ond ej Navrátil <b>Bohumil Ková</b> Ond ej Navrátil (Gar.)	Z,ZK	7	2P+4C+22E	s z	Z
11LA	Linear Algebra Lucie Kárná, Pavel Provinský, Martina Be vá ová Martina Be vá ová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10E	B Z	Z
12ZADK	Introduction to Transportation Engineering  Dagmar Ko árková, Jana Štikarová	Z,ZK	5	12B	Z	Z
18MTY	Materials Science and Engineering Jaromír Kylar, Veronika Drechslerová, Jaromír Kylar, Nela Kr má ová, Jitka ezní ková, Jaroslav Valach, Vít Malinovský, Veronika Drechslerová, Jaromír Kylar Jaroslav Valach Jaroslav Valach (Gar.)	Z,ZK	3	2P+1C+10E	3 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	Z
14ASD	Algorithm and Data Structures Tomáš Brandejský, Michal Je ábek, Alena Kubá ová, Jan Procházka, Vít Fábera, Martin Fiala Vít Fábera Vít Fábera (Gar.)	KZ	3	0P+2C+8E	B Z	Z
18TKK	Technical Drawing and Designing Jitka ezní ková, Vít Malinovský, Jan Šleichrt, Martin Brumovský, Jan Mejst ík, Drahomír Schmidt, Lukáš Svoboda, Jan Vogl, Ji í Zeisek, Jan Šleichrt Jan Šleichrt (Gar.)	KZ	4	2P+2C+16E	3 Z	Z
16UDOP	Introduction into Vehicles Zuzana Radová, Petr Bouchner	Z	2	2P+0C+8E	B Z	Z

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

11CAL1	Calculus 1	Z,ZK	7				
Sequence of real number	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, improp						
Riemann integral. First-	order differential equations, linear differential equations.						
11LA	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	their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification.						
12ZADK	Introduction to Transportation Engineering	Z,ZK	5				

18MTY Materials Science and Engineering 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. Attention is also paid to degradation processes in materials, to defectoscopy and to main mechanical tests. Geometry 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 14ASD Algorithm and Data Structures Students will analyze problems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading algorithms written 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, branching, loops, they will learn to work with variables of basic data types (integer, floating point and string) and the list data structure in their programs. 18TKK Technical Drawing and Designing ΚZ 16UDOP 2 Ζ Introduction into Vehicles Vehicles and transportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water transport. Alternative means

Code of the group: 2S-BK-TET-24/25

tasks. Soft and hard systems, methods for soft system analysis.

of transport. Lifting equipment and conveyors. Legislation.

Name of the group: 2nd Sem. Bachelor Part-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	P.					
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 Olga Vraštilová, Tomáš Tasák, Magdalena Hykšová, Ond ej Navrátil, Old ich Hykš <b>Magdalena Hykšová</b> Ond ej Navrátil (Gar.)	Z,ZK	5	2P+3C+20B	L	Z
11STAT	Statistics Pavel Provinský, Evženie Uglickich, Pavla Pecherková, Michal Matowicki, Natálie Blahitka, Ivan Nagy, Jana Kuklová Pavla Pecherková Evženie Uglickich (Gar.)	Z,ZK	4	2P+2C+12B	L	Z
12ZTS	Railway Lines and Stations Lukáš Týfa, Martin Jacura, Petr Šatra, Tomáš Javo ík, Ond ej Trešl Lukáš Týfa (Gar.)	Z,ZK	4	2P+2C+10B	L	Z
18SAT	Structural Analysis Jaromír Kylar, Veronika Drechslerová, Nela Kr má ová, Jitka ezní ková, Jan Šleichrt, Daniel Kytý, Jan Vy ichl, Tomáš Doktor, Jan Falta Daniel Kytý (Gar.)	Z,ZK	4	2P+2C+14B	L	Z
20SYSA	Systems Analysis Zuzana B linová, Ji í R ži ka, Patrik Horaž ovský, Petr Bureš Zuzana B linová (Gar.)	Z,ZK	5	2P+2C+14B	L	Z
14PRG	Programming Alena Kubá ová, Jan Procházka, Martin Fiala, Lukáš Svoboda, Jana Kaliková, Jan Kr ál <b>Jana Kaliková</b> Jana Kaliková (Gar.)	KZ	2	0P+2C+8B	L	Z
17TEDK	Transport Technology and Logistics Michal Drábek Michal Drábek (Gar.)	KZ	4	12B	L	Z
21ZALD	Basics of Air Transport Jakub Hospodka, Tomáš Tlu ho , Ji í Volt, Peter Olexa, Jan Slezá ek, Jakub Trýb, Sébastien Lán, Bo Stloukal	KZ	2	0P+2C+8B	L	Z

# Characteristics of the courses of this group of Study Plan: Code=2S-BK-TET-24/25 Name=2nd Sem. Bachelor Part-Time TET from 2024/25

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 is	ntegrals.	
11STAT	Statistics	Z,ZK	4
Basics of probabili	ity Descriptive statistics Population and sample, limit theorem Point estimate, construction and properties Interval estimates Para	metric tests Nonpara	ametric tests
Regression and co	orrelation analysis		
12ZTS	Railway Lines and Stations	Z,ZK	4
Rail transport. Rai	lway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure	e. Spatial layout of ra	ilway lines.
Railway control sy	stems 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 determi	nate beams and simp	ole girders.
Principle of virtual	work. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss construct	tions. Cross-sectional	characteristic
of planar shapes.	Fiber polygons and chains.		
20SYSA	Systems Analysis	Z,ZK	5
Introduction to sys	tem sciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interface	tasks, processes, sys	stem behavior
and its analysis st	trong functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decision	tables algorithms for	or structural

14PRG **Programming** The Course Programming builds on and fully extends the course 14ASD (Algorithmization and Data Structures). The knowledge of the Python programming language is expanded here so that the participant gains skills and can apply them to solve various follow-up tasks. Main topics: lists, multidimensional arrays, sorting and searching, tuples, sets, dictionaries, working with date and time, regular expressions, functions and procedures, working with files (CSV, JSON, XML).

Transport Technology and Logistics

**Basics of Air Transport** 

Basic terms in transport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport, organisation of traffic in each transport modus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using various transport modus. 21ZALD

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.

Code of the group: 3S-BK-TET-25/26

Name of the group: 3rd Sem. Bachelor Part-Time TET from 2025/26

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:

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

# Characteristics of the courses of this group of Study Plan: Code=3S-BK-TET-25/26 Name=3rd Sem. Bachelor Part-Time TET from

11FYZ	Physics	Z,ZK	5
Kinematics, dynam	cs, Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and electric current.		<u> </u>
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. Theory of	f queues, shock	waves. Quality o
transport and its as	sessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the conse	quences. Improvi	ng of transport
safety and fluency.			
11TGA	Graph Theory and its Applications in Transport	Z,ZK	4
Basic terms of grap	h theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in of	her scientific disc	iplines.
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, bolt	ed and welded jo	ints of structures
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 leg	islative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of i	nformation and te	lecommunication
systems for ITS. Pr	nciples and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real exam	ples of possible a	pplications of th
principles of ITS.			
12PPOK	Designing Roads, Highways and Motorways	KZ	3
Definition, types, ov	rnership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and stand	ard 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. S	afety device. Cro	ssings, junction
intersections.			
14DATS	Database Systems	KZ	2
Basic concepts of c	atabase systems, conceptual model, relational data model, the principles of normal forms, relational database design, security a	nd integrity of da	ta, database
queries, relational a	lgebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via the WWW.		
15JZ1A	Foreign Language - English 1	7	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.

Code of the group: XB-BK-LOG-26-27

Name of the group: Bachelor Thesis Seminar Bachelor TET-LOG Part-Time from 2026/27

Requirement credits in the group: In this group you have to gain 1 credit

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

Credits in the group: 1 Note on the group:

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 71

The role of the block: P

Code of the group: 4S-BK-LOG-25/26

Name of the group: 4th Sem. Bachelor Part-Time TET-LOG from 2025/26 Requirement credits in the group: In this group you have to gain 26 credits

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

Credits in the group: 26 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
11MSP	Modeling of Systems and Processes Bohumil Ková, Lucie Kárná Bohumil Ková Bohumil Ková (Gar.)	Z,ZK	4	2P+2C+12B	L	Р
17ESYS	Transport Systems Economy Rudolf Franz Heidu, Roman Št rba Rudolf Franz Heidu (Gar.)	Z,ZK	6	3P+2C+18B	L	Р
17LGT	Logistics Tomáš Horák, Eliška Glaserová Tomáš Horák (Gar.)	Z,ZK	6	3P+2C+18B	L	Р
11LP	Linear Programming Šárka Vorá ová, Pavla Pecherková, Ivan Nagy Pavla Pecherková Ivan Nagy (Gar.)	KZ	3	2P+1C+12B	L	Р
11MDP	Transport Prognostic Methods Alena Rybi ková Alena Rybi ková Denisa Mocková (Gar.)	KZ	2	2P+0C+10B	L	Р
16DPO	Vehicle Technology Josef Mík, Josef Svoboda, P emysl Toman Josef Mík (Gar.)	KZ	2	2P+0C+10B	L	Р
15JZ2A	Foreign Language - English 2 Markéta Vojanová, Marie Michlová, Marek Tome ek, Jan Feit, Markéta Musilová, Peter Morpuss, Lenka Monková, Jitka He manová, Eva Rezlerová,	Z,ZK	3	0P+4C+10B	L	Р

# Characteristics of the courses of this group of Study Plan: Code=4S-BK-LOG-25/26 Name=4th Sem. Bachelor Part-Time TET-LOG from 2025/26

11MSP	Modeling of Systems and Processes	Z,ZK	4
System and subsy	stem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of di	1 ' 1	ential equations
Linear and nonline	ear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer functic	on. Stability of LTI s	ystems.
Discretization of c	ontinuous systems. System interconnection.		
17ESYS	Transport Systems Economy	Z,ZK	6
Macroeconomics,	macroeconomic indicators, transport system, transport externalities, energy in transport, shared economy, state transport system a	nd its quantification	, rationalizatio
of transport syster	m.		
17LGT	Logistics	Z,ZK	6
Logistics definition	n, basic concepts, store, warehouse, transport and handling equipment, logistics technology, logistics centers, information and inte	lligent logistics sys	tems, logistics
city.			
11LP	Linear Programming	KZ	3
Tanana da da a a 4 da a	a problem of linear programming, transposintion of some proptical problems to the linear programming problems. Cimpley and some		
Formulation of the	e problem of linear programming, transcription of some practical problems to the linear programming problems. Simplex and conve	x polyedra. Simplex	k method, basi
	prioriem of linear programming, transcription of some practical problems to the linear programming problems. Simplex and conve principle in linear programming, stability of solution of linear programming problem. Traffic problem.	x polyedra. Simplex	k method, basi
		x polyedra. Simples	c method, basi
solutions, duality p	principle in linear programming, stability of solution of linear programming problem. Traffic problem.	KZ	2
solutions, duality particles of the techniques of	orinciple in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods	KZ	2
solutions, duality p	orinciple in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods	KZ	2
solutions, duality p 11MDP The techniques of indices. 16DPO	principle in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods feconomical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statis	KZ ktical values using o	2 differencies an
solutions, duality particles of indices.  16DPO Vehicle. Functions	principle in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods feconomical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statis  Vehicle Technology	KZ ktical values using o	2 differencies an
solutions, duality particles of indices.  16DPO Vehicle. Functions	principle in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods f economical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statis  Vehicle Technology s, principles. Drive, vehicle construction. Road transport, safety, heavy duty vehicle desing, dynamics. Rail transport, safety, carriage	KZ ktical values using o	2 differencies and
solutions, duality particles of indices.  16DPO Vehicle. Functions Transshipment. Te 15JZ2A	principle in linear programming, stability of solution of linear programming problem. Traffic problem.  Transport Prognostic Methods f economical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statis  Vehicle Technology s, principles. Drive, vehicle construction. Road transport, safety, heavy duty vehicle desing, dynamics. Rail transport, safety, carriage technological components of various modes of transport. Management and control of various means of transport. Safety.	KZ stical values using of KZ seed design. Drive. Ele	2 differencies an 2 ectric traction.

Code of the group: 5S-BK-LOG-26/27

Name of the group: 5th Sem. Bachelor Part-Time TET-LOG from 2026/27

Requirement credits in the group: In this group you have to gain 23 credits Requirement courses in the group: In this group you have to complete 6 courses

Credits in the group: 23

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
12ZPV	Railway Operation Martin Jacura, Jan Kruntorád	Z,ZK	4	2P+1C+12B	Z	Р
17EPOD	Economics of Transport Company Alexandra Dvo á ková, Václav Baroch Alexandra Dvo á ková (Gar.)	Z,ZK	6	4P+2C+18B	Z	Р
17TVD	Technology of Public Transport Stanislav Metelka, Vít Janoš, Ji í Pospíšil, Zden k Michl Vít Janoš (Gar.)	Z,ZK	5	2P+2C+18B	Z	Р
14DMG	Datamining Radek Holý Radek Holý Radek Holý (Gar.)	KZ	2	0P+2C+10B	Z	Р
17MAGD	Marketing in Transport Petra Skolilová Petra Skolilová (Gar.)	KZ	4	2P+1C+12B	Z	Р
17ZAP	Fundamentals od law Martina D v rová Martina D v rová (Gar.)	Z	2	2P+0C+10B	Z	Р

# Characteristics of the courses of this group of Study Plan: Code=5S-BK-LOG-26/27 Name=5th Sem. Bachelor Part-Time TET-LOG from 2026/27

2026/27			
12ZPV	Railway Operation	Z,ZK	4
Legislation in railw	ray transport. Railway vehicles. Railway signals and signal devices. Railway traffic organisation and operation. Simplified railway tr	affic operation. Ra	ilway vehicles
brakes. Railway ve	chicles marking. Operation intervals. Theoretical graph of train running.		
17EPOD	Economics of Transport Company	Z,ZK	6
Economy, margina	ıl utility, marginal costs, function of supply and demand, market equilibrium, perfect competition and types of market arrangement	. Transportation m	arket, transport
company, it's envi	ronment, balance sheet, costs, revenue, profit and maximalization of profit. Business plan, taxation in transport.		
17TVD	Technology of Public Transport	Z,ZK	5
The course conter	nts a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the	general transport	planning and
quantified transpo	rt demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport system.		
14DMG	Datamining	KZ	2
Types of data sour	ces and knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge ac	quisition systems	or data mining,
mining characteris	tics of concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayes	sian cob., using ne	ural networks).
Prediction. Cluster	analysis. Mining in complex structured data, multimedia dbf., www.		
17MAGD	Marketing in Transport	KZ	4
Development of st	rategic marketing plans. Implementation of marketing campaigns. Branding and brand promotion. Public relations industry, busine	ss and vertical ma	arket. Website
development, sear	ch engine optimization. Government relations and industry organization lobbying. Advertising and strategic sponsorships. Multime	edia presentations	and corporate
videos. Direct mar	keting and related lead generation campaigns.		
17ZAP	Fundamentals od law	Z	2

Code of the group: 6S-BK-LOG-26/27

Name of the group: 6th Sem. Bachelor Part-Time TET-LOG from 2026/27

Requirement credits in the group: In this group you have to gain 22 credits

Requirement courses in the group: In this group you have to complete 8 courses

Credits in the group: 22 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
17FID	Financing and Investment in Transport  Alexandra Dvo á ková, Olga Mertlová Olga Mertlová (Gar.)	Z,ZK	4	2P+1C+12B	L	Р
17IVED	Integration of Public Transport Roman Št rba Roman Št rba (Gar.)	Z,ZK	3	2P+1C+10B	L	Р
17KLID	Quality in Transport Service Pavel Edvard Van ura Pavel Edvard Van ura (Gar.)	Z,ZK	3	2P+1C+10B	L	Р
17MRRK	Managerial Decision-making and Management Alexandra Dvo á ková Alexandra Dvo á ková (Gar.)	Z,ZK	3	10B	L	Р
14MPG	Modern Programming Approaches Michal Je ábek, Vít Fábera (Gar.)	KZ	2	0P+2C+8B	L	Р
17GEDS	Geography of Transport Systems Miroslav Marada Miroslav Marada (Gar.)	KZ	2	2P+0C+8B	L	Р
12ZAR	Introduction to Architectural Design Karel Hájek	Z	3	2P+0C+8B	L	Р
17NAPR	Freight Traffic Roman Št rba Roman Št rba (Gar.)	Z	2	2P+0C+8B	L	Р

### Characteristics of the courses of this group of Study Plan: Code=6S-BK-LOG-26/27 Name=6th Sem. Bachelor Part-Time TET-LOG from 2026/27

17FID	Financing and Investment in Transport	Z,ZK	4
•	of transport infrastructure, the role of public administration in the financing and realization of investment in transport, the investi les, competition, effectiveness and efficiency of spending public funds, evaluation systems of public projects and programs.	ment project projec	t cycle, subsid
17IVED	Integration of Public Transport	Z,ZK	3
activities and organiz	th EU and CR, transport sectoral strategies, land use planning and evolution of space organization, integration of public servic ational structures of integrated public transport systems, internal and external bindings, contracting, carriage relations, condition and quality, IS, marketing.	•	
17KLID	Quality in Transport Service	Z,ZK	3
and logistics, method	n of quality, standards and international standardization, integrated management systems, modern attitudes of quality managen s of quality measurement, quality management, risks and opportunities, public transport quality, view of costumers, carriers and ng and costumer satisfaction.		•
17MRRK	Managerial Decision-making and Management	Z,ZK	3
Decision-making proothinking.	ess; identifying exactly what the problem is; evaluating the issue; solving the issue; using multiple perspective analysis to make	e a decision; usual	method of
14MPG	Modern Programming Approaches	KZ	2
Students will be remin	Modern Programming Approaches nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the sics of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller and la	eir implementation	_
Students will be remine will also try out the base	nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the	eir implementation	_
Students will be remined will also try out the base 17GEDS Regional differentiation theoretical and methological.	nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the sics of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller and lateral Geography of Transport Systems on of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional developled framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Pra	reir implementation rger data sizes.  KZ  Dopment. Spatial inte	in Python. The
Students will be reminimil also try out the base 17GEDS Regional differentiation theoretical and methologism.	nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the sics of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller and lateral Geography of Transport Systems on of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional developled framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Pra	reir implementation rger data sizes.  KZ  Dopment. Spatial inte	in Python. The
Students will be remined will also try out the base of	nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the size of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller and law Geography of Transport Systems on of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional developled dological framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Praction planning.  Introduction to Architectural Design cture of traffic systems. Bus and trolley-bus transport. Tramway and town tracks. Design of vehicles. Subway. Railway transport.	eir implementation rger data sizes.  KZ ppment. Spatial intectical use of transpo	in Python. The  2 eraction - ort-geographica
will also try out the band of	nded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and the size of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller and law Geography of Transport Systems on of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional developled dological framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Praction planning.  Introduction to Architectural Design cture of traffic systems. Bus and trolley-bus transport. Tramway and town tracks. Design of vehicles. Subway. Railway transport.	eir implementation rger data sizes.  KZ ppment. Spatial intectical use of transpo	in Python. The  2 eraction - ort-geographica

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 12

The role of the block: PV

Code of the group: W1-BK-LOG-25/26

Name of the group: Comp. Sel. Courses Bachelor Part-Time TET-LOG from 2025/26

Requirement credits in the group: In this group you have to gain 12 credits

Requirement courses in the group: In this group you have to complete 3 courses

Credits in the group: 12 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
15W1BO	Work Safety and Health Protection Petr Musil	KZ	4	8	L	PV
17W1EV	Public Sector Economy	KZ	4	8B	Z	PV
14W1HW	Computer Hardware	KZ	4	8B	L	PV
15W1HE	Work Hygiene and Ergonomics in Traffic Petr Musil	KZ	4	8B	Z	PV
17W1LL	Logistics of Passenger and Freight Air Transport	KZ	4	8B	L	PV
17W1OF	Personal Finance	KZ	4	8	Z	PV
17W1PM	Personal Management	KZ	4	8	L	PV
14W1PZ	Advanced Data Processing in Spreadsheets	KZ	4	8B	Z	PV
14W1PJ	C Programming Language	KZ	4	8B	Z	PV
16W1PV	Operation, Construction and Maintenance of Vehicles	KZ	4	8	L	PV
17W1ST	Titan Simulation	KZ	4	8B	L	PV
17W1SL	Sociology of Human Resources	KZ	4	8	Z	PV
17W1SK	Urban and Regional Rail Transport Systems	KZ	4	8B	L	PV
14W1UP	Editing of Theses in MS Word	KZ	4	8	L	PV

# Characteristics of the courses of this group of Study Plan: Code=W1-BK-LOG-25/26 Name=Comp. Sel. Courses Bachelor Part-Time TET-LOG from 2025/26

15W1BO	Work Safety and Health Protection	KZ	4	
Základní legislativa, vyr	nezení pojm , rizika a možná poškození zdraví, pracovní podmínky a ochrana zdraví zejména v doprav . Programy na ochra	anu zdraví a zdrav	otní zajišt ní na	
služebních cestách don	na i v zahrani í, statistika, praxe.			

17W1EV			
Economic and financis	Public Sector Economy	KZ	4
	al theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of		
tax system of the CR,	state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, fundir	ng from EU funds, p	rogram HDM-4.
14W1HW	Computer Hardware	KZ	4
Computer architecture	, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separat	e parts designing -	controllers,
arithmetic and logical	units, I/O subsystem.		
15W1HE	Work Hygiene and Ergonomics in Traffic	KZ	4
Basic knowledge of or	cupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of thes	e factors on health	of workers.
Creation and protectic	n of working conditions that do not damage public health. Mutual links: man-machine-environment. Adaptation of technology	to possibilities and	skills of a man.
Practical examples fro	m the field of transportation; relevant legislature.		
17W1LL	Logistics of Passenger and Freight Air Transport	KZ	4
Logistics airline passe	nger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial	transport process p	passengers and
air cargo. Information	systems in air transport. Global distribution systems.		
17W1OF	Personal Finance	KZ	4
Personal finance (bud	et, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of h	1	gage, savings,
consumer loans, refina	uncing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability	and adequacy), see	curing the future
(retirement savings an	d insurance).		
17W1PM	Personal Management	KZ	4
	group, man as personality, planning, choice, evaluation and education of human sources, work adaptation, teamwork, intercu	ıltural communicati	on.
14W1PZ	Advanced Data Processing in Spreadsheets	KZ	4
	ar with principles of working in a spreadsheet. Graphic layout of the table appearance, formatting of numbers, insertion of form	1 1	•
	ction. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting		
	es and questions from various companies and training.	rig, solution illiang,	, solver, macros,
14W1PJ	· · · · · · · · · · · · · · · · · · ·	147	
177711 5	1 C Programming Language	K/	1
C programming langua	C Programming Language	KZ string files structu	4 ures and unions
	ege. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation,	1	•
Implementations of ab	uge. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.	string, files, structu	ires and unions.
Implementations of ab	ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise operators.  Operation, Construction and Maintenance of Vehicles	string, files, structu	ures and unions.
Implementations of about 16W1PV Methods of vehicle pro	ge. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measur	string, files, structu	ures and unions.
Implementations of ab 16W1PV Methods of vehicle pro General principles of e	rige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles adduction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurement of the programming diagnostics.	kZ ement. Transmission	ures and unions.  4 on mechanism.
Implementations of ab 16W1PV Methods of vehicle pro General principles of e 17W1ST	regie. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles adduction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measure angine diagnostics.  Titan Simulation	KZ  KZ  KZ  KZ	4 on mechanism.
Implementations of ab 16W1PV Methods of vehicle pro General principles of e 17W1ST Titan is a management	region Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles adduction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measure angine diagnostics.  Titan Simulation  t game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce.	KZ ement. Transmissio	4 on mechanism. 4 price and
Implementations of ab 16W1PV Methods of vehicle pro General principles of e 17W1ST Titan is a management determine the quantity	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.  Titan Simulation t game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence.	KZ ement. Transmissio	4 on mechanism. 4 price and
Implementations of ab 16W1PV Methods of vehicle pro General principles of 6 17W1ST Titan is a management determine the quantity of financial corporate	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.  Titan Simulation  t game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the conseque eports and they use this information for other business decisions.	KZ ement. Transmission  KZ uct. Students set a nces of their decision	4 on mechanism.  4 price and ons by the form
Implementations of ab 16W1PV Methods of vehicle pro General principles of e 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.  Titan Simulation t game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same product and capacity of production, plan budgets for marketing, research and development. They become familiar with the conseque reports and they use this information for other business decisions.  Sociology of Human Resources	KZ ement. Transmission KZ uct. Students set a noces of their decision KZ	4 on mechanism.  4 price and ons by the form
Implementations of ab 16W1PV Methods of vehicle pro General principles of e 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.  Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.  Titan Simulation  t game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the conseque eports and they use this information for other business decisions.	KZ ement. Transmission KZ uct. Students set a noces of their decision KZ	4 on mechanism.  4 price and ons by the form
Implementations of ab 16W1PV Methods of vehicle pro- General principles of e 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and of the organization.	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation train the business decisions. Lets 2-8 student groups to produce and compete in the market with the same product and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence are they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management,	KZ ement. Transmission  KZ uct. Students set a nces of their decision  KZ human resources p	4 price and ons by the form 4 planning, culture
Implementations of ab 16W1PV Methods of vehicle produced from the principles of an analysis of the second from the organization.	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation transport of produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence reports and they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management,   Urban and Regional Rail Transport Systems	KZ ement. Transmission KZ uct. Students set a nces of their decision KZ human resources p	4 price and ons by the form 4 planning, culture 4
Implementations of ab 16W1PV Methods of vehicle pro- General principles of e 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and of the organization. 17W1SK Factors affecting trans	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation transport groups to produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence are they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management,   Urban and Regional Rail Transport Systems   Port demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management,	KZ ement. Transmission  KZ uct. Students set a noces of their decision  KZ human resources p  KZ line networking. C	ares and unions.  4 on mechanism.  4 price and ons by the form  4 olanning, culture  4 reating and
Implementations of ab 16W1PV Methods of vehicle pro- General principles of e 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and of the organization. 17W1SK Factors affecting trans- evaluation of the timet	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation transport of produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence reports and they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management,   Urban and Regional Rail Transport Systems	KZ ement. Transmission  KZ uct. Students set a noces of their decision  KZ human resources p  KZ line networking. C	4 price and ons by the form 4 planning, culture 4 reating and
Implementations of ab 16W1PV Methods of vehicle progeneral principles of 6 17W1ST Titan is a management determine the quantity of financial corporate in 17W1SL Human resources and of the organization. 17W1SK Factors affecting transevaluation of the timet marketing.	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation transport groups to produce and compete in the market with the same product and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence reports and they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management, work group as a special kind of social group, communication, personal management, modern management, able. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport special spe	KZ ement. Transmission  KZ uct. Students set a noces of their decision  KZ human resources property of the set	ares and unions.  4 on mechanism.  4 price and ons by the form  4 planning, culture  4 reating and he role of
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Implementations of ab 16W1PV Methods of vehicle progeneral principles of 6 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and of the organization. 17W1SK Factors affecting transevaluation of the timet marketing. 14W1UP Students will be introde	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation type described to the production, plan budgets for marketing, research and development. They become familiar with the consequence and they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management, able. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport Gritans of Theses in MS Word used to the principles of creating and editing large documents and basic typographic rules. They will properly apply styles, creating and editing large documents and basic typographic rules. They will properly apply styles, creating and editing large documents and basic typographic rules. They will properly apply styles, creating and editing large documents and basic typographic rules.	KZ ement. Transmission  KZ uct. Students set a noces of their decision  KZ human resources property for the set of their decision  KZ kZ human resources property for the set of their decision  KZ line networking. C port preferences. T	4 price and ons by the form 4 planning, culture 4 reating and he role of 4 ents, lists of
Implementations of ab 16W1PV Methods of vehicle progeneral principles of 6 17W1ST Titan is a management determine the quantity of financial corporate of 17W1SL Human resources and of the organization. 17W1SK Factors affecting transevaluation of the timet marketing. 14W1UP Students will be introdifigures, tables, graphs	Ige. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.    Operation, Construction and Maintenance of Vehicles duction. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurengine diagnostics.    Titan Simulation type described to the same simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence and they use this information for other business decisions.    Sociology of Human Resources their importance, work group as a special kind of social group, communication, personal management, modern management, work group as a special kind of social group, communication, personal management, modern management, able. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport in the same produce and compete in the management, able. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport in the same produce and compete in the management, and they are same produce and compete in the management, and they are same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the market with the same produce and compete in the ma	KZ ement. Transmission  KZ uct. Students set a noces of their decision  KZ human resources property for the set of their decision  KZ kZ human resources property for the set of their decision  KZ line networking. C port preferences. T	4 price and ons by the form 4 planning, culture 4 reating and he role of 4 ents, lists of

