

# Study plan

## Name of study plan: PL nav.kombi 24/25 (pro program PL)

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Air Traffic Control and Management

Type of study: Follow-up master combined

Required credits: 70

Elective courses credits: 50

Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses

Minimal number of credits of the block: 54

The role of the block: Z

Code of the group: 1.S.NKPL 22/23

Name of the group: 1.sem.nav.kombi PL (od) 22/23 (program PL)

Requirement credits in the group: In this group you have to gain 28 credits

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

Credits in the group: 28

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
11APAS	<b>Applied Statistics</b> Evženie Uglickich, Pavla Pecherková <b>Pavla Pecherková</b>	Z,ZK	4	2P+2C+12B	Z	z
11MMJ	<b>Mathematical Models and their Applications</b> Evženie Uglickich, Pavla Pecherková, Šárka Vorá ová, Ivan Nagy, Michal Matowicki <b>Pavla Pecherková</b> Evženie Uglickich (Gar.)	Z,ZK	4	2P+2C+12B	Z	z
21BILD	<b>Safety Engineering in Aviation</b> Natalia Guskova, Kate ina Grötschelová, Andrej Lališ <b>Andrej Lališ</b>	Z,ZK	4	2P+2C+12B	Z	z
21CNSS	<b>CNS Systems</b> Stanislav Pleninger, Jakub Steiner <b>Stanislav Pleninger</b>	Z,ZK	5	3P+2C+16B	Z	z
21LETS	<b>Airport</b> Petr Líka , Sébastien Lán, Petr Had, Ji í Volt, Slobodan Stoji <b>Slobodan Stoji</b>	Z,ZK	4	1P+2C+12B	Z	z
21PEKL	<b>Principles and Models in Air Transport Economics</b> Peter Vittek <b>Peter Vittek</b>	Z,ZK	5	4P+2C+16B	Z	z
15J2A1	<b>Language - English 1</b> Barbora Horá ková, Jiřka He manová, Dana Bouřová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Marek Tome ek, Markéta Musilová, .....	Z	2	0P+2C+10B	Z	z

### Characteristics of the courses of this group of Study Plan: Code=1.S.NKPL 22/23 Name=1.sem.nav.kombi PL (od) 22/23 (program PL)

11APAS	Applied Statistics	Z,ZK	4	Descriptive statistics, data preprocessing, discretize continuous data. Hypothesis testing - continuous and discrete variables. Regression and correlation analysis. Multivariable methods - multiple regression analysis, logistic regression analysis, ROC curve, MANOVA, PCA, Factor analysis. Power analysis, preparation, processing and evaluation of the experiment.
11MMJ	Mathematical Models and their Applications	Z,ZK	4	System. Regression, discrete and logistic models. Bayesian estimation of model parameters. Parameter estimation of normal regression, discrete and logistic models. Classification with logistic model. One-step and multi-step prediction with regression and discrete models. State model. State estimation. Kalman filter. Control with regression and discrete models.
21BILD	Safety Engineering in Aviation	Z,ZK	4	The course is focused on understanding the issue of safety, learning how to assess new systems in terms of safety and acquiring principles of safety management. Students will learn explaining accidents and incident causes and bridge their theoretical knowledge with practical problems of air transport.
21CNSS	CNS Systems	Z,ZK	5	Course provides full technical informations about CNS (communication, navigation, surveillance) systems used in aviation. Systems are presented in perspective of future development.
21LETS	Airport	Z,ZK	4	Methods of designing new airports and developing existing ones. Connection of the airport to the surrounding infrastructure. Airport economics. Detailed look at the development of movement areas. Certification of airside movement areas and procedures according to EASA CS-ADR-DSN. Development planning - design, preparation and regulatory basis. Environmental aspects of airport operations.

21PEKL	Principles and Models in Air Transport Economics	Z,ZK	5
The course contains the most important and typical models on which the economics of air transport is based. It covers the principles of regulation, airline infrastructure models, market structure, analyses airline costs, and looks in detail at the low-cost and charter airline model. It also focuses on airline alliances, air cargo, airline strategies and the economic principles of safety and security.			
15J2A1	Language - English 1	Z	2
Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.			

Code of the group: 2.S.NKPL 22/23

Name of the group: 2.sem.nav.kombi PL (od) 22/23 (program PL)

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 6 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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
21AFM	<b>Air Traffic Management</b> <i>Terézia Pilmannová Jakub Kraus Jakub Kraus (Gar.)</i>	Z,ZK	5	3P+2C+16B	L	Z
21MULD	<b>Managerial Challenges in Air Transport</b> <i>Peter Vittek Peter Vittek (Gar.)</i>	Z,ZK	5	3P+2C+14B	L	Z
21PLET	<b>Airport Operations</b> <i>Sébastien Lán, Petr Had, Jiří Volt, Slobodan Stoji Slobodan Stoji (Gar.)</i>	Z,ZK	5	2P+2C+12B	L	Z
21SPOL	<b>Aircraft Technology Reliability</b> <i>Natalia Guskova, Kateřina Grötschelová, Oldřich Štumbauer Andrej Lališ (Gar.)</i>	Z,ZK	4	2P+1C+12B	L	Z
21PAM1	<b>Programming and Modelling 1</b> <i>Vladimír Socha, Lenka Hanáková Vladimír Socha (Gar.)</i>	KZ	5	2P+4C+16B	L	Z
15JBA2	<b>Language - English 2</b> <i>Barbora Horáková, Jitka Heřmanová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Marek Tomek, Markéta Musilová, .....</i>	Z	2	0P+2C+10B	L	Z

**Characteristics of the courses of this group of Study Plan: Code=2.S.NKPL 22/23 Name=2.sem.nav.kombi PL (od) 22/23 (program PL)**

21AFM	Air Traffic Management	Z,ZK	5
Current ATM system and its functional blocks. View of ATM data (technical architecture and configuration, transmission systems and networks). Data exchange with neighboring ATM systems. Monitoring systems and technical supervision. ATM simulation. ATM conceptions and strategies for next years. EUROCONTROL - CFMU. FAB. ATS's - AOC's data applications.			
21MULD	Managerial Challenges in Air Transport	Z,ZK	5
The course contains a list of basic managerial tasks in aviation. The basic managerial tasks are quality assurance and operational safety, marketing operations, marketing context implementation, airline network management, fleet management and revenue management. The core disciplines also include project management, cost management and project resource planning and management.			
21PLET	Airport Operations	Z,ZK	5
Planning, design and modelling of airport processes in airside, landside and terminal buildings. Impact of infrastructure and equipment on airport capacity. Available tools and practices for increasing capacity. Operational analytics, capacity and traffic load forecasting. Purpose and development of an airport masterplan.			
21SPOL	Aircraft Technology Reliability	Z,ZK	4
Subject deals with tuition of separate attributes of reliability (no failure, vitality, maintainability, and so on) and main criterions of safety of production and working of aerospace engineering. General legalities are in the framework of tuition demonstrated on the example of calculation of reliability of integral characteristics of materials and they are practical illustration of its security in The Czech Police Aviation Department.			
21PAM1	Programming and Modelling 1	KZ	5
Harmonic signals, their generation. Real signals, sampling theorem, aliasing. Signal filtering. Fourier transform (FT), discrete Fourier transform (DFT), fast Fourier transform (FFT). Spectrum estimation, spectral power density. Image - basic processing methods, 2D Fourier transform, noise filtering, edge detection, linear and non-linear methods, brightness transforms, geometric transforms, image compression.			
15JBA2	Language - English 2	Z	2
Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.			

Name of the block: Semestrální projekt

Minimal number of credits of the block: 8

The role of the block: ZP

Code of the group: XN PL 1-4 22/23

Name of the group: Projekty nav. 1.-4.sem (od) 22/23 programu PL (PRE i KOMBI)

Requirement credits in the group: In this group you have to gain 8 credits

Requirement courses in the group: In this group you have to complete 4 courses

Credits in the group: 8

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
11XN1	<b>Master Project 1</b> Ivan Nagy	Z	2	0P+2C+4B	Z	ZP
12XN1	<b>Master Project 1</b> Zuzana arská, Dagmar Ko árková, Iva Šturmová, Kristýna Neubergová, Martin Jacura, Jan Kruntorád, Ond ej Trešl, David Vodák, Tomáš Javo ík, .....	Z	2	0P+2C+4B	Z	ZP
14XN1	<b>Master Project 1</b>	Z	2	0P+2C+4B	Z	ZP
15XN1	<b>Master Project 1</b>	Z	2	0P+2C+4B	Z	ZP
16XN1	<b>Master Project 1</b> P emysl Toman	Z	2	0P+2C+4B	Z	ZP
17XN1	<b>Master Project 1</b> Václav Baroch, Michal Drábek, Alexandra Dvo á ková, Veronika Fafrová, Eliška Glaserová, Rudolf Franz Heidu, Tomáš Horák, Vít Janoš, Milan K íž, .....	Z	2	0P+2C+4B	Z	ZP
18XN1	<b>Master Project 1</b> Václav Rada, Nela Kr má ová	Z	2	0P+2C+4B	Z	ZP
20XN1	<b>Master Project 1</b> Ji í R ži ka	Z	2	0P+2C+4B	Z	ZP
21XN1	<b>Master Project 1</b> Natalia Guskova, Andrej Lališ, Jakub Steiner, Slobodan Stoji , Peter Vittek, Terézia Pilmannová, Jakub Kraus, Vladimír Socha, Lenka Hanáková, .....	Z	2	0P+2C+4B	Z	ZP
22XN1	<b>Master Project 1</b> Michal Frydrýn, Karel Kocián, Luboš Nouzovský, Zden k Svatý, Jakub Nová ek	Z	2	0P+2C+4B	Z	ZP
23XN1	<b>Master Project 1</b>	Z	2	0P+2C+4B	Z	ZP
11XN2	<b>Master Project 2</b> Ivan Nagy	Z	2	0P+2C+8B	L	ZP
12XN2	<b>Master Project 2</b> Zuzana arská, Dagmar Ko árková, Kristýna Neubergová, Martin Jacura, Jan Kruntorád, Ond ej Trešl, David Vodák, Tomáš Javo ík, Pavel Purkart, .....	Z	2	0P+2C+8B	L	ZP
14XN2	<b>Master Project 2</b> Vít Fábera, Tomáš Brandejský, Mária Jánešová, Jan Zelenka	Z	2	0P+2C+8B	L	ZP
15XN2	<b>Master Project 2</b>	Z	2	0P+2C+8B	L	ZP
16XN2	<b>Master Project 2</b> P emysl Toman, Josef Mík	Z	2	0P+2C+8B	L	ZP
17XN2	<b>Master Project 2</b> Václav Baroch, Michal Drábek, Alexandra Dvo á ková, Veronika Fafrová, Rudolf Franz Heidu, Tomáš Horák, Vít Janoš, Milan K íž, Olga Mertlová, ..... Vít Janoš (Gar.)	Z	2	0P+2C+8B	L	ZP
18XN2	<b>Master Project 2</b> Nela Kr má ová	Z	2	0P+2C+8B	L	ZP
20XN2	<b>Master Project 2</b> Ji í R ži ka, Patrik Horaž ovský	Z	2	0P+2C+8B	L	ZP
21XN2	<b>Master Project 2</b> Natalia Guskova, Kate ina Grötschelová, Andrej Lališ, Jakub Steiner, Slobodan Stoji , Peter Vittek, Terézia Pilmannová, Jakub Kraus, Lenka Hanáková, .....	Z	2	0P+2C+8B	L	ZP
22XN2	<b>Master Project 2</b> Michal Frydrýn, Karel Kocián, Luboš Nouzovský, Zden k Svatý, Jakub Nová ek	Z	2	0P+2C+8B	L	ZP
23XN2	<b>Master Project 2</b>	Z	2	0P+2C+8B	L	ZP
11XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
12XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
14XN3L	<b>Master Project 3</b> Vít Fábera Vít Fábera (Gar.)	Z	2	0P+2C+8B	Z	ZP
15XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
16XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
17XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
18XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
20XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
21XN3L	<b>Master Project 3</b> Natalia Guskova, Kate ina Grötschelová, Andrej Lališ, Slobodan Stoji , Peter Vittek, Terézia Pilmannová, Jakub Kraus, Vladimír Socha, Lenka Hanáková, .....	Z	2	0P+2C+8B	Z	ZP
22XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
23XN3L	<b>Master Project 3</b>	Z	2	0P+2C+8B	Z	ZP
11XN4L	<b>Master Project 4</b>	Z	2	0P+5C+8B	L	ZP
12XN4L	<b>Master Project 4</b>	Z	2	0P+5C+8B	L	ZP
14XN4L	<b>Master Project 4</b> Vít Fábera, Tomáš Brandejský, Mária Jánešová, Jan Zelenka	Z	2	0P+5C+8B	L	ZP
15XN4L	<b>Master Project 4</b>	Z	2	0P+5C+8B	L	ZP

16XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP
17XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP
18XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP
20XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP
21XN4L	<b>Master Project 4</b> <i>Natalia Guskova, Kateřina Grötschelová, Andrej Lališ, Stanislav Pleninger, Jakub Steiner, Petr Had, Jiří Volt, Slobodan Stoji, Peter Vittek, .....</i>	Z	2	OP+5C+8B	L	ZP
22XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP
23XN4L	<b>Master Project 4</b>	Z	2	OP+5C+8B	L	ZP

**Characteristics of the courses of this group of Study Plan: Code=XN PL 1-4 22/23 Name=Projekty nav. 1.-4.sem (od) 22/23 programu PL (PRE i KOMBI)**

11XN1	Master Project 1	Z	2
12XN1	Master Project 1	Z	2
14XN1	Master Project 1	Z	2
15XN1	Master Project 1	Z	2
16XN1	Master Project 1	Z	2
17XN1	Master Project 1	Z	2
18XN1	Master Project 1	Z	2
20XN1	Master Project 1	Z	2
21XN1	Master Project 1	Z	2
22XN1	Master Project 1	Z	2
23XN1	Master Project 1	Z	2
11XN2	Master Project 2	Z	2
12XN2	Master Project 2	Z	2
14XN2	Master Project 2	Z	2
15XN2	Master Project 2	Z	2
16XN2	Master Project 2	Z	2
17XN2	Master Project 2	Z	2
18XN2	Master Project 2	Z	2
20XN2	Master Project 2	Z	2
21XN2	Master Project 2	Z	2
22XN2	Master Project 2	Z	2
23XN2	Master Project 2	Z	2
11XN3L	Master Project 3	Z	2
12XN3L	Master Project 3	Z	2
14XN3L	Master Project 3	Z	2
15XN3L	Master Project 3	Z	2
16XN3L	Master Project 3	Z	2
17XN3L	Master Project 3	Z	2
18XN3L	Master Project 3	Z	2
20XN3L	Master Project 3	Z	2
21XN3L	Master Project 3	Z	2
22XN3L	Master Project 3	Z	2
23XN3L	Master Project 3	Z	2
11XN4L	Master Project 4	Z	2
12XN4L	Master Project 4	Z	2
14XN4L	Master Project 4	Z	2
15XN4L	Master Project 4	Z	2
16XN4L	Master Project 4	Z	2
17XN4L	Master Project 4	Z	2
18XN4L	Master Project 4	Z	2
20XN4L	Master Project 4	Z	2
21XN4L	Master Project 4	Z	2
22XN4L	Master Project 4	Z	2
23XN4L	Master Project 4	Z	2

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 8

The role of the block: PV

Code of the group: Y2-NKPL 24/25

Name of the group: PVP nav.kombi program PL 24/25

Requirement credits in the group: In this group you have to gain 8 credits

Requirement courses in the group: In this group you have to complete 4 courses

Credits in the group: 8

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) <i>Tutors, authors and guarantors (gar.)</i>	Completion	Credits	Scope	Semester	Role
21Y2BS	<b>Unmanned aircraft systems 2</b> <i>Tomáš Tluhoš, Michal Černý, Tomáš Tluhoš</i>	KZ	2	2P+0C+8B	Z	PV
21Y2CR	<b>CRM</b>	KZ	2	2P+0C	L	PV
21Y2FM	<b>Aviation Company Financial Management</b> <i>Radoslav Zozuňák, Radoslav Zozuňák</i>	KZ	2	2P+0C+8B	Z	PV
21Y2MQ	<b>Quality Management</b> <i>Luboš Šocha</i>	KZ	2	2P+0C+8B	L	PV
21Y2MK	<b>Marketing of Air Transport</b> <i>Peter Vittek, Peter Vittek</i>	KZ	2	2P+0C+8B	Z	PV
21Y2MC	<b>CNS Systems Modelling</b> <i>Stanislav Plenínger, Stanislav Plenínger</i>	KZ	2	2P+0C+8B	Z	PV
21Y2PP	<b>Law and Operation in Air Transport</b> <i>Radoslav Zozuňák</i>	KZ	2	2P+0C+8B	L	PV
21Y2UL	<b>Aircraft Maintenance</b> <i>Tomáš Pařízek</i>	KZ	2	2P+0C+8B	L	PV
14Y2UI	<b>Artificial Intelligence</b>	KZ	2	2P+0C+8B	Z,L	PV

**Characteristics of the courses of this group of Study Plan: Code=Y2-NKPL 24/25 Name=PVP nav.kombi program PL 24/25**

21Y2BS	Unmanned aircraft systems 2	KZ	2	Modern trends in unmanned aircraft development. Use of unmanned aircraft. Managerial activities related to the operation of unmanned aircraft. Flights beyond the applicable legislation.
21Y2CR	CRM	KZ	2	Introduction to CRM. Analysis of air accidents. Human factor. Error. Historical development of CRM. Health and fitness. Stress and its effect on the human body. Fatigue Sleep & Vigilance. Information Processing. Situational Awareness. Workload Management. Decision Making. Communication. Leadership & Team Behaviour. Automation.
21Y2FM	Aviation Company Financial Management	KZ	2	Theories of corporate finance - financial statements, budget, forecast. Financial policy of the company. Financial resources - long-term financial resources, depreciation, retained earnings, shares, bonds, loans, leasing, capital. Financial and economic analysis of the company - structure and content.
21Y2MQ	Quality Management	KZ	2	History, basic definition. Pioneers in the field of quality. International quality organisations and quality promotion in the Czech Republic. Quality management system. Environmental management systems. Integrated management systems. Risk management in the context of the requirements of ISO standards. Sectoral quality management systems. Comprehensive quality management, excellence models and corporate social responsibility. Quality audits.
21Y2MK	Marketing of Air Transport	KZ	2	The content of the course "Marketing in air transport" is the management of activities and processes using available marketing tools and processes for analysis, strategy development and implementation of sales of goods and services in the aviation industry. In addition to the theoretical foundations of marketing, the lectures present systems of market, competition and product analysis, creation of marketing strategies and planning.
21Y2MC	CNS Systems Modelling	KZ	2	The course is designed as a set of model tasks in the field of communication navigation and surveillance systems in aviation, addressed using mathematical approaches and software tools. A large part is devoted to air targets tracking, measurement-to-track association, track filtering and multisensor tracking.
21Y2PP	Law and Operation in Air Transport	KZ	2	Development of aviation law. International conventions on civil aviation. International organisations and including of the Czech Republic in these organisations. EU legislation and civil aviation. Execution of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Responsibilities of air carriers for passengers, luggage and cargo. The safe transport of dangerous goods.
21Y2UL	Aircraft Maintenance	KZ	2	Approved Maintenance Organisations (AMOs), Continuing Airworthiness Management Organisations (CAMOs), Maintenance Training Organisations (MTOs), technical documentation and additional ICA (Instructions for Continued Airworthiness) instructions, aircraft release to service procedure, maintenance programmes and scheduling, modifications and general repair methods, aircraft centre of gravity and weights, human factors in aircraft maintenance.
14Y2UI	Artificial Intelligence	KZ	2	History of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, machine learning.

**List of courses of this pass:**

Code	Name of the course	Completion	Credits
11APAS	Applied Statistics	Z,ZK	4
	Descriptive statistics, data preprocessing, discretize continuous data. Hypothesis testing - continuous and discrete variables. Regression and correlation analysis. Multivariable methods - multiple regression analysis, logistic regression analysis, ROC curve, MANOVA, PCA, Factor analysis. Power analysis, preparation, processing and evaluation of the experiment.		
11MMJ	Mathematical Models and their Applications	Z,ZK	4
	System. Regression, discrete and logistic models. Bayesian estimation of model parameters. Parameter estimation of normal regression, discrete and logistic models. Classification with logistic model. One-step and multi-step prediction with regression and discrete models. State model. State estimation. Kalman filter. Control with regression and discrete models.		

11XN1	Master Project 1	Z	2
11XN2	Master Project 2	Z	2
11XN3L	Master Project 3	Z	2
11XN4L	Master Project 4	Z	2
12XN1	Master Project 1	Z	2
12XN2	Master Project 2	Z	2
12XN3L	Master Project 3	Z	2
12XN4L	Master Project 4	Z	2
14XN1	Master Project 1	Z	2
14XN2	Master Project 2	Z	2
14XN3L	Master Project 3	Z	2
14XN4L	Master Project 4	Z	2
14Y2UI	Artificial Intelligence History of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, machine learning.	KZ	2
15J2A1	Language - English 1 Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.	Z	2
15JBA2	Language - English 2 Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.	Z	2
15XN1	Master Project 1	Z	2
15XN2	Master Project 2	Z	2
15XN3L	Master Project 3	Z	2
15XN4L	Master Project 4	Z	2
16XN1	Master Project 1	Z	2
16XN2	Master Project 2	Z	2
16XN3L	Master Project 3	Z	2
16XN4L	Master Project 4	Z	2
17XN1	Master Project 1	Z	2
17XN2	Master Project 2	Z	2
17XN3L	Master Project 3	Z	2
17XN4L	Master Project 4	Z	2
18XN1	Master Project 1	Z	2
18XN2	Master Project 2	Z	2
18XN3L	Master Project 3	Z	2
18XN4L	Master Project 4	Z	2
20XN1	Master Project 1	Z	2
20XN2	Master Project 2	Z	2
20XN3L	Master Project 3	Z	2
20XN4L	Master Project 4	Z	2
21AFM	Air Traffic Management Current ATM system and its functional blocks. View of ATM data (technical architecture and configuration, transmission systems and networks). Data exchange with neighboring ATM systems. Monitoring systems and technical supervision. ATM simulation. ATM conceptions and strategies for next years. EUROCONTROL - CFMU. FAB. ATS's - AOC's data applications.	Z,ZK	5
21BILD	Safety Engineering in Aviation The course is focused on understanding the issue of safety, learning how to assess new systems in terms of safety and acquiring principles of safety management. Students will learn explaining accidents and incident causes and bridge their theoretical knowledge with practical problems of air transport.	Z,ZK	4
21CNSS	CNS Systems Course provides full technical informations about CNS (communication, navigation, surveillance) systems used in aviation. Systems are presented in perspective of future development.	Z,ZK	5
21LETS	Airport Methods of designing new airports and developing existing ones. Connection of the airport to the surrounding infrastructure. Airport economics. Detailed look at the development of movement areas. Certification of airside movement areas and procedures according to EASA CS-ADR-DSN. Development planning - design, preparation and regulatory basis. Environmental aspects of airport operations.	Z,ZK	4
21MULD	Managerial Challenges in Air Transport The course contains a list of basic managerial tasks in aviation. The basic managerial tasks are quality assurance and operational safety, marketing operations, marketing context implementation, airline network management, fleet management and revenue management. The core disciplines also include project management, cost management and project resource planning and management.	Z,ZK	5
21PAM1	Programming and Modelling 1 Harmonic signals, their generation. Real signals, sampling theorem, aliasing. Signal filtering. Fourier transform (FT), discrete Fourier transform (DFT), fast Fourier transform (FFT). Spectrum estimation, spectral power density. Image - basic processing methods, 2D Fourier transform, noise filtering, edge detection, linear and non-linear methods, brightness transforms, geometric transforms, image compression.	KZ	5
21PEKL	Principles and Models in Air Transport Economics The course contains the most important and typical models on which the economics of air transport is based. It covers the principles of regulation, airline infrastructure models, market structure, analyses airline costs, and looks in detail at the low-cost and charter airline model. It also focuses on airline alliances, air cargo, airline strategies and the economic principles of safety and security.	Z,ZK	5
21PLET	Airport Operations Planning, design and modelling of airport processes in airside, landside and terminal buildings. Impact of infrastructure and equipment on airport capacity. Available tools and practices for increasing capacity. Operational analytics, capacity and traffic load forecasting. Purpose and development of an airport masterplan.	Z,ZK	5

