

Recommended pass through the study plan

Name of the pass: Master Full-Time PL from 2023/24

Faculty/Institute/Others:

Department:

Pass through the study plan: Master Full-Time PL from 2023/24

Branch of study guaranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Air Traffic Control and Management

Type of study: Follow-up master full-time

Note on the pass:

Coding of roles of courses and groups of courses:

P - compulsory courses of the program, PO - compulsory courses of the branch, Z - compulsory courses, S - compulsory elective courses, PV - compulsory elective courses, F - elective specialized courses, V - elective courses, T - physical training courses

Coding of ways of completion of courses (KZ/Z/ZK) and coding of semesters (Z/L):

KZ - graded assesment, Z - assesment, ZK - examination, L - summer semester, Z - winter semester

Number of semester: 1

| 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 |
|----------------|---|--------------------------------------|----------------|-----------|----------|------|
| 11APAS | Applied Statistics <i>Evženie Uglickich, Pavla Pecherková Pavla Pecherková</i> | Z,ZK | 4 | 2P+2C+12B | Z | z |
| 21BILD | Safety Engineering in Aviation <i>Natalia Guskova, Kate ina Grötschelová, Andrej Lališ Kate ina Grötschelová</i> | Z,ZK | 4 | 2P+2C+12B | Z | z |
| 21CNSS | CNS Systems <i>Stanislav Pleninger, Jakub Steiner Stanislav Pleninger</i> | Z,ZK | 5 | 3P+2C+16B | Z | z |
| 15J2A1 | Language - English 1 <i>Jitka He manová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Jan Feit, Eva Rezlerová</i> | Z | 2 | 0P+2C+10B | Z | z |
| 21LETS | Airport <i>Jakub Kraus, Petr Líka, Sébastien Lán, Petr Had, Ji í Volt, Slobodan Stoji Slobodan Stoji</i> | Z,ZK | 4 | 1P+2C+12B | Z | z |
| 11MMJ | Mathematical Models and their Applications <i>Evženie Uglickich, Pavla Pecherková, Ivan Nagy, Michal Matowicki, Natálie Blahitka Pavla Pecherková Evženie Uglickich (Gar.)</i> | Z,ZK | 4 | 2P+2C+12B | Z | z |
| 21PEKL | Principles and Models in Air Transport Economics <i>Peter Vittek Peter Vittek</i> | Z,ZK | 5 | 4P+2C+16B | Z | z |
| 15JCZ1 | Czech Language for Foreign Students 1 <i>Irena Veselková</i> | Z | 0 | 0P+2C | Z | ZP |
| X2-NX-PL-22/23 | Projekty Mgr. PL od 2022/23 <i>11XN1,12XN1,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | ZP |

Number of semester: 2

| 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 | Air Traffic Management <i>Jakub Kraus, Terézia Pilmannová, Martina Hlavatá Jakub Kraus Jakub Kraus (Gar.)</i> | Z,ZK | 5 | 3P+2C+16B | L | z |
| 15JBA2 | Language - English 2 <i>Jitka He manová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Jan Feit, Eva Rezlerová,</i> | Z | 2 | 0P+2C+10B | L | z |
| 21MULD | Managerial Challenges in Air Transport <i>Peter Vittek Peter Vittek Peter Vittek (Gar.)</i> | Z,ZK | 5 | 3P+2C+14B | L | z |
| 21PAM1 | Programming and Modelling 1 <i>Lenka Hanáková, Vladimír Socha Vladimír Socha Vladimír Socha (Gar.)</i> | KZ | 5 | 2P+4C+16B | L | z |
| 21PLET | Airport Operations <i>Sébastien Lán, Petr Had, Ji í Volt Slobodan Stoji Slobodan Stoji (Gar.)</i> | Z,ZK | 5 | 2P+2C+12B | L | ZP |

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|----------------|---|--------------------------------------|----------------|-----------|---|----|
| 21SPOL | Aircraft Technology Reliability <i>Natalia Guskova, Kateřina Grötschelová, Oldřich Štumberg, Kiyofoto Benjamin Ouattara Andrej Lališ (Gar.)</i> | Z,ZK | 4 | 2P+1C+12B | L | Z |
| 15JCZ2 | Czech Language for Foreign Students 2 <i>Irena Veselková</i> | Z | 0 | 0P+2C | L | Z |
| X2-NX-PL-22/23 | Projekty Mgr. PL od 2022/23 <i>11XN1,12XN1,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | ZP |
| Y2-NP-PL-23/24 | PVP-B Mgr. prezen ní PL od 2023/24 <i>00Y2XN,21Y2BS,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | PV |

Number of semester: 3

| 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 |
|----------------|---|--------------------------------------|----------------|-----------|----------|------|
| 15JBA3 | Language - English 3 <i>Jitka Heřmanová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Jan Feit, Eva Režlerová,</i> | Z | 2 | 0P+2C+10B | Z | Z |
| 21LIA1 | Aviation Engineering English 1 <i>Jitka Heřmanová, Dana Boušová Jitka Heřmanová</i> | Z | 3 | 0P+2C+8B | Z | Z |
| 11MMAA | Mathematical methods for data analysis <i>Evžen Uglický, Pavla Pečerková Pavla Pečerková Evžen Uglický (Gar.)</i> | Z,ZK | 4 | 2P+2C+12B | Z | Z |
| 21NSR | Navigation and Flight Control Systems <i>Milan Kameník, Jakub Trýb, Jakub Hospodka, Ladislav Capoušek Jakub Hospodka</i> | Z,ZK | 5 | 3P+2C+14B | Z | Z |
| 21PAM2 | Programming and Modelling 2 <i>Lenka Hanáková, Vladimír Socha Vladimír Socha</i> | KZ | 5 | 2P+4C+16B | Z | Z |
| 21PLDC | Air Carrier Operations <i>Miloš Strouhal Miloš Strouhal</i> | Z,ZK | 5 | 3P+2C+16B | Z | ZP |
| 21XNL1 | Thesis seminar 1 <i>Lenka Hanáková, Vladimír Socha Vladimír Socha</i> | Z | 2 | 0P+1C+4B | Z | Z |
| 15JCZ3 | Czech Language for Foreign Students 3 <i>Irena Veselková</i> | Z | | 0P+2C | Z | Z |
| X2-NX-PL-22/23 | Projekty Mgr. PL od 2022/23 <i>11XN1,12XN1,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | ZP |
| Y2-NP-PL-23/24 | PVP-B Mgr. prezen ní PL od 2023/24 <i>00Y2XN,21Y2BS,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | PV |

Number of semester: 4

| 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 |
|--------|---|------------|---------|-----------|----------|------|
| 21ELEG | European Aviation Legislation <i>Radoslav Zozulák Peter Vittek (Gar.)</i> | ZK | 3 | 2P+0C+8B | L | Z |
| 15JBA4 | Language - English 4 <i>Jitka Heřmanová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Jan Feit, Eva Režlerová,</i> | ZK | 2 | 0P+2C+10B | L | Z |
| 21KST | Space Technology <i>Jakub Trýb, Jakub Hospodka Jakub Hospodka Jakub Hospodka (Gar.)</i> | ZK | 3 | 2P+0C+10B | L | Z |
| 21LIA2 | Aviation Engineering English 2 <i>Jitka Heřmanová, Dana Boušová</i> | KZ | 3 | 0P+2C+8B | L | Z |
| 21LPZP | Air Traffic and the Environment <i>Peter Vittek Luděk Bejček (Gar.)</i> | ZK | 3 | 3P+0C+8B | L | Z |
| 21NTLE | New Trends in Aviation Technologies <i>Peter Vittek Peter Vittek Peter Vittek (Gar.)</i> | KZ | 3 | 3P+0C+8B | L | Z |