Name of the block: Jazyky

Minimal number of credits of the block: 6

The role of the block: J

Code of the group: JZ-BP-TET-22/23

Name of the group: Bachelor TET (ex LED) 2nd Language Courses from 2022/23

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:

riote on the group	J.					
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
15JZ3F	Foreign Language - French 3 Irena Veselková	Z	3	0P+4C+10B	Z	J
15JZ3I	Foreign Language - Italian 3 Irena Veselková	Z	3	0P+4C+10B	Z	J
15JZ3N	Foreign Language - German 3 Jana Štikarová, Eva Rezlerová, Martina Navrátilová	Z	3	0P+4C+10B	Z	J
15JZ3R	Foreign Language - Russian 3 Marie Michlová	Z	3	0P+4C+10B	Z	J
15JZ3S	Foreign Language - Spanish 3 Nina Hricsina Puškinová	Z	3	0P+4C+10B	Z	J

15JZ4F	Foreign Language - French 4 Irena Veselková	Z,ZK	3	0P+4C+10B	L	J
15JZ4I	Foreign Language - Italian 4	Z,ZK	3	0P+4C+10B	L	J
15JZ4N	Foreign Language - German 4 Jana Štikarová, Eva Rezlerová, Martina Navrátilová	Z,ZK	3	0P+4C+10B	L	J
15JZ4R	Foreign Language - Russian 4 Marie Michlová	Z,ZK	3	0P+4C+10B	L	J
15JZ4S	Foreign Language - Spanish 4 Zuzana Krinková	Z,ZK	3	0P+4C+10B	L	J