21SPOL	<b>Aircraft Technology Reliability</b>	Z,ZK	4
Subject deals with tuition of separate attributes of reliability (no failure, vitality, maintainability, and so on) and main criterions of safety of production and working of aerospace engineering. General legalities are in the framework of tuition demonstrated on the example of calculation of reliability of integral characteristics of materials and they are practical illustration of its security in The Czech Police Aviation Department.			
21XN1	Master Project 1	Z	2
21XN2	Master Project 2	Z	2
21XN3L	Master Project 3	Z	2
21XN4L	Master Project 4	Z	2
21Y2BS	<b>Unmanned aircraft systems 2</b>	KZ	2
Modern trends in unmanned aircraft development. Use of unmanned aircraft. Managerial activities related to the operation of unmanned aircraft. Flights beyond the applicable legislation.			
21Y2CR	<b>CRM</b>	KZ	2
Introduction to CRM. Analysis of air accidents. Human factor. Error. Historical development of CRM. Health and fitness. Stress and its effect on the human body. Fatigue Sleep & Vigilance. Information Processing. Situational Awareness. Workload Management. Decision Making. Communication. Leadership & Team Behaviour. Automation.			
21Y2FM	<b>Aviation Company Financial Management</b>	KZ	2
Theories of corporate finance - financial statements, budget, forecast. Financial policy of the company. Financial resources - long-term financial resources, depreciation, retained earnings, shares, bonds, loans, leasing, capital. Financial and economic analysis of the company - structure and content.			
21Y2MC	<b>CNS Systems Modelling</b>	KZ	2
The course is designed as a set of model tasks in the field of communication navigation and surveillance systems in aviation, addressed using mathematical approaches and software tools. A large part is devoted to air targets tracking, measurement-to-track association, track filtering and multisensor tracking.			
21Y2MK	<b>Marketing of Air Transport</b>	KZ	2
The content of the course "Marketing in air transport" is the management of activities and processes using available marketing tools and processes for analysis, strategy development and implementation of sales of goods and services in the aviation industry. In addition to the theoretical foundations of marketing, the lectures present systems of market, competition and product analysis, creation of marketing strategies and planning.			
21Y2MQ	<b>Quality Management</b>	KZ	2
History, basic definition. Pioneers in the field of quality. International quality organisations and quality promotion in the Czech Republic. Quality management system. Environmental management systems. Integrated management systems. Risk management in the context of the requirements of ISO standards. Sectoral quality management systems. Comprehensive quality management, excellence models and corporate social responsibility. Quality audits.			
21Y2PP	<b>Law and Operation in Air Transport</b>	KZ	2
Development of aviation law. International conventions on civil aviation. International organisations and including of the Czech Republic in these organisations. EU legislation and civil aviation. Execution of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Responsibilities of air carriers for passengers, luggage and cargo. The safe transport of dangerous goods.			
21Y2UL	<b>Aircraft Maintenance</b>	KZ	2
Approved Maintenance Organisations (AMOs), Continuing Airworthiness Management Organisations (CAMOs), Maintenance Training Organisations (MTOs), technical documentation and additional ICA (Instructions for Continued Airworthiness) instructions, aircraft release to service procedure, maintenance programmes and scheduling, modifications and general repair methods, aircraft centre of gravity and weights, human factors in aircraft maintenance.			
22XN1	Master Project 1	Z	2
22XN2	Master Project 2	Z	2
22XN3L	Master Project 3	Z	2
22XN4L	Master Project 4	Z	2
23XN1	Master Project 1	Z	2
23XN2	Master Project 2	Z	2
23XN3L	Master Project 3	Z	2
23XN4L	Master Project 4	Z	2

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