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|----------------|---|--------------------------------------|----------------|----------|---|----|
| 14PROM | Process Modeling <i>Marek Kalika Marek Kalika Marek Kalika (Gar.)</i> | KZ | 2 | 2P+0C+8B | L | Z |
| 21XNL2 | Thesis Seminar 2 <i>Lenka Hanáková, Vladimír Socha, Marta Urbanová Vladimír Socha Vladimír Socha (Gar.)</i> | Z | 2 | 0P+2C+6B | L | ZP |
| 21SYMS | System Thinking <i>Jakub Kraus Jakub Kraus Jakub Kraus (Gar.)</i> | ZK | 3 | 2P+0C+8B | L | Z |
| 15JCZ4 | Czech Language for Foreign Students 4 <i>Irena Veselková</i> | Z | | 0P+2C | L | Z |
| X2-NX-PL-22/23 | Projekty Mgr. PL od 2022/23 <i>11XN1,12XN1,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | ZP |
| Y2-NP-PL-23/24 | PVP-B Mgr. prezen ní PL od 2023/24 <i>00Y2XN,21Y2BS,..... (see the list of groups below)</i> | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | PV |

List of groups of courses of this pass with the complete content of members of individual groups

| Kód | Name of the group of courses and codes of members of this group (for specification see here or below the list of courses) | | | Completion | Credits | Scope | Semester | Role |
|----------------|---|--------|--------------------------------------|--------------------------------------|--------------------------------------|-------|----------|------|
| X2-NX-PL-22/23 | Projekty Mgr. PL od 2022/23 | | | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | ZP |
| 11XN1 | Master Project 1 | 12XN1 | Master Project 1 | 14XN1 | Master Project 1 | | | |
| 15XN1 | Master Project 1 | 16XN1 | Master Project 1 | 17XN1 | Master Project 1 | | | |
| 18XN1 | Master Project 1 | 20XN1 | Master Project 1 | 21XN1 | Master Project 1 | | | |
| 22XN1 | Master Project 1 | 23XN1 | Master Project 1 | 11XN2 | Master Project 2 | | | |
| 12XN2 | Master Project 2 | 14XN2 | Master Project 2 | 15XN2 | Master Project 2 | | | |
| 16XN2 | Master Project 2 | 17XN2 | Master Project 2 | 18XN2 | Master Project 2 | | | |
| 20XN2 | Master Project 2 | 21XN2 | Master Project 2 | 22XN2 | Master Project 2 | | | |
| 23XN2 | Master Project 2 | 11XN3L | Master Project 3 for study progr ... | 12XN3L | Master Project 3 for study progr ... | | | |
| 14XN3L | Master Project 3 for study progr ... | 15XN3L | Master Project 3 for study progr ... | 16XN3L | Master Project 3 for study progr ... | | | |
| 17XN3L | Master Project 3 for study progr ... | 18XN3L | Master Project 3 for study progr ... | 20XN3L | Master Project 3 for study progr ... | | | |
| 21XN3L | Master Project 3 for study progr ... | 22XN3L | Master Project 3 for study progr ... | 23XN3L | Master Project 3 | | | |
| 11XN4L | Master Project 4 for study progr ... | 12XN4L | Master Project 4 for study progr ... | 14XN4L | Master Project 4 for study progr ... | | | |
| 15XN4L | Master Project 4 for study progr ... | 16XN4L | Master Project 4 for study progr ... | 17XN4L | Master Project 4 for study progr ... | | | |
| 18XN4L | Master Project 4 for study progr ... | 20XN4L | Master Project 4 for study progr ... | 21XN4L | Master Project 4 for study progr ... | | | |
| 22XN4L | Master Project 4 for study progr ... | 23XN4L | Master Project 4 | | | | | |
| Y2-NP-PL-23/24 | PVP-B Mgr. prezen ní PL od 2023/24 | | | Min. cours. 4 Max. cours. 4 | Min/Max 8/8 | | | PV |
| 00Y2XN | Active participation in a scient ... | 21Y2BS | Unmanned aircraft systems 2 | 21Y2CR | CRM | | | |
| 21Y2FM | Aviation Company Financial Manag ... | 21Y2LS | Air Traffic Services | 21Y2MQ | Quality Management | | | |
| 21Y2MK | Marketing of Air Transport | 22Y2MN | Methods and Procedures of Aircra ... | 21Y2MC | CNS Systems Modelling | | | |
| 21Y2MG | Military Aerospace Technologies: ... | 21Y2PP | Law and Operation in Air Transpo ... | 21Y2UL | Aircraft Maintenance | | | |
| 14Y2UI | Artificial Intelligence | 15Y2ZA | Basic Principles of English Acad ... | | | | | |