#### Characteristics of the courses of this group of Study Plan: Code=JZ-BP-TET-22/23 Name=Bachelor TET (ex LED) 2nd Language Courses from 2022/23

and parcontive and co	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	rk with (profession	nal) toyt and its
	ral and written presentation.	ik with (profession	iai) text and it
15JZ3I	Foreign Language - Italian 3	7	3
	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of	of language struc	ture knowleda:
•	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. World and written form.		•
	ral and written presentation.	u ·	,
15JZ3N	Foreign Language - German 3	Z	3
Grammar and stylistic	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ure knowledge
and perceptive and co	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	rk with (profession	nal) text and its
features. Practice of o	ral and written presentation.		
15JZ3R	Foreign Language - Russian 3	Z	3
Grammar and etylictic	- Coloration of annual control and another in a benefit of the language benefit of the form of the Franks benefit of		'
Ciaminal and Stylistic	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of	or language struc	ture knowledge
•	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement to Immunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo		•
and perceptive and co			
and perceptive and co	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo		•
and perceptive and co features. Practice of o	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. World and written presentation.	rk with (profession	nal) text and its
and perceptive and confeatures. Practice of one of 15JZ3S Grammar and stylistic	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. World and written presentation.  Foreign Language - Spanish 3	rk with (profession  Z  of language struct	nal) text and its
and perceptive and confeatures. Practice of of 15JZ3S Grammar and stylistic and perceptive and confeatures.	ommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. World and written presentation.  Foreign Language - Spanish 3  s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of	rk with (profession  Z  of language struct	nal) text and its
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#### Foreign Language - German 4

features. Practice of oral and written presentation.

Foreign Language - French 3

15JZ3F

Z,ZK

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation.

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#### 15JZ4R Foreign Language - Russian 4

Z,ZK

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation.

#### 15JZ4S Foreign Language - Spanish 4

Z,ZK

Ζ

3

3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation.

#### List of courses of this pass:

Code	Name of the course	Completion	Credits
11CAL1	Calculus 1	Z,ZK	7
Sequence of real r	numbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integ	ral, Riemann integr	al, improper
	Riemann integral. First-order differential equations, linear differential equations.		
11CAL2	Calculus 2	Z,ZK	5
Linea	ar 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 elec	tric current.	'
11GIE	Geometry	KZ	3
Differential geom	etry of curves - parameterization, the arc of the curve, torsion and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of	of the motion, the v	elocity, and
	acceleration of a particle moving on a curved path		

11LA	Linear Algebra	Z,ZK	3
Vector spaces (line	bar 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.	
11LP	Linear Programming	KZ	3
	problem of linear programming, transcription of some practical problems to the linear programming problems. Simplex and convex po	1	
1 officiation of the	solutions, duality principle in linear programming, stability of solution of linear programming problem.	orycura. Ompicx m	cuioa, basic
44MDD		1/7	_
11MDP	Transport Prognostic Methods	KZ	2
The techniques of	economical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statistical	al values using diffe	rencies and
	indices.		I
11MSP	Modeling of Systems and Processes	Z,ZK	4
System and subsys	stem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of differences.	ential and differentia	al equations.
Linear and non	nlinear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function	on. Stability of LTI s	ystems.
	Discretization of continuous systems. System interconnection.		
11STAT	Statistics	Z,ZK	4
Basics of probabi	ility Descriptive statistics Population and sample, limit theorem Point estimate, construction and properties Interval estimates Parame	tric tests Nonparan	netric tests
	Regression and correlation analysis		
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		1
12MDE	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 qu		_
			•
transport and its a	assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequ	ences. Improving o	n 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	-	
Range of vision for	stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safe	ty device. Crossing	s, junctions,
	intersections.		
12ZADK	Introduction to Transportation Engineering	Z,ZK	5
12ZAR	Introduction to Architectural Design	Z	3
	d architecture of traffic systems. Bus and trolley-bus transport. Tramway and town tracks. Design of vehicles. Subway. Railway transport	rt. Railwav stations	_
	communications. International airports.		
12ZPV	Railway Operation	Z,ZK	4
	l · · · · · · · · · · · · · · · · · · ·		
Legisiation in failt	way transport. Railway vehicles. Railway signals and signal devices. Railway traffic organisation and operation. Simplified railway traff	ic operation. Railwa	ay veriicles
	brakes. Railway vehicles marking. Operation intervals. Theoretical graph of train running.		
12ZTS	Railway Lines and Stations	Z,ZK	4
Rail transport. Ra	ailway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. 🤉	•	way lines.
	Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail to	transport.	
44400			
14ASD	Algorithm and Data Structures	KZ	3
	Algorithm and Data Structures ze problems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading algo	1	
Students will analy		rithms written using	flowcharts,
Students will analy	ze problems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading algo	rithms written using variable, branching,	flowcharts,
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15JZ2A		· ·	
	Foreign Language - English 2 ures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and con	Z,ZK nmunicative skills	3
ammatical of ac	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles o		. Lioinona
15JZ3F	Foreign Language - French 3	Z	3
-	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
nd perceptive an	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation.	/ith (professional)	text and
15JZ3I	Foreign Language - Italian 3	Z	3
	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		-
ind perceptive an	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	vith (professional)	text and
	features. Practice of oral and written presentation.		
15JZ3N	Foreign Language - German 3	Z	3
-	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w		
ina perceptive an	features. Practice of oral and written presentation.	nui (proicessional)	text and
15JZ3R	Foreign Language - Russian 3	Z	3
Frammar and sty	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la	inguage structure	knowled
nd perceptive ar	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	vith (professional)	text and
	features. Practice of oral and written presentation.		
15JZ3S	Foreign Language - Spanish 3	Z	3
· -	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
nd perceptive an	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation.	niii (proiessionai)	lext and
15JZ4F	Foreign Language - French 4	Z,ZK	3
	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		_
nd perceptive ar	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	vith (professional)	text and
	features. Practice of oral and written presentation.		1
15JZ4I	Foreign Language - Italian 4	Z,ZK	3
	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
na perceptive an	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation.	ith (professional)	text and
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	features. Practice of oral and written presentation.		
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-	Geography of Transport Systems	KZ	. 2
neoretical and metr	ntiation of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional develop	•	
	nodological framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Practical	use of transport-	geographic
	analysis in transportation planning.		
17IVED	Integration of Public Transport	Z,ZK	3
	ooth EU and CR, transport sectoral strategies, land use planning and evolution of space organization, integration of public service in t		
activities and organ	nizational structures of integrated public transport systems, internal and external bindings, contracting, carriage relations, conditions of	of both rail and b	us transpor
	operations, grading and quality, IS, marketing.		
17KLID	Quality in Transport Service	Z,ZK	3
General interpretat	ion of quality, standards and international standardization, integrated management systems, modern attitudes of quality managemen	it, quality in trans	port service
nd logistics, metho	ds of quality measurement, quality management, risks and opportunities, public transport quality, view of costumers, carriers and PT-	organizers, quali	ty standard
	quality costs, marketing and costumer satisfaction.		
17LGT	Logistics	Z,ZK	6
	basic concepts, store, warehouse, transport and handling equipment, logistics technology, logistics centers, information and intellige	•	_
,	city.		., .,
17MAGD	Marketing in Transport	KZ	4
	rategic marketing plans. Implementation of marketing campaigns. Branding and brand promotion. Public relations industry, business a		1
	ch engine optimization. Government relations and industry organization lobbying. Advertising and strategic sponsorships. Multimedia		
acvolopinoni, scan	videos. Direct marketing and related lead generation campaigns.	presentations ar	ia corporati
17MDDK		Z.ZK	
17MRRK	Managerial Decision-making and Management	,	3
Decision-making	process; identifying exactly what the problem is; evaluating the issue; solving the issue; using multiple perspective analysis to make a	a decision; usual	method of
4-1-1	thinking.		T -
17NAPR	Freight Traffic	Z	2
	Freight traffic and transportation system, conditions of implementation, forwarding.		_
17TEDK	Transport Technology and Logistics	KZ	4
Basic terms in trans	sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight trans	sport, organisatio	n of traffic i
each transport mo	odus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usir	ng various transp	ort modus.
17TVD	Technology of Public Transport	Z,ZK	5
	nts a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ger	•	anning and
	quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport s		3
17W1EV	Public Sector Economy	KZ	4
	icial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of public		
	R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding fro		
17W1LL	Logistics of Passenger and Freight Air Transport	KZ	4
ogistics airline pas	senger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial trans air cargo. Information systems in air transport. Global distribution systems.	port process pas	sengers an
17W1OF	Personal Finance	KZ	4
II.	budget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of housi		ı . de. savinds
·	inancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability and a		
,	(retirement savings and insurance).	. ,,,	Ü
17W1PM	Personal Management		
		K7	4
Human source	es. Work group, man as personality, planning, choice, evaluation and education of numan sources, work adaptation, teamwork, interc	KZ	4 cation.
	es, work group, man as personality, planning, choice, evaluation and education of human sources, work adaptation, teamwork, intercent sources, work adaptation and teamwork, intercent sources, work adaptation and teamwork adaptation and teamwork adaptation and the sources and teamwork adaptation adaptation and teamwork adaptation and teamwork adaptation adaptatio	cultural communic	cation.
17W1SK	Urban and Regional Rail Transport Systems	cultural communic	cation.
17W1SK Factors affecting	Urban and Regional Rail Transport Systems transport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management, lin	cultural communio KZ ne networking. Cr	cation.  4 eating and
17W1SK Factors affecting	Urban and Regional Rail Transport Systems transport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management, lin timetable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport	cultural communio KZ ne networking. Cr	cation.  4 eating and
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20UITS	Introduction to Intelligent Transport Systems	Z,ZK	7			
Terminology and le	Terminology and legislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of information and telecommunication					
systems for ITS. Pr	systems for ITS. Principles and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examples of possible applications of the					
	principles of ITS.					
21ZALD	Basics of Air Transport	KZ	2			
History, definitions,	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, secur	ity. Air crew.			
	Airlines and economics. Space technologies.					

For updated information see <a href="http://bilakniha.cvut.cz/en/FF.html">http://bilakniha.cvut.cz/en/FF.html</a> Generated: day 2025-06-12, time 21:37.