Study plan

Name of study plan: 1.blok TL prez.08/09začátek

Faculty/Institute/Others:
Department:
Branch of study guaranteed by the department: Welcome page
Garantor of the study branch:
Program of study: Welcome page
Type of study: unknown full-time
Required credits: 120
Elective courses credits: 0
Sum of credits in the plan: 120
Note on the plan:

Name of the block: Compulsory courses
Minimal number of credits of the block: 120
The role of the block: Z

Code of the group: 1.S-TL-08/09
Name of the group: 1.s.TL prez.bak.od08/09
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 at least 8 courses
Credits in the group: 30
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
11GMR	**Geometry**	Z,ZK	5	2+2		z
15J1A1	**Foreign Language - English 1**	Z	2	0+2		z
21LEG1	**Aviation Legislation 1**	Z,ZK	6	4+1		z
21LC1	**Human Factor 1**	ZK	4	3+0		z
11ML1	**Mathematics for Aviation 1**	Z,ZK	6	2+3		z
18TDKL	**Technical Documentation in Aeroplane Design**	KZ	3	2+1		z
00TVC1	**Physical Education 1**	Z	1	0+2	Z	z
14ZI	**Basic of Informatics**	KZ	3	0+2	Z	z

Characteristics of the courses of this group of Study Plan: Code=1.S-TL-08/09 Name=1.s.TL prez.bak.od08/09

11GMR	Geometry	Z,ZK	5
Topographic surfaces, Orthogonal projection, axonometric projection (orthogonal axonometry, skew projection), perspective projection, curves - conic sections, examples of plane curves, basics of differential geometry of curves: parameterization, arc of the the curve, torsion and curvature, Frenet`s trihedron, surfaces of revolution, quadrics, ruled quadrics, etc.			
15J1A1	Foreign Language - English 1	Z	2
The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.			
21LEG1	Aviation Legislation 1	Z,ZK	6
21LC1	Human Factor 1	ZK	4
11ML1	Mathematics for Aviation 1	Z,ZK	6
Real and complex numbers. Sequences, real function of real variable, composite and inverse functions, limits, continuity, derivatives, differentials, investigation of functions for their properties. Integral calculus of functions of one variable with applications. Solution of ordinary differential equations, separation of variables.			
18TDKL	Technical Documentation in Aeroplane Design	KZ	3
General principles, parts lists, handling of modification of Technical Documents, data exchange.			
00TVC1	Physical Education 1	Z	1
Practical instruction and training in a wide variety of sports and games: from basic recreational coaching to competitive top level training. Included are: basketball, volleyball, soccer, tennis, squash, floorball, bodybuilding, swimming, canoeing, aerobic.			

14ZI	Basic of Informatics	KZ	3

Introduce to the faculty network and faculty information systems. Theory of information - basic terms. Number systems, conversions, analog / digital representation of the information. Architecture and activity of the numerical computing systems. Algorithms and their graphical flowchart representation. Algorithm development and solution finding by simple program languages. Engineer computation by specialized software - practical tasks. Classified credit examination.

Code of the group: 2.S-TL-08/09
Name of the group: 2.s.TL prez.bak.od08/09
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 at least 10 courses
Credits in the group: 30
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
11FZL1	**Physics for Aviation 1**	Z,ZK	5	2+2		z
15J1A2	**Foreign Language - English 2**	Z	2	0+2		z
14KPP1	**Computer Aided Design 1 (AutoCAD Basic Steps)**	KZ	3	0+2		z
18KKM	**Metals and Metal Materials**	Z,ZK	3	2+1		z
21LEG2	**Aviation Legislation 2**	Z,ZK	3	2+1		z
21LC2	**Human Factor in Aviation 2**	KZ	3	0+2	L	z
11ML2	**Mathematics for Air Branches 2**	Z,ZK	4	2+2		z
18SP	**Statics and Elasticity**	Z,ZK	4	2+1	L	z
00TVC2	**Physical Education 2**	Z	1	0+2	L	z
17ZKP	**Introduction to Law**	KZ	2	2+0		z

Characteristics of the courses of this group of Study Plan: Code=2.S-TL-08/09 Name=2.s.TL prez.bak.od08/09

11FZL1	Physics for Aviation 1	Z,ZK	5

Kinematics. Dynamics.Thermodynamics. Electric field.

15J1A2	Foreign Language - English 2	Z	2

The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues.
 Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study.
 Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.

14KPP1	Computer Aided Design 1 (AutoCAD Basic Steps)	KZ	3

Determination of "CAD Systems" term. CAD task in system projecting model. Concurrent CAD system in Czech market. Basic AutoCAD course in 2D environment, user settings, output options, designs with grid background.

18KKM	Metals and Metal Materials	Z,ZK	3
21LEG2	Aviation Legislation 2	Z,ZK	3
21LC2	Human Factor in Aviation 2	KZ	3
11ML2	Mathematics for Air Branches 2	Z,ZK	4

Metric spaces, sequences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of function, partial derivations, implicitly defined functions, extremes of functions of several variables. Integral calculus of function of several variables, Riemann integral in Rn, integral over curves and surfaces in R3, application of integral calculus in physics.

18SP	Statics and Elasticity	Z,ZK	4
00TVC2	Physical Education 2	Z	1

Practical instruction and training in a wide variety of sports and games: from basic recreational coaching to competitive top level training. Included are: basketball, volleyball, soccer, tennis, squash, floorball, bodybuilding, swimming, canoeing, aerobic.

17ZKP	Introduction to Law	KZ	2

Theoretical foundations of law. The rule of law. Constitutional law. Public law. Substantive and procedural civil law. Commercial law. Trading business. Building permit procedure. Criminal and violation law. Law of nations, European Union and community law.

Code of the group: 3.S.TL-06/07
Name of the group: 3.s.TL prez.bak.od06/07
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 at least 9 courses
Credits in the group: 30
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
11FZL2	**Physics for Aviation 2**	Z,ZK	5	2+2		z
15J1A3	**Foreign Language - English 3**	Z	2	0+2		z
18KD	**Kinematics and Dynamics**	Z,ZK	4	2+1		z
21LP	**Aircraft Propulsions**	Z,ZK	4	2+2	Z	z
21PU1	**Maintenance Procedures 1**	KZ	2	2+1		z
14SIAW	**Internet Services and WWW Pages Design**	KZ	3	1+1		z
18SMT	**Special Materials and Technologies**	Z,ZK	3	2+1		z
20ZDT	**Basics of Digital Technics**	Z,ZK	4	2+2	Z	z
20ZET	**Foundations of Electrical Engineering**	KZ	3	2+1		z

Characteristics of the courses of this group of Study Plan: Code=3.S.TL-06/07 Name=3.s.TL prez.bak.od06/07

11FZL2	Physics for Aviation 2	Z,ZK	5
Electric Current. Magnetic field. Electromagnetic Induction. Electromagnetic Waves, Light. Geometric Optics, Physical Optics. Interaction of Radiation with Matter. Quantization. Atoms. Solid State Physics. Semiconductors.			
15J1A3	Foreign Language - English 3	Z	2
The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.			
18KD	Kinematics and Dynamics	Z,ZK	4
21LP	Aircraft Propulsions	Z,ZK	4
21PU1	Maintenance Procedures 1	KZ	2
14SIAW	Internet Services and WWW Pages Design	KZ	3
Orientation and information searching in Internet environment, ability of communication through Internet and basic knowledge of own WWW presentation by help of WWW sides.			
18SMT	Special Materials and Technologies	Z,ZK	3
20ZDT	Basics of Digital Technics	Z,ZK	4
20ZET	Foundations of Electrical Engineering	KZ	3
Basic terms of electrical engineering, analysis of linear circuits with resistors, inductors and capacitors supplied with DC/AC sources, including transient phenomena. Basic electrical measurements. Energy sources, transformers, converters, rotary machines (DC, AC, asynchronous, synchronous, step motors). Safety at work with electrical installation (electrical engineering qualification).			

Code of the group: 4.S-TL-06/07
Name of the group: 4.s.TL prez.bak.od06/07
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 at least 9 courses
Credits in the group: 30
Note on the group:

Code	Name of the course / Name of the group of courses *(in case of groups of courses the list of codes of their members)* *Tutors,* ***authors*** *and guarantors (gar.)*	Completion	Credits	Scope	Semester	Role
21EPS1	**Electronical Instrument Systems 1**	Z,ZK	3	2+2		z
20ELT1	**Electrotechnics 1**	Z,ZK	4	2+2		z
15J1A4	**Foreign Language - English 4**	Z,ZK	2	0+2		z
21LLA1	**Aircraft 1**	KZ	4	2+1		z
18MLP	**Materials for Aviation Industry**	Z,ZK	3	2+1	L	z
21PU2	**Maintenance Procedures 2**	KZ	4	2+2		z
14UPG	**Introduction into Programming**	KZ	3	0+2		z
20ZENT	**Basic Electronics**	Z,ZK	3	2+1	Z	z
21ZLU1	**Principles of Flight 1**	KZ	4	2+1		z

Characteristics of the courses of this group of Study Plan: Code=4.S-TL-06/07 Name=4.s.TL prez.bak.od06/07

21EPS1	Electronical Instrument Systems 1	Z,ZK	3
20ELT1	Electrotechnics 1	Z,ZK	4
Basic terms from theory of electrical circuits. Definitions of circuit variables and elements. Physical principles of electrotechnics. Generation of static electricity. Issue of direct current (sources, circuits).			

15J1A4	Foreign Language - English 4	Z,ZK	2
The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.			
21LLA1	Aircraft 1	KZ	4
Evolution of aircraft constructions, aircraft classification, basic parts of aircraft and their function, wings of low speed aircraft - construction scheme, shapes and components, wings of high speed aircraft, wings with changeable geometry, direct lift control, wing mechanization, increase of lift and drag, longitudinal stability and control, flaps, spoilers, interceptors, ailerons. \r\nThe lector of this subject has to have passed an exam at CAA following JAR - FCL 1.			
18MLP	Materials for Aviation Industry	Z,ZK	3
Classification of materials for aviation industry. Special steels, mainly corrosion- resistant steels, and their heat treatnent. Al-alloys. Mg-alloys. Changes of mechanical properties during processing. Deterioration of materials. Properties of polymeric materials. Composites.			
21PU2	Maintenance Procedures 2	KZ	4
14UPG	Introduction into Programming	KZ	3
Introduction to task algorithmization. Acquaintance with basic programming language types. Basic commands, expressions and functions of the C programming language. Practical realization of simple programmes in some of higher programming languages (Turbo C).			
20ZENT	Basic Electronics	Z,ZK	3
The subject is focused on switching elements, operational amplifier, generation harmonic and nonharmonic signals, sources, conduction of high frequencies signals. Analog-Digital and Digital-Analog convertor. Extensive part is also dedicated to digital logical circuits and microprocessors.			
21ZLU1	Principles of Flight 1	KZ	4
Aerodynamic drag, relation between drag and speed, air flow, formula of continuity, formula of Bernoulli, lift and drag, air flow and pressures around wing, angle of attack, reactions of a wing in air flow, lift and drag of a wing and a aircraft, coefficient of lift and drag, critical angle of attack, wing with final span, induced drag, interference, devices for lift and drag increase \r\nThe lector of this subject has to have passed an exam at CAA following JAR - FCL 1.			

List of courses of this pass:

Code	Name of the course	Completion	Credits
00TVC1	Physical Education 1	Z	1
Practical instruction and training in a wide variety of sports and games: from basic recreational coaching to competitive top level training. Included are: basketball, volleyball, soccer, tennis, squash, floorball, bodybuilding, swimming, canoeing, aerobic.			
00TVC2	Physical Education 2	Z	1
Practical instruction and training in a wide variety of sports and games: from basic recreational coaching to competitive top level training. Included are: basketball, volleyball, soccer, tennis, squash, floorball, bodybuilding, swimming, canoeing, aerobic.			
11FZL1	Physics for Aviation 1	Z,ZK	5
Kinematics. Dynamics.Thermodynamics. Electric field.			
11FZL2	Physics for Aviation 2	Z,ZK	5
Electric Current. Magnetic field. Electromagnetic Induction. Electromagnetic Waves, Light. Geometric Optics, Physical Optics. Interaction of Radiation with Matter. Quantization. Atoms. Solid State Physics. Semiconductors.			
11GMR	Geometry	Z,ZK	5
Topographic surfaces, Orthogonal projection, axonometric projection (orthogonal axonometry, skew projection), perspective projection, curves - conic sections, examples of plane curves, basics of differential geometry of curves: parameterization, arc of the the curve, torsion and curvature, Frenet`s trihedron, surfaces of revolution, quadrics, ruled quadrics, etc.			
11ML1	Mathematics for Aviation 1	Z,ZK	6
Real and complex numbers. Sequences, real function of real variable, composite and inverse functions, limits, continuity, derivatives, differentials, investigation of functions for their properties. Integral calculus of functions of one variable with applications. Solution of ordinary differential equations, separation of variables.			
11ML2	Mathematics for Air Branches 2	Z,ZK	4
Metric spaces, sequences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of function, partial derivations, implicitly defined functions, extremes of functions of several variables. Integral calculus of function of several variables, Riemann integral in Rn, integral over curves and surfaces in R3, application of integral calculus in physics.			
14KPP1	Computer Aided Design 1 (AutoCAD Basic Steps)	KZ	3
Determination of "CAD Systems" term. CAD task in system projecting model. Concurrent CAD system in Czech market. Basic AutoCAD course in 2D environment, user settings, output options, designs with grid background.			
14SIAW	Internet Services and WWW Pages Design	KZ	3
Orientation and information searching in Internet environment, ability of communication through Internet and basic knowledge of own WWW presentation by help of WWW sides.			
14UPG	Introduction into Programming	KZ	3
Introduction to task algorithmization. Acquaintance with basic programming language types. Basic commands, expressions and functions of the C programming language. Practical realization of simple programmes in some of higher programming languages (Turbo C).			
14ZI	Basic of Informatics	KZ	3
Introduce to the faculty network and faculty information systems. Theory of information - basic terms. Number systems, conversions, analog / digital representation of the information. Architecture and activity of the numerical computing systems. Algorithms and their graphical flowchart representation. Algorithm development and solution finding by simple program languages. Engineer computation by specialized software - practical tasks. Classified credit examination.			
15J1A1	Foreign Language - English 1	Z	2
The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP			

	(Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1A2	Foreign Language - English 2	Z	2
	The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1A3	Foreign Language - English 3	Z	2
	The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1A4	Foreign Language - English 4	Z,ZK	2
	The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.		
17ZKP	Introduction to Law	KZ	2
	Theoretical foundations of law. The rule of law. Constitutional law. Public law. Substantive and procedural civil law. Commercial law. Trading business. Building permit procedure. Criminal and violation law. Law of nations, European Union and community law.		
18KD	Kinematics and Dynamics	Z,ZK	4
18KKM	Metals and Metal Materials	Z,ZK	3
18MLP	Materials for Aviation Industry	Z,ZK	3
	Classification of materials for aviation industry. Special steels, mainly corrosion- resistant steels, and their heat treatnent. Al-alloys. Mg-alloys. Changes of mechanical properties during processing. Deterioration of materials. Properties of polymeric materials. Composites.		
18SMT	Special Materials and Technologies	Z,ZK	3
18SP	Statics and Elasticity	Z,ZK	4
18TDKL	Technical Documentation in Aeroplane Design	KZ	3
	General principles, parts lists, handling of modification of Technical Documents, data exchange.		
20ELT1	Electrotechnics 1	Z,ZK	4
	Basic terms from theory of electrical circuits. Definitions of circuit variables and elements. Physical principles of electrotechnics. Generation of static electricity. Issue of direct current (sources, circuits).		
20ZDT	Basics of Digital Technics	Z,ZK	4
20ZENT	Basic Electronics	Z,ZK	3
	The subject is focused on switching elements, operational amplifier, generation harmonic and nonharmonic signals, sources, conduction of high frequencies signals. Analog-Digital and Digital-Analog convertor. Extensive part is also dedicated to digital logical circuits and microprocessors.		
20ZET	Foundations of Electrical Engineering	KZ	3
	Basic terms of electrical engineering, analysis of linear circuits with resistors, inductors and capacitors supplied with DC/AC sources, including transient phenomena. Basic electrical measurements. Energy sources, transformers, converters, rotary machines (DC, AC, asynchronous, synchronous, step motors). Safety at work with electrical installation (electrical engineering qualification).		
21EPS1	Electronical Instrument Systems 1	Z,ZK	3
21LC1	Human Factor 1	ZK	4
21LC2	Human Factor in Aviation 2	KZ	3
21LEG1	Aviation Legislation 1	Z,ZK	6
21LEG2	Aviation Legislation 2	Z,ZK	3
21LLA1	Aircraft 1	KZ	4
	Evolution of aircraft constructions, aircraft classification, basic parts of aircraft and their function, wings of low speed aircraft - construction scheme, shapes and components, wings of high speed aircraft, wings with changeable geometry, direct lift control, wing mechanization, increase of lift and drag, longitudinal stability and control, flaps, spoilers, interceptors, ailerons. \r\nThe lector of this subject has to have passed an exam at CAA following JAR - FCL 1.		
21LP	Aircraft Propulsions	Z,ZK	4
21PU1	Maintenance Procedures 1	KZ	2
21PU2	Maintenance Procedures 2	KZ	4
21ZLU1	Principles of Flight 1	KZ	4
	Aerodynamic drag, relation between drag and speed, air flow, formula of continuity, formula of Bernoulli, lift and drag, air flow and pressures around wing, angle of attack, reactions of a wing in air flow, lift and drag of a wing and a aircraft, coefficient of lift and drag, critical angle of attack, wing with final span, induced drag, interference, devices for lift and drag increase \r\nThe lector of this subject has to have passed an exam at CAA following JAR - FCL 1.		

For updated information see http://bilakniha.cvut.cz/en/FF.html
Generated: day 2023-12-08, time 17:40.