List of courses of this pass:

| Code | Name of the course | Completion | Credits |
|---|--|------------|---------|
| 00Y2XN | Active participation in a scientific project, workshop, short-term trip abroad | KZ | 2 |
| 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 hte experiment. | | | |

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| 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. | | | |
| 11MMA | Mathematical methods for data analysis | Z,ZK | 4 |
| Stochastic modelling, estimation, prediction, filtration, control, methods of data analysis - k-means, DBSCAN, naive Bayes, decision trees, support vector machine. | | | |
| 11XN1 | Master Project 1 | Z | 2 |
| 11XN2 | Master Project 2 | Z | 2 |
| 11XN3L | Master Project 3 for study programme PL | Z | 2 |
| 11XN4L | Master Project 4 for study programme PL | Z | 2 |
| 12XN1 | Master Project 1 | Z | 2 |
| 12XN2 | Master Project 2 | Z | 2 |
| 12XN3L | Master Project 3 for study programme PL | Z | 2 |
| 12XN4L | Master Project 4 for study programme PL | Z | 2 |
| 14PROM | Process Modeling | KZ | 2 |
| Definition of the process, role, KPI's, areas of interest. Process Map, definition, purpose, clear examples and demonstrations, recommendations and standards, SIPOC. Process model, definition, purpose, procedures and tools, static and dynamic models. BPMN language, syntax and semantics, process flows. Implementation of practical examples, As-Is, To-Be, optimization and evaluation. | | | |
| 14XN1 | Master Project 1 | Z | 2 |
| 14XN2 | Master Project 2 | Z | 2 |
| 14XN3L | Master Project 3 for study programme PL | Z | 2 |
| 14XN4L | Master Project 4 for study programme PL | Z | 2 |
| 14Y2UI | Artificial Intelligence | KZ | 2 |
| History of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, machine learning. | | | |
| 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. | | | |
| 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. | | | |
| 15JBA3 | Language - English 3 | Z | 2 |
| Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.Optional courses for certificates FCE, CAE. | | | |
| 15JBA4 | Language - English 4 | ZK | 2 |
| Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.Optional courses for certificates FCE, CAE. | | | |
| 15JCZ1 | Czech Language for Foreign Students 1 | Z | 0 |
| Basic structures of Czech language, common communication situations, study, work, leisure time activities, introduction of myself, phonetics of Czech language, writing skills. | | | |
| 15JCZ2 | Czech Language for Foreign Students 2 | Z | 0 |
| Basic structures of Czech language, common communication situations, study, work, leisure time activities, introduction of myself, phonetics of Czech language, writing skills. | | | |
| 15JCZ3 | Czech Language for Foreign Students 3 | Z | |
| Language structures with regard to the group level. Listening and oral fluency drill. Basic terminology. | | | |
| 15JCZ4 | Czech Language for Foreign Students 4 | Z | |
| Language structures with regard to the group level. Listening and oral fluency drill. Basic terminology. | | | |
| 15XN1 | Master Project 1 | Z | 2 |
| 15XN2 | Master Project 2 | Z | 2 |
| 15XN3L | Master Project 3 for study programme PL | Z | 2 |
| 15XN4L | Master Project 4 for study programme PL | Z | 2 |
| 15Y2ZA | Basic Principles of English Academic Writing and Abstract in English | KZ | 2 |
| Theory, creating a phrasal bank according to students' specialisations, rhetorical analysis or texts/abstracts, drafting an abstract, providing effective feedback. | | | |
| 16XN1 | Master Project 1 | Z | 2 |
| 16XN2 | Master Project 2 | Z | 2 |
| 16XN3L | Master Project 3 for study programme PL | Z | 2 |
| 16XN4L | Master Project 4 for study programme PL | Z | 2 |
| 17XN1 | Master Project 1 | Z | 2 |
| 17XN2 | Master Project 2 | Z | 2 |
| 17XN3L | Master Project 3 for study programme PL | Z | 2 |
| 17XN4L | Master Project 4 for study programme PL | Z | 2 |
| 18XN1 | Master Project 1 | Z | 2 |
| 18XN2 | Master Project 2 | Z | 2 |
| 18XN3L | Master Project 3 for study programme PL | Z | 2 |
| 18XN4L | Master Project 4 for study programme PL | Z | 2 |
| 20XN1 | Master Project 1 | Z | 2 |
| 20XN2 | Master Project 2 | Z | 2 |
| 20XN3L | Master Project 3 for study programme PL | Z | 2 |
| 20XN4L | Master Project 4 for study programme PL | Z | 2 |
| 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. | | | |

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| 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. | | | |
| 21ELEG | European Aviation Legislation | ZK | 3 |
| The content of the subject "European Aviation Legislation" is the legal regulation of air operation, the system and structure of the national and European legal system, the legal effects of EU legal acts in the Czech national environment and their impact on national regulation with a focus on requirements and criteria of individual regulations on aviation transport and transportation. | | | |
| 21KST | Space Technology | ZK | 3 |
| Universe and its basic characteristics. Fundamentals of astrophysics. Kepler's laws. Solar system. Earth's and its atmosphere and outer space. Space transport vehicles. Rockets and rocket engines and their structure and operational characteristics. Space crafts and satellites, space flight. Orbital mechanics. Application of space technologies for global navigation and communication. Space exploration and piloted space flights and missions. | | | |
| 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. | | | |
| 21LIA1 | Aviation Engineering English 1 | Z | 3 |
| Lectures include various types of the language exercises and are focused on the following topics - EUR-Lex and European Legislation, ICAO Annexes and SARPs, AMCs and GMs, Civil Aviation Authorities, Accident investigation, Aircraft Airworthiness, Aircraft documentations and manuals, Medical certification, Emergency response plan. | | | |
| 21LIA2 | Aviation Engineering English 2 | KZ | 3 |
| Lectures include various types of the language exercises and are focused on the following topics - Aviation associations, ISAGO and IGOM, EUROCONTROL, Airport Council International, International Air Transport Association, Airport Engineering, Airline business, Future development in civil aviation. | | | |
| 21LPZP | Air Traffic and the Environment | ZK | 3 |
| The course is about ecology, sustainable development, ecological stability, environmental protection and environmental legislation. It also focuses on air traffic with respect to the environment, current issues, threats and solutions. | | | |
| 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. | | | |
| 21NSR | Navigation and Flight Control Systems | Z,ZK | 5 |
| Navigation. Radionavigation. Satellite navigation. Flight management system. Autopilot. FMC. Practical execution of flight. | | | |
| 21NTLE | New Trends in Aviation Technologies | KZ | 3 |
| The course includes an introduction to all the technologies that are currently important to aviation, such as new aircraft design concepts, new types of propulsion, and new types of aviation fuels. The course also covers new types of urban mobility, virtual reality systems, biomechanical analysis. ATM technologies are another component, and the course also looks at smart airports, the use of blockchain, and airport simulations. | | | |
| 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. | | | |
| 21PAM2 | Programming and Modelling 2 | KZ | 5 |
| Descriptive statistics, classical statistical analysis. Statistical hypothesis testing. Analysis of variance (ANOVA), one-factor, two-factor ANOVA. Non-parametric methods. Linear regression. Correlation, correlation coefficient. Non-linear regression models, procedure for regression analysis of a non-linear model. Basics of machine learning. Classification by nearest neighbour method. SVM classifiers. Decision trees. | | | |
| 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. | | | |
| 21PLDC | Air Carrier Operations | Z,ZK | 5 |
| Mission and importance of air transport. Legislation. Airlines - structure, strategy. Performances in air transport. Cost structure. Fuel management. Cargo. Aircraft maintenance (organization) and economics of aircraft operation. Ground handling and other services. Safety / Security / Quality and Compliance monitoring. Revenue management. Air transport and environment. | | | |
| 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. | | | |
| 21SYMS | System Thinking | ZK | 3 |
| System, its structure, algorithmization, complexity, emergence, mind setting, critical thinking, teamwork, feedback and communication, goal setting, uncertainties and arguments, decision making under uncertainty. | | | |
| 21XN1 | Master Project 1 | Z | 2 |
| 21XN2 | Master Project 2 | Z | 2 |
| 21XN3L | Master Project 3 for study programme PL | Z | 2 |
| 21XN4L | Master Project 4 for study programme PL | Z | 2 |
| 21XNL1 | Thesis seminar 1 | Z | 2 |
| Introduction, scientific publications, publications devoted to scientific writing, grey literature, difference between bachelor and master thesis. Time management. Formal and graphic design, mathematical typesetting, typography, paragraphing, transitions between paragraphs. LaTeX. Research, databases, critical work with text, digital notes, working with notes, outline. Rhetorical exercises / presentation skills. | | | |

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|--------|---|----|---|
| 21XNL2 | Thesis Seminar 2 Selected chapters from the structure. PRISMA and meta-analysis methods. Citation, citation managers. English. Statistical inference. Presentation of results. Graphic design of the work, own and adopted graphics. Ethical principles in scientific work, publishing process, journals (impacted, open access, predatory journals). Rhetorical exercises / presentation skills. Specifics of state exams. | Z | 2 |
| 21Y2BS | Unmanned aircraft systems 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. | KZ | 2 |
| 21Y2CR | CRM 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. | KZ | 2 |
| 21Y2FM | Aviation Company Financial Management 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. | KZ | 2 |
| 21Y2LS | Air Traffic Services Airspace structure in Czech Republic and other countries. Introduction and description of ATS units in Czech Republic. Practical examples of TWR, APP a ACC control. History of ATS at USA and Czechoslovakia. ATS - Model of financing. Training Systém of Air Traffic Controllers. Future development of ATS. | KZ | 2 |
| 21Y2MC | CNS Systems Modelling 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. | KZ | 2 |
| 21Y2MG | Military Aerospace Technologies: Applications and Global Dynamics | KZ | 2 |
| 21Y2MK | Marketing of Air Transport 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. | KZ | 2 |
| 21Y2MQ | Quality Management 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. | KZ | 2 |
| 21Y2PP | Law and Operation in Air Transport 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. | KZ | 2 |
| 21Y2UL | Aircraft Maintenance 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. | KZ | 2 |
| 22XN1 | Master Project 1 | Z | 2 |
| 22XN2 | Master Project 2 | Z | 2 |
| 22XN3L | Master Project 3 for study programme PL | Z | 2 |
| 22XN4L | Master Project 4 for study programme PL | Z | 2 |
| 22Y2MN | Methods and Procedures of Aircraft Accident Investigation Expanding knowledge of practical procedures in aircraft accident investigation. Equipment and organisation of the investigation team. Examples of aircraft accident investigations in the Czech Republic and abroad and analysis of published final reports. Examples of the preparation of the final report of an air accident investigation. | KZ | 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 |

For updated information see <http://bilakniha.cvut.cz/en/FF.html>

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