

Study plan

Name of study plan: 2.bl.bak.komb.ME 09/10za átek

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch: prof. Ing. Tomáš Zelinka, CSc.

Program of study: Welcome page

Type of study: unknown combined

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: 88

The role of the block: Z

Code of the group: 5.S.BK 05/06

Name of the group: 5.sem.bak.komb.od 05/06

Requirement credits in the group: In this group you have to gain 24 credits

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

Credits in the group: 24

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 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 17EMM | Economic-mathematical Models | ZK | 3 | 2+0 | | Z |
| 11MST | Mathematical Statistics | Z,ZK | 2 | 1+1 | | Z |
| 13PE | Operational Economy | Z,ZK | 3 | 2+1 | | Z |
| 17RP | Project Management | ZK | 2 | 2+0 | | Z |
| 14SSS | Networks and Network Operating Systems | KZ | 2 | 1+1 | | Z |
| 20SANL | Systems Analysis | Z,ZK | 4 | 2+1 | | Z |
| 14TLK | Telecommunications | Z,ZK | 4 | 2+1 | | Z |
| 17ZTD | Introduction to Theory of Transport | Z,ZK | 4 | 2+1 | | Z |

Characteristics of the courses of this group of Study Plan: Code=5.S.BK 05/06 Name=5.sem.bak.komb.od 05/06

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|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|
| 17EMM | Economic-mathematical Models | ZK | 3 |
| 11MST | Mathematical Statistics Point estimation, properties of point estimators (consistency, unbiasedness, efficiency), methods of point estimation (method of moments, maximum likelihood method). Bayes estimators. Testing of statistical hypothesis, critical values, choice of hypothesis and level of significance, observed level of significance (P-value). Goodness of fit test, independence test. Regression and correlation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression, analysis of variance, multiple regression, the use of matrices in regression. | Z,ZK | 2 |
| 13PE | Operational Economy | Z,ZK | 3 |
| 17RP | Project Management The course makes students acquainted first with project, its participants and their target behaviour, then with the project cycle and the principles of project management. Basic methods of project assessment, principles of optimal scenario choice, risks and uncertainties of choice. The possibilities of project funding, the methodology of World Bank and the management of supranational projects. | ZK | 2 |
| 14SSS | Networks and Network Operating Systems Acquaintance with operating and possibilities of computer networks and their services utilize is the subject target. Network topology, IP addressing, WAN networks, connection information (ping, trace route). Detailed familiarity with selected WIN NT, Novell, and Unix network environment in the second semester part. Introduction to server and workstations installation, users and groups creation, folder structure creation, disc mapping, users protection, folders security, network printing, network security. | KZ | 2 |
| 20SANL | Systems Analysis Models and analyses of systemic features, means of detection of systemic characteristics, ways, decomposition, boundary and structure of systems, system behavior, decision-making processes, diagram characteristics, fuzzy sets/equations, formulation of states underindistinctly defined conditions, stability of systems. | Z,ZK | 4 |

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| 14TLK | Telecommunications | Z,ZK | 4 |
| Telecommunication bases as cross-section branch create the subject's contents. During introduction, basic legislative conditions forming telecommunication market consistent with the EU rules (selected parts of legislative and sub legislative standards, regulation and regulation frame) and existing and perspective telecommunication services characteristics are lectured. In the second part, transmission and connecting system and terminal devices basic principles (analogue and digital systems, used modulations in view of PCM modulation and modulation predicative methods) and solution of modern connecting systems are explained. In the third part, network management principles from view of operational organization are briefly described. | | | |
| 17ZTD | Introduction to Theory of Transport | Z,ZK | 4 |

Code of the group: 6.S.BK 05/06

Name of the group: 6.sem.bak.komb.od05/06

Requirement credits in the group: In this group you have to gain 24 credits

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

Credits in the group: 24

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 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 14DAPS | Database and Presentation Systems | KZ | 2 | 1+1 | | Z |
| 13EFI | Enterprise Economics | Z,ZK | 3 | 2+1 | | Z |
| 13EDT | Transportation and Telecommunication Economics | Z,ZK | 4 | 2+2 | | Z |
| 14IFS | Information Systems | ZK | 4 | 2+0 | | Z |
| 17MEAN | Methods of Economic Analyses | Z,ZK | 4 | 2+1 | | Z |
| 11MSAP | Modeling of Systems and Processes | Z,ZK | 4 | 2+1 | | Z |
| 13PAZ | Transportation and Forwarding Business | Z,ZK | 3 | 2+1 | | Z |

Characteristics of the courses of this group of Study Plan: Code=6.S.BK 05/06 Name=6.sem.bak.komb.od05/06

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| 14DAPS | Database and Presentation Systems | KZ | 2 |
| Database systems. E-R data model, relational data model, relational databases. Creation of a simple database application in the MS ACCESS environment. Creation of presentations by help of the PowerPoint environment - static snaps, simple animations, linking with other applications. | | | |
| 13EFI | Enterprise Economics | Z,ZK | 3 |
| 13EDT | Transportation and Telecommunication Economics | Z,ZK | 4 |
| The subject is dedicated to analytical and synthetically views of economic activities, both the production and services business systems. The main interest is focused on the parts which will be provided in decision-making processes by future engineers, technologists and managers. The property and financial structures create the basic issues for business activities. Furthermore, the attention is concentrated on time life cycle of product and service, quantification economic time life, depreciation and methods of its calculation. The problem of inventories as a key question of business activities is provided and basic mathematical inventory models are given. The core of entrepreneurial process - cost analysis, cost estimating, revenue, profit and benefit are put to the main interest of engineer and manager together with structure of business plan, entrepreneurial projects and their analysis and evaluation. Finally, the characteristics of time life business cycle from the start of activities to the end these ones are discussed. | | | |
| 14IFS | Information Systems | ZK | 4 |
| The subject is specialized in theoretic and practical design resources and principles and information systems (IS) creation and realization. Students get knowledge of various information systems terminology, classification and characterization (process, transaction, knowledge, metainformation, etc.), IS projecting procedures, data/information computer proceeding technology by help of data structures, database systems and models. They obtain view of IS and information technologies technical infrastructure trends, understand IS architecture principles and purposes, human role in IS and possibilities of IS evaluation. In brief, they acquaint themselves with creation principles, architecture and standards of the state information system. | | | |
| 17MEAN | Methods of Economic Analyses | Z,ZK | 4 |
| The course comprehends the problems of numerical representation of economical phenomena by systems of indicators and their analysis and interpretation. The analysis of dependence, time series and indices is emphasised. | | | |
| 11MSAP | Modeling of Systems and Processes | Z,ZK | 4 |
| The course introduces mathematical methods and algorithms providing an essential tool for system analysis. Methods and algorithms represent context in which the systems are modelled and evaluated in continuous and discrete time domain. The Laplace transform, z-transform, and the recursive algorithms are introduced in order to understand solution of differential and difference equations, which are developed for system description. The course focuses on practical use of technical computing environment MATLAB. | | | |
| 13PAZ | Transportation and Forwarding Business | Z,ZK | 3 |
| The aim of the subject is to make the students acquainted with the basis of transportation processes technology, with the conditions for particular kinds of transport and with engagement relationships on transport (inland and international) and on forwarding business. | | | |

Code of the group: 7S.BK-ME06/07

Name of the group: 7.s.bak.komb.ME-od06/07

Requirement credits in the group: In this group you have to gain 18 credits

Requirement courses in the group: In this group you have to complete at least 5 courses

Credits in the group: 18

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 |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 17DOU | Public Transport Service | Z,ZK | 4 | 2+1 | | Z |
| 17FF | Finances and Funds | Z,ZK | 4 | 2+1 | | Z |
| 14IP1 | Tutorial in Informatics 1 | Z | 2 | 0+2 | | Z |
| 13MDT | Marketing in Transport.and Telecommunications | Z,ZK | 4 | 2+1 | | Z |
| 17TEC | Technology of Transport | Z,ZK | 4 | 2+1 | | Z |

Characteristics of the courses of this group of Study Plan: Code=7S.BK-ME06/07 Name=7.s.bak.komb.ME-od06/07

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| 17DOU | Public Transport Service | | | Z,ZK | 4 |
| 17FF | Finances and Funds | | | Z,ZK | 4 |
| The course is oriented to the problems of finance, financial markets and institutions. It analyses the credit and the saving financial policy as well as various types of loans and their influence on lenders and borrowers. Direct and portfolio investment, their strong and weak points and risks. Business companies from the view of financial flows and financing. Financial aspects of joint stock companies, the position of shareholders, various types of shares, dividends. Financial plans, the use of financial instrument combinations as long and short term loans, bond emissions and capital raise. The problems of bills of exchange, bankruptcy and composition and of international investment. | | | | | |
| 14IP1 | Tutorial in Informatics 1 | | | Z | 2 |
| The course involves introductory theoretical part (basic terminology from information technologies, information theory, computer terminology, data damage protection, theft and destruction, protection of computer network, security and legal problems relevant to information technologies, copyright and data protection law, computer criminality) and practical part according to the specialization. | | | | | |
| 13MDT | Marketing in Transport.and Telecommunications | | | Z,ZK | 4 |
| Analysing the marketing process. The core concepts of marketing. Understanding the role of marketing in organisations. Marketing management. Marketing of information systems and marketing research. Analysing the marketing environment (macro and microenvironment). Analysing consumer markets and buyer behaviour. Analysing business markets and business buying behaviour. Identifying market segments and selecting target markets. Differentiating and positioning the market offer marketing mix. Developing, testing and launching new products. Product life cycles and strategies. Product lines, brands and packaging. Designing pricing strategies and programs. Selecting marketing channels. Physical distributions systems. Promotion and communication mix strategies. Sales promotion, advertising, public relations, programs, personal sale. Corporate business strategic planning. Market oriented strategic planning. Marketing in services and non-profit organisations. | | | | | |
| 17TEC | Technology of Transport | | | Z,ZK | 4 |
| Course deals with foundations of technology and management of transportation proceses. It is concerning mainly in way and organization transfer of persons and goods on the defined transport network by moving of transport means through the transport ways. It connects on knowledges of transport and handling tools from the first period of study. Study is concerning on these questions from technology of single sorts of transportation: most important terms of transfer process, particularities,and using indicators, making and using of basing technologic plans and tools, combination and integration of sorts of transportation into transport systems, using knowledges of system analyses and kybernetics in management of transportation process | | | | | |

Code of the group: 7BK-SEMI.06/07

Name of the group: 7s.bak.kom.semi.od06/07

Requirement credits in the group: In this group you have to gain 2 credits

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

Credits in the group: 2

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 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 12X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 11X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 13X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 14X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 15X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 22X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 17X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 18X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 20X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 21X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |
| 16X17K | Seminar for Bachelor Thesis 1 | Z | 2 | 8 | | Z |

Characteristics of the courses of this group of Study Plan: Code=7BK-SEMI.06/07 Name=7s.bak.kom.semi.od06/07

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|--------|-------------------------------|--|--|---|---|
| 12X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |
| 11X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |
| 13X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |
| 14X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |
| 15X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |
| 22X17K | Seminar for Bachelor Thesis 1 | | | Z | 2 |

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|--------|-------------------------------|---|---|
| 17X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 18X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 20X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 21X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 16X17K | Seminar for Bachelor Thesis 1 | Z | 2 |

Code of the group: 8S.BK-ME06/07

Name of the group: 8.s.bak.komb.ME od06/07

Requirement credits in the group: In this group you have to gain 14 credits

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

Credits in the group: 14

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 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 14IP2 | Tutorial in Informatics 2 | KZ | 2 | 0+2 | | z |
| 17LGS | Logistics | Z,ZK | 4 | 2+1 | | z |
| 13MSPK | Small and Medium-sized Enterprise | ZK | 4 | 2+0 | | z |
| 13U | Accounting | Z,ZK | 4 | 2+1 | | z |

Characteristics of the courses of this group of Study Plan: Code=8S.BK-ME06/07 Name=8.s.bak.komb.ME od06/07

| 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 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 14IP2 | Tutorial in Informatics 2 Knowledge systems. Expert systems and programmes based on knowledge, their architecture, knowledge representation, basic derivation and implementation methods. Interface for knowledge systems creation and their design principles. Certainty and uncertainty in knowledge systems and different approaches to them. Common model of balances combination, fuzzy logics. Knowledge base design methods. Database and knowledge systems and their rules. | KZ | 2 | | | z |
| 17LGS | Logistics As an integrated managerial system of circular and transfer flows, logistics form new ways of partnership between production and business organization on one hand, and material and information carriers on the other hand. This subject is focused on: - Concept of logistics, its development and principles - Logistics systems units, logistics chain - Logistics coupling, logistics methods and technologies, decision making in the logistics managerial systems - Marketing as a basic tool in the logistics managerial systems, marketing survey, marketing offer, marketing evaluation techniques and completion marketing planning - Status of transportation in the logistics system - Information flows in the logistics chain | Z,ZK | 4 | | | z |
| 13MSPK | Small and Medium-sized Enterprise The aim of this course is to point out the small business as an important element of global economy. Through this subject the entrepreneurship and dynamic entrepreneurship in the world and in the Czech Republic under technology and economic conditions is discussed. The role of venture capital for development of small enterprises using the material of EVCA, European Union organisation is shown. Finally, analysis and synthesis of steps needed for successfully goals of entrepreneurship taking a business plan as a productive method are described. | ZK | 4 | | | z |
| 13U | Accounting The objective of the subject is to master the basics of accounting in the individual accounting domains on a basis of knowledge of the accounting rules, methods, tools (including technical procedures) and accounting procedures. Furthermore, students will become familiar with importance to accounting in practice, of the accounting units, with administration of the accounting books and with accounting systems including organisation of the accounting and administration and processing of accounting on computer. The subject will also include the basic bindings to tax and managerial accounting (in-house). | Z,ZK | 4 | | | z |

Code of the group: 8BK-SEM.06/07

Name of the group: 8s.bak.kom.semi.od06/07

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 at least 1 course

Credits in the group: 6

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 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 17X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 13X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 14X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 18X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 16X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 20X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 21X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 12X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |
| 11X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | z |

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| 15X18K | Seminar for Bachelor Thesis 2 | Z | 6 | 12 | | Z |
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Characteristics of the courses of this group of Study Plan: Code=8BK-SEM.06/07 Name=8s.bak.kom.semi.od06/07

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|--------|-------------------------------|---|---|
| 17X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 13X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 14X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 18X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 16X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 20X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 21X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 12X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 11X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 15X18K | Seminar for Bachelor Thesis 2 | Z | 6 |

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 24

The role of the block: S

Code of the group: VP-B-KOMB.OD 05/06

Name of the group: VP-bak.komb.ME od 05/06

Requirement credits in the group: In this group you have to gain 24 credits

Requirement courses in the group: In this group you have to complete at least 6 courses

Credits in the group: 24

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 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 11YAS | | Z,ZK | 3 | 2+1 | | S |
| 17W1AF | Alternative Forms of Transportation Project Financing | KZ | 4 | 8 | Z | S |
| 17W1BB | Banks and Banking | KZ | 4 | 8 | Z | S |
| 15W1BO | Work Safety and Health Protection | KZ | 4 | 8 | L | S |
| 15W1DU | Art History and Society | KZ | 4 | 8 | Z | S |
| 15W1DZ | History of Railway | KZ | 4 | 8 | L | S |
| 17W1DN | Carriage of Dangerous Goods | KZ | 4 | 8 | | S |
| 17W1DG | Transport Geography | KZ | 4 | 8 | | S |
| 17W1DP | Transportation Politics and Strategy | KZ | 4 | 8 | | S |
| 17W1DZ | Transported Commodities Cognization | KZ | 4 | 8 | L | S |
| 13W1EA | Economic - Energetic Analysis of Land Transport | KZ | 4 | 8 | Z | S |
| 13W1EP | Technology, Economics and Management of Postal Services | KZ | 4 | 8 | | S |
| 15W1EH | European Integration within Historical Context | KZ | 4 | 8 | Z | S |
| 15W1FD | French Area Studies and Transportation | KZ | 4 | 8 | | S |
| 17W1HO | Heuristic Methods in Optimization Problems | KZ | 4 | 8 | | S |
| 15W1HL | History of Civil Aviation | KZ | 4 | 8 | | S |
| 15W1HD | History of City Public Transport | KZ | 4 | 8 | Z | S |
| 13W1HG | Economic Geography | KZ | 4 | 8 | | S |
| 15W1HE | Work Hygiene and Ergonomics in Traffic | KZ | 4 | 8 | Z | S |
| 16WKV | Car Bodies of Motor Vehicles | KZ | 4 | 6 | | S |
| 13W1KM | Crisis Management in Transportation | KZ | 4 | 8 | | S |
| 15W1LU | Logic of Engineer Judgement | KZ | 4 | 8 | | S |
| 17W1LL | Logistics of Passenger and Freight Air Transport | KZ | 4 | 8B | L | S |
| 13W1MR | Managerial Decision-making | KZ | 4 | 8 | | S |
| 11W1MM | Mathematical Models in Economy | KZ | 4 | 8 | Z | S |
| 17W1ND | Maritime Transportation | KZ | 4 | 8 | Z | S |
| 15W1OC | Crucial Moments of Czechs | KZ | 4 | 8 | | S |
| 13W1PM | Personal Management | KZ | 4 | 8 | L | S |

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| 12W1PC | Pedestrian and Cycling Transport | KZ | 4 | 8 | | S |
| 13W1PD | The Participation of Transport in Tourist Trade Management | KZ | 4 | 8 | L | S |
| 16W1PV | Operation, Construction and Maintenance of Vehicles | KZ | 4 | 8 | L | S |
| 13W1SM | MESE Simulation | KZ | 4 | 8 | Z | S |
| 13W1TC | Techniques of Travel Services | KZ | 4 | 8 | | S |
| 16W1TJ | Technological Quality Aspects | KZ | 4 | 8 | Z | S |
| 16W1TR | Theory of Railroad Vehicle Driving | KZ | 4 | 8 | Z | S |
| 16W1TZ | Transporting Devices | KZ | 4 | 8 | L | S |
| 12W1VC | Waterways and shipping | KZ | 4 | 8 | Z | S |
| 12W1VD | Water Transport and Transportation | KZ | 4 | 8 | L | S |
| 17W1ZC | Tourist Business Transportation | KZ | 4 | 8 | | S |
| 16W1ZL | Vehicle Testing, Legislation and Construction | KZ | 4 | 8 | Z | S |

Characteristics of the courses of this group of Study Plan: Code=VP-B-KOMB.OD 05/06 Name=VP-bak.komb.ME od 05/06

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| 11YAS | | | | Z,ZK | | 3 |
| 17W1AF | Alternative Forms of Transportation Project Financing | | | KZ | | 4 |
| It will be specified such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from its budget, but the final debtor is not a direct participant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternative source of transportation project financing. | | | | | | |
| 17W1BB | Banks and Banking | | | KZ | | 4 |
| Banks and banking system. Balance sheet, income statement, bank's capital and its functions. Banking risks. Banking products. Interest types, pay-off and loan securing, financial loan products. Banking deposit products. Banking payment-clearing products. Financial intermediation, open-end and closed-end funds, collective investment schemes. Central bank and its role. Bank regulation and supervision. International banking. | | | | | | |
| 15W1BO | Work Safety and Health Protection | | | KZ | | 4 |
| Fundamental legislature, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health protection programmes, health insurance of home and foreign business trips, statistics, working practice. | | | | | | |
| 15W1DU | Art History and Society | | | KZ | | 4 |
| Aesthetics and its basic concepts. Art history: definitions, terminology, division into periods. Architecture, fine arts, design in Europe and America in the course of centuries. Situation in Central Europe, Czechoslovakia, the Czech Republic. Art Nouveau, Cubism, Postmodernism in industrial buildings and transportation facilities. Stations, bridges, embankments, sluices etc. Aesthetics and construction work today. Design of transport vehicles. | | | | | | |
| 15W1DZ | History of Railway | | | KZ | | 4 |
| Horse-drawn railways, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Republic", electric traction, World War II railways, railway development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, development of long-distance train connections, railway lines construction, railway accidents, railway junctions. Study trips and projections. | | | | | | |
| 17W1DN | Carriage of Dangerous Goods | | | KZ | | 4 |
| 17W1DG | Transport Geography | | | KZ | | 4 |
| Facultative course Transport geography briefly describes transport system and reciprocal relations between economic development and transport system. The result of its long-term relations is specific configuration of transport infrastructure and also perspective of its future development. Course is oriented step by step on railway, road, water, air, combine and pipeline transport. There are lectures there about: transport ways, transport junctions and terminals, important international crossings, most important connections, offered services and international cooperation in this areas | | | | | | |
| 17W1DP | Transportation Politics and Strategy | | | KZ | | 4 |
| This subject focuses on a practical implementation of transportation theory into the transportation systems for the sake of state interest, and its macroeconomics development. Concurrently, it harmonizes EU and Czech directives. Closely this subject focuses on: Czech Transportation policy development; Status of transportation in the macroeconomics system; Creation and regulation of transportation market by direct and indirect instruments in favor of the society/public interest; Comparison and harmonization of Czech and EU directives on the transportation market; Defining of constant tenable mobility according to the international agreements, directives, approaches; National transportation system planning according to the constant tenable mobility, and with respect to the international systems and obligations, the comparison of Czech and EU strategies; Legislative harmonization (Czech, EU) on the transportation field, progress in the time; Terms for Czech Republic's entrance on EU integrated transportation market | | | | | | |
| 17W1DZ | Transported Commodities Cognization | | | KZ | | 4 |
| Useful features. Quality. Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention during the carriage. Optimization of the choice and effective transport means utility. | | | | | | |
| 13W1EA | Economic - Energetic Analysis of Land Transport | | | KZ | | 4 |
| Vehicle traction systems, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technical, economical and social aspects. | | | | | | |
| 13W1EP | Technology, Economics and Management of Postal Services | | | KZ | | 4 |
| The contents of the subject is to introduce state policy to listeners in the area of the postal and delivery services. The position of post in the frame of infrastructure and the socio-economical system of the state, with the harmonisation process and problems with the regulation, in the relation to the market liberalisation, competition of post services with the electronic and information technologies, reserved and universal services. | | | | | | |
| 15W1EH | European Integration within Historical Context | | | KZ | | 4 |
| Versailles system, formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nazism, communism. Little Entente, its principles and goals. Europe after Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and its consequences for Europe. New quality of French-German relationship - a driving power of starting European integration. | | | | | | |
| 15W1FD | French Area Studies and Transportation | | | KZ | | 4 |
| French geography and its transportation network. Paris and its historical and technical sights, traffic organisation. Road transport, motorways, rail transport and TGV, air traffic. Political system, current French society and culture. Current social issues. Educational system, studies in France. Great figures of French history. French gastronomy. The aim is to broaden general knowledge of France. Special focus is on the field of transportation in the international context. | | | | | | |

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| 17W1HO | Heuristic Methods in Optimization Problems | KZ | 4 |
| Introduction and overview of heuristic methods, exact approaches for solving the Traveling Salesman Problem (TSP), Lagrangean approach, assignment problem, algorithm of Little, vehicle routing problem (VRP) - derivation from the TSP, classical heuristics solving the VRP, local search methods, Tabu Search method, genetic algorithms in location problems and its enhancements. | | | |
| 15W1HL | History of Civil Aviation | KZ | 4 |
| Historical overview of civil aviation as a part of transportation system. Developmental trends in plane construction, technical safety and control systems in civil and sports aviation. Chronological development of aviation from planes lighter than air to current planes heavier than air in the context of a complex transportation system of passengers, goods, freight and sport activities in Czech, European and global conditions. The lectures are accompanied by various picture documents and maps, videos, museum and specialised workplaces excursions. | | | |
| 15W1HD | History of City Public Transport | KZ | 4 |
| History of city public transport in the world; development of tram, bus and trolley-bus systems. History of transport networks in the world; current trends and development of tariff and clearance systems. History of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Slovakia. | | | |
| 13W1HG | Economic Geography | KZ | 4 |
| The basic concepts of economic geography - general approach. Geography of the world economy. Geography of inhabitants - as a factor of dislocation and development. Habitation structure. The world industrial production (energy, machinery, chemical and food industry). Agriculture, plant industry, animal industry, the world fishing and forest economy. Power supply. Transportation - all kinds of transportation, railway, road, naval, marine, tabular, air. Business travel - the main factors of dislocation and development, the most important world famous tourist areas. Transportation infrastructure all over the world (Europe, Asia, Africa, Australia and Oceanic). | | | |
| 15W1HE | Work Hygiene and Ergonomics in Traffic | KZ | 4 |
| Basic knowledge of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these factors on health of workers. Creation and protection 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 from the field of transportation; relevant legislature. | | | |
| 16WKV | Car Bodies of Motor Vehicles | KZ | 4 |
| 13W1KM | Crisis Management in Transportation | KZ | 4 |
| 15W1LU | Logic of Engineer Judgement | KZ | 4 |
| Components of an engineer judgements: empirical, general and logical ones. Logical structure of the judgement. The intuitive and exact judgement and the natural and exact language. The propositional logic of the judgement, methods of solving of the technical tasks, combinational nets. The predicate logic of the judgement, methods of solving of technical tasks. Design of the sequential nets. Logical base of the mathematical solution of technical tasks, the deductive and inductive aspects of judgement. Many-valued and fuzzy logic. | | | |
| 17W1LL | Logistics of Passenger and Freight Air Transport | KZ | 4 |
| Logistics airline passenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial transport process passengers and air cargo. Information systems in air transport. Global distribution systems. | | | |
| 13W1MR | Managerial Decision-making | KZ | 4 |
| The subject provides in a clearly organised form a summary of knowledge and skills for solution of decision-making issues. It explains basic concepts of decision-making, it characterises rational logistics for solution of decision-making issues in organisations, it provides logistics of multi-criteria decision-making and the choice of decision-making methodologies for security, risks and insecurity. | | | |
| 11W1MM | Mathematical Models in Economy | KZ | 4 |
| Linear models subjected to linear constraints leading to linear programming. Models of net analysis, storage models, queue lengths models. Theory of reliability. Dynamical programming, convex optimisation tasks. | | | |
| 17W1ND | Maritime Transportation | KZ | 4 |
| History and importance of the maritime transportation, theoretical discipline in maritime transportation, seafaring vessels, maritime ports and their utilization, inland logistic centre and maritime ports, transport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation, maritime transportation and smart containers, ITS in maritime transport. | | | |
| 15W1OC | Crucial Moments of Czechs | KZ | 4 |
| The contemporary view of crucial moments of the more than a thousand-year long history of western Slavs in Central Europe stressing the relations with bordering nations and with Europe as a whole. Formation and strengthening of the P emysl state. The lands of the Czech Crown as a part of the Habsburgh monarchy. Political programmes in the 19th century and formation of Czechoslovakia. Disputes over the sense of Czech history. Changes of the power structure of Europe in the 20th century regarding the position of our lands. | | | |
| 13W1PM | Personal Management | KZ | 4 |
| Basic overview of leadership issue from the viewpoint of an employee as well as a manager. The accent at the experience of basic situations through a simulation game. Systemic approach to the personal management, the assessment as a process, SWOT analysis, basic principles of personal management, theory and practice of motivation, managerial leadership styles. | | | |
| 12W1PC | Pedestrian and Cycling Transport | KZ | 4 |
| 13W1PD | The Participation of Transport in Tourist Trade Management | KZ | 4 |
| Tourist trade, transport, typology, market, marketing mix, transport service providers, contract cooperation, reservation systems, transport valuables, standard air carriers, low cost air carriers, IATA, ICAO, road, water, rail transport. | | | |
| 16W1PV | Operation, Construction and Maintenance of Vehicles | KZ | 4 |
| Methods of vehicle production. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurement. Transmission mechanism. General principles of engine diagnostics. | | | |
| 13W1SM | MESE Simulation | KZ | 4 |
| Management game simulating corporate decision making. Groups of students produce the same product, give the volume of available production capacity, plan budgets for marketing, research and development. | | | |
| 13W1TC | Techniques of Travel Services | KZ | 4 |
| Importance of Tourism for human consumption and for the national economy Services of tourism - basic and others Transportation services, Accommodation services, Food and beverage services, Catering Travel agencies and their activities. | | | |
| 16W1TJ | Technological Quality Aspects | KZ | 4 |
| Certification and accreditation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods of quality improvement. Conformity verification. Environmental certification. Workplace certification. QMS integration. Classification, certification of products and producers. | | | |
| 16W1TR | Theory of Railroad Vehicle Driving | KZ | 4 |
| Legislation in railroad transportation. Technical condition of railroad vehicles and responsibility for their condition. Railroad traffic regulations. Railroad traffic safety. Signal systems. Radiocommunication system. Powering system. Power distribution. | | | |
| 16W1TZ | Transporting Devices | KZ | 4 |
| Flow of masses, material transport technology, loose material transport - conveyors with tractive elements, conveyors without tractive elements, transport of piece material - continual transport devices, cyclic transport devices, crane mechanisms, steel constructions. Vertical transport, transport in mines, long-distance conveyor belt transport. | | | |

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| 12W1VC | Waterways and shipping | KZ | 4 |
| European waterway net, waterways parameters, ports and transshipment points, advantages and disadvantages of water transport, regulations of ship operation and waterways, shipping net in the Czech Republic and European countries, waterways authorities, investment in water infrastructure. | | | |
| 12W1VD | Water Transport and Transportation | KZ | 4 |
| 17W1ZC | Tourist Business Transportation | KZ | 4 |
| 16W1ZL | Vehicle Testing, Legislation and Construction | KZ | 4 |
| Vehicle construction, aggregate computing, driving resistance, building and parameters of traction, constructional arrangement of personal cars, trucks, buses, motorbikes, legislation in the EU and in the world, creation of technical legislation, testing methods, vehicle tests, accelerated tests, mathematical modelling in testing. | | | |

Name of the block: Jazyky

Minimal number of credits of the block: 8

The role of the block: J

Code of the group: J2B-B OD05/06 P+K

Name of the group: Jazyk 2.bl.bak.od 05/06 prez.+kombin.

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 at least 5 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 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|----------|------|
| 15JA2B | Foreign Language - English (exam 2) | ZK | 0 | | | J |
| 15J1A5 | Foreign Language - English 5 | Z | 2 | 0+2 | | J |
| 15J1A6 | Foreign Language - English 6 | Z | 2 | 0+2 | | J |
| 15J1A7 | Foreign Language - English 7 | Z | 2 | 0+2 | | J |
| 15J1A8 | Foreign Language - English 8 | Z,ZK | 2 | 0+2 | | J |
| 15JF2B | Foreign Language - French (exam 2) | ZK | 0 | | | J |
| 15J1F5 | Foreign Language - French 5 | Z | 2 | 0+2 | | J |
| 15J1F6 | Foreign Language - French 6 | Z | 2 | 0+2 | | J |
| 15J1F7 | Foreign Language - French 7 | Z | 2 | 0+2 | | J |
| 15J1F8 | Foreign Language - French 8 | Z,ZK | 2 | 0+2 | | J |
| 15JN2B | Foreign Language - German (exam 2) | ZK | 0 | | | J |
| 15J1N5 | Foreign Language - German 5 | Z | 2 | 0+2 | | J |
| 15J1N6 | Foreign Language - German 6 | Z | 2 | 0+2 | | J |
| 15J1N7 | Foreign Language - German 7 | Z | 2 | 0+2 | | J |
| 15J1N8 | Foreign Language - German 8 | Z,ZK | 2 | 0+2 | | J |
| 15JR2B | Foreign Language - Russian (exam 2) | ZK | 0 | | | J |
| 15J1R5 | Foreign Language - Russian 5 | Z | 2 | 0+2 | | J |
| 15J1R6 | Foreign Language - Russian 6 | Z | 2 | 0+2 | | J |
| 15J1R7 | Foreign Language - Russian 7 | Z | 2 | 0+2 | | J |
| 15J1R8 | Foreign Language - Russian 8 | Z,ZK | 2 | 0+2 | | J |
| 15JS2B | Foreign Language - Spanish (exam 2) | ZK | 0 | | | J |
| 15J1S5 | Foreign Language - Spanish 5 | Z | 2 | 0+2 | | J |
| 15J1S6 | Foreign Language - Spanish 6 | Z | 2 | 0+2 | | J |
| 15J1S7 | Foreign Language - Spanish 7 | Z | 2 | 0+2 | | J |
| 15J1S8 | Foreign Language - Spanish 8 | Z,ZK | 2 | 0+2 | | J |

Characteristics of the courses of this group of Study Plan: Code=J2B-B OD05/06 P+K Name=Jazyk 2.bl.bak.od 05/06 prez.+kombin.

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----|---|
| 15JA2B | Foreign Language - English (exam 2) | ZK | 0 |
| 15J1A5 | Foreign Language - English 5 | 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. | | | |

List of courses of this pass:

| Code | Name of the course | Completion | Credits |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|
| 11MSAP | Modeling of Systems and Processes The course introduces mathematical methods and algorithms providing an essential tool for system analysis. Methods and algorithms represent context in which the systems are modelled and evaluated in continuous and discrete time domain. The Laplace transform, z-transform, and the recursive algorithms are introduced in order to understand solution of differential and difference equations, which are developed for system description. The course focuses on practical use of technical computing environment MATLAB. | Z,ZK | 4 |
| 11MST | Mathematical Statistics Point estimation, properties of point estimators (consistency, unbiasedness, efficiency), methods of point estimation (method of moments, maximum likelihood method). Bayes estimators. Testing of statistical hypothesis, critical values, choice of hypothesis and level of significance, observed level of significance (P-value). Goodness of fit test, independence test. Regression and correlation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression, analysis of variance, multiple regression, the use of matrices in regression. | Z,ZK | 2 |
| 11W1MM | Mathematical Models in Economy Linear models subjected to linear constraints leading to linear programming. Models of net analysis, storage models, queue lengths models. Theory of reliability. Dynamical programming, convex optimisation tasks. | KZ | 4 |
| 11X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 11X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 11YAS | | Z,ZK | 3 |
| 12W1PC | Pedestrian and Cycling Transport | KZ | 4 |
| 12W1VC | Waterways and shipping European waterway net, waterways parameters, ports and transshipment points, advantages and disadvantages of water transport, regulations of ship operation and waterways, shipping net in the Czech Republic and European countries, waterways authorities, investment in water infrastructure. | KZ | 4 |
| 12W1VD | Water Transport and Transportation | KZ | 4 |
| 12X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 12X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 13EDT | Transportation and Telecommunication Economics The subject is dedicated to analytical and synthetically views of economic activities, both the production and services business systems. The main interest is focused on the parts which will be provided in decision-making processes by future engineers, technologists and managers. The property and financial structures create the basic issues for business activities. Furthermore, the attention is concentrated on time life cycle of product and service, quantification economic time life, depreciation and methods of its calculation. The problem of inventories as a key question of business activities is provided and basic mathematical inventory models are given. The core of entrepreneurial process - cost analysis, cost estimating, revenue, profit and benefit are put to the main interest of engineer and manager together with structure of business plan, entrepreneurial projects and their analysis and evaluation. Finally, the characteristics of time life business cycle from the start of activities to the end these ones are discussed. | Z,ZK | 4 |
| 13EFI | Enterprise Economics | Z,ZK | 3 |
| 13MDT | Marketing in Transport and Telecommunications Analysing the marketing process. The core concepts of marketing. Understanding the role of marketing in organisations. Marketing management. Marketing of information systems and marketing research. Analysing the marketing environment (macro and microenvironment). Analysing consumer markets and buyer behaviour. Analysing business markets and business buying behaviour. Identifying market segments and selecting target markets. Differentiating and positioning the market offer marketing mix. Developing, testing and launching new products. Product life cycles and strategies. Product lines, brands and packaging. Designing pricing strategies and programs. Selecting marketing channels. Physical distributions systems. Promotion and communication mix strategies. Sales promotion, advertising, public relations, programs, personal sale. Corporate business strategic planning. Market oriented strategic planning. Marketing in services and non-profit organisations. | Z,ZK | 4 |
| 13MSPK | Small and Medium-sized Enterprise The aim of this course is to point out the small business as an important element of global economy. Through this subject the entrepreneurship and dynamic entrepreneurship in the world and in the Czech Republic under technology and economic conditions is discussed. The role of venture capital for development of small enterprises using the material of EVCA, European Union organisation is shown. Finally, analysis and synthesis of steps needed for successfully goals of entrepreneurship taking a business plan as a productive method are described. | ZK | 4 |
| 13PAZ | Transportation and Forwarding Business The aim of the subject is to make the students acquainted with the basis of transportation processes technology, with the conditions for particular kinds of transport and with engagement relationships on transport (inland and international) and on forwarding business. | Z,ZK | 3 |
| 13PE | Operational Economy | Z,ZK | 3 |
| 13U | Accounting The objective of the subject is to master the basics of accounting in the individual accounting domains on a basis of knowledge of the accounting rules, methods, tools (including technical procedures) and accounting procedures. Furthermore, students will become familiar with importance to accounting in practice, of the accounting units, with administration of the accounting books and with accounting systems including organisation of the accounting and administration and processing of accounting on computer. The subject will also include the basic bindings to tax and managerial accounting (in-house). | Z,ZK | 4 |
| 13W1EA | Economic - Energetic Analysis of Land Transport Vehicle traction systems, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technical, economical and social aspects. | KZ | 4 |
| 13W1EP | Technology, Economics and Management of Postal Services The contents of the subject is to introduce state policy to listeners in the area of the postal and delivery services. The position of post in the frame of infrastructure and the socio-economical system of the state, with the harmonisation process and problems with the regulation, in the relation to the market liberalisation, competition of post services with the electronic and information technologies, reserved and universal services. | KZ | 4 |
| 13W1HG | Economic Geography The basic concepts of economic geography - general approach. Geography of the world economy. Geography of inhabitants - as a factor of dislocation and development. Habitation structure. The world industrial production (energy, machinery, chemical and food industry). Agriculture, plant industry, animal industry, the world fishing and forest economy. Power supply. Transportation - all kinds of transportation, railway, road, naval, marine, tabular, air. Business travel - the main factors of dislocation and development, the most important world famous tourist areas. Transportation infrastructure all over the world (Europe, Asia, Africa, Australia and Oceanic). | KZ | 4 |
| 13W1KM | Crisis Management in Transportation | KZ | 4 |

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| 13W1MR | Managerial Decision-making | KZ | 4 |
| The subject provides in a clearly organised form a summary of knowledge and skills for solution of decision-making issues. It explains basic concepts of decision-making, it characterises rational logistics for solution of decision-making issues in organisations, it provides logistics of multi-criteria decision-making and the choice of decision-making methodologies for security, risks and insecurity. | | | |
| 13W1PD | The Participation of Transport in Tourist Trade Management | KZ | 4 |
| Tourist trade, transport, typology, market, marketing mix, transport service providers, contract cooperation, reservation systems, transport valuables, standard air carriers, low cost air carriers, IATA, ICAO, road, water, rail transport. | | | |
| 13W1PM | Personal Management | KZ | 4 |
| Basic overview of leadership issue from the viewpoint of an employee as well as a manager. The accent at the experience of basic situations through a simulation game. Systemic approach to the personal management, the assessment as a process, SWOT analysis, basic principles of personal management, theory and practice of motivation, managerial leadership styles. | | | |
| 13W1SM | MESE Simulation | KZ | 4 |
| Management game simulating corporate decision making. Groups of students produce the same product, give the volume of available production capacity, plan budgets for marketing, research and development. | | | |
| 13W1TC | Techniques of Travel Services | KZ | 4 |
| Importance of Tourism for human consumption and for the national economy\n\nServices of tourism - basic and others Transportation services,\n\nAccommodation services, Food and beverage services, Catering Travel\n\nagencies and their activities. | | | |
| 13X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 13X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 14DAPS | Database and Presentation Systems | KZ | 2 |
| Database systems. E-R data model, relational data model, relational databases. Creation of a simple database application in the MS ACCESS environment. Creation of presentations by help of the PowerPoint environment - static snaps, simple animations, linking with other applications. | | | |
| 14IFS | Information Systems | ZK | 4 |
| The subject is specialized in theoretic and practical design resources and principles and information systems (IS) creation and realization. Students get knowledge of various information systems terminology, classification and characterization (process, transaction, knowledge, metainformation, etc.), IS projecting procedures, data/information computer proceeding technology by help of data structures, database systems and models. They obtain view of IS and information technologies technical infrastructure trends, understand IS architecture principles and purposes, human role in IS and possibilities of IS evaluation. In brief, they acquaint themselves with creation principles, architecture and standards of the state information system. | | | |
| 14IP1 | Tutorial in Informatics 1 | Z | 2 |
| The course involves introductory theoretical part (basic terminology from information technologies, information theory, computer terminology, data damage protection, theft and destruction, protection of computer network, security and legal problems relevant to information technologies, copyright and data protection law, computer criminality) and practical part according to the specialization. | | | |
| 14IP2 | Tutorial in Informatics 2 | KZ | 2 |
| Knowledge systems. Expert systems and programmes based on knowledge, their architecture, knowledge representation, basic derivation and implementation methods. Interface for knowledge systems creation and their design principles. Certainty and uncertainty in knowledge systems and different approaches to them. Common model of balances combination, fuzzy logics. Knowledge base design methods. Database and knowledge systems and their rules. | | | |
| 14SSS | Networks and Network Operating Systems | KZ | 2 |
| Acquaintance with operating and possibilities of computer networks and their services utilize is the subject target. Network topology, IP addressing, WAN networks, connection information (ping, trace route). Detailed familiarity with selected WIN NT, Novell, and Unix network environment in the second semester part. Introduction to server and workstations installation, users and groups creation, folder structure creation, disc mapping, users protection, folders security, network printing, network security. | | | |
| 14TLK | Telecommunications | Z,ZK | 4 |
| Telecommunication bases as cross-section branch create the subject's contents. During introduction, basic legislative conditions forming telecommunication market consistent with the EU rules (selected parts of legislative and sub legislative standards, regulation and regulation frame) and existing and perspective telecommunication services characteristics are lectured. In the second part, transmission and connecting system and terminal devices basic principles (analogue and digital systems, used modulations in view of PCM modulation and modulation predicative methods) and solution of modern connecting systems are explained. In the third part, network management principles from view of operational organization are briefly described. | | | |
| 14X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 14X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 15J1A5 | Foreign Language - English 5 | 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. | | | |
| 15J1A6 | Foreign Language - English 6 | 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. | | | |
| 15J1A7 | Foreign Language - English 7 | 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. | | | |
| 15J1A8 | Foreign Language - English 8 | 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 | | | |

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| 15W1HD | History of City Public Transport | KZ | 4 |
| History of city public transport in the world; development of tram, bus and trolley-bus systems. History of transport networks in the world; current trends and development of tariff and clearance systems. History of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Slovakia. | | | |
| 15W1HE | Work Hygiene and Ergonomics in Traffic | KZ | 4 |
| Basic knowledge of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these factors on health of workers. Creation and protection 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 from the field of transportation; relevant legislature. | | | |
| 15W1HL | History of Civil Aviation | KZ | 4 |
| Historical overview of civil aviation as a part of transportation system. Developmental trends in plane construction, technical safety and control systems in civil and sports aviation. Chronological development of aviation from planes lighter than air to current planes heavier than air in the context of a complex transportation system of passengers, goods, freight and sport activities in Czech, European and global conditions. The lectures are accompanied by various picture documents and maps, videos, museum and specialised workplaces excursions. | | | |
| 15W1LU | Logic of Engineer Judgement | KZ | 4 |
| Components of an ingeeneer judgements: empirical, general and logical ones. Logical structure of the judgement. The intuitive and exact judgement and the natural and exact language. The propositional logic of the judgement, methods of solving of the technical tasks, combinational nets. The predicate logic of the judgement, methods of solving of technical tasks. Design of the sequential nets. Logical base of the mathematical solution of technical tasks, the deductive and inductive aspects of judgement. Many-valued and fuzzy logic. | | | |
| 15W1OC | Crucial Moments of Czechs | KZ | 4 |
| The contemporary view of crucial moments of the more than a thousand-year long history of western Slavs in Central Europe stressing the relations with bordering nations and with Europe as a whole. Formation and strengthening of the P emysl state. The lands of the Czech Crown as a part of the Habsburgh monarchy. Political programmes in the 19th century and formation of Czechoslovakia. Disputes over the sense of Czech history. Changes of the power structure of Europe in the 20th century regarding the position of our lands. | | | |
| 15X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 15X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 16W1PV | Operation, Construction and Maintenance of Vehicles | KZ | 4 |
| Methods of vehicle production. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurement. Transmission mechanism. General principles of engine diagnostics. | | | |
| 16W1TJ | Technological Quality Aspects | KZ | 4 |
| Certification and accreditation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods of quality improvement. Conformity verification. Environmental certification. Workplace certification. QMS integration. Classification, certification of products and producers. | | | |
| 16W1TR | Theory of Railroad Vehicle Driving | KZ | 4 |
| Legislation in railroad transportation. Technical condition of railroad vehicles and responsibility for their condition. Railroad traffic regulations. Railroad traffic safety. Signal systems. Radiocommunication system. Powering system. Power distribution. | | | |
| 16W1TZ | Transporting Devices | KZ | 4 |
| Flow of masses, material transport technology, loose material transport - conveyors with tractive elements, conveyors without tractive elements, transport of piece material - continual transport devices, cyclic transport devices, crane mechanisms, steel constructions. Vertical transport, transport in mines, long-distance conveyor belt transport. | | | |
| 16W1ZL | Vehicle Testing, Legislation and Construction | KZ | 4 |
| Vehicle costruction, aggregate computing, driving resistance, building and parameters of traction, constructional arrangement of personal cars, trucks, buses, motorbikes, legislation in the EU and in the world, creation of technical legislation, testing methods, vehicle tests, accelerated tests, mathematical modelling in testing. | | | |
| 16WKV | Car Bodies of Motor Vehicles | KZ | 4 |
| 16X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 16X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 17DOU | Public Transport Service | Z,ZK | 4 |
| 17EMM | Economic-mathematical Models | ZK | 3 |
| 17FF | Finances and Funds | Z,ZK | 4 |
| The course is oriented to the problems of finance, financial markets and institutions. It analyses the credit and the saving financial policy as well as various types of loans and their influence on lenders and borrowers. Direct and portfolio investment, their strong and weak points and risks. Business companies from the view of financial flows and financing. Financial aspects of joint stock companies, the position of shareholders, various types of shares, dividends. Financial plans, the use of financial instrument combinations as long and short term loans, bond emissions and capital raise. The problems of bills of exchange, bankruptcy and composition and of international investment. | | | |
| 17LGS | Logistics | Z,ZK | 4 |
| As an integrated managerial system of circular and transfer flows, logistics form new ways of partnership between production and business organization on one hand, and material and information carriers on the other hand. This subject is focused on: Concept of logistics, its development and principles Logistics systems units, logistics chain Logistics coupling, logistics methods and technologies, decision making in the logistics managerial systems Marketing as a basic tool in the logistics managerial systems, marketing survey, marketing offer, marketing evaluation techniques and completion marketing planning Status of transportation in the logistics system Information flows in the logistics chain | | | |
| 17MEAN | Methods of Economic Analyses | Z,ZK | 4 |
| The course comprehends the problems of numerical representation of economical phenomena by systems of indicators and their analysis and interpretation. The analysis of dependence, time series and indices is emphasised. | | | |
| 17RP | Project Management | ZK | 2 |
| The course makes students acquainted first with project, its participants and their target behaviour, then with the project cycle and the principles of project management. Basic methods of project assessment, principles of optimal scenario choice, risks and uncertainties of choice. The possibilities of project funding, the methodology of World Bank and the management of supranational projects. | | | |
| 17TEC | Technology of Transport | Z,ZK | 4 |
| Course deals with foundations of technology and management of transportation proceses. It is concerning mainly in way and organization transfer of persons and goods on the defined transport network by moving of transport means through the transport ways. It connects on knowledges of transport and handling tools from the first period of study. Study is concerning on these questions from technology of single sorts of transportation: most important terms of transfer process, particularities, and using indicators, making and using of basing technologic plans and tools, combination and integration of sorts of transportation into transport systems, using knowledges of system analyses and kybernetics in management of transportation process | | | |
| 17W1AF | Alternative Forms of Transportation Project Financing | KZ | 4 |
| It will be specifed such forms of financing in trasportation, where the public sector body perform the final debtor, i. e. debtor payments come from its budget, but the final debtor is not a direct participant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternative source of transportation project financing. | | | |

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| 17W1BB | Banks and Banking | KZ | 4 |
| Banks and banking system. Balance sheet, income statement, bank's capital and its functions. Banking risks. Banking products. Interest types, pay-off and loan securing, financial loan products. Banking deposit products. Banking payment-clearing products. Financial intermediation, open-end and closed-end funds, collective investment schemes. Central bank and its role. Bank regulation and supervision. International banking. | | | |
| 17W1DG | Transport Geography | KZ | 4 |
| Facultative course Transport geography briefly describes transport system and reciprocal relations between economic development and transport system. The result of its long-term relations is specific configuration of transport infrastructure and also perspective of its future development. Course is oriented step by step on railway, road, water, air, combine and pipeline transport. There are lectures there about: transport ways, transport junctions and terminals, international crossings, most important connections, offered services and international cooperation in this areas; | | | |
| 17W1DN | Carriage of Dangerous Goods | KZ | 4 |
| 17W1DP | Transportation Politics and Strategy | KZ | 4 |
| This subject focuses on a practical implementation of transportation theory into the transportation systems for the sake of state interest, and its macroeconomics development. Concurrently, it harmonizes EU and Czech directives. Closely this subject focuses on: Czech Transportation policy development; Status of transportation in the macroeconomics system; Creation and regulation of transportation market by direct and indirect instruments in favor of the society/public interest; Comparison and harmonization of Czech and EU directives on the transportation market; Defining of constant tenable mobility according to the international agreements, directives, approaches; National transportation system planning according to the constant tenable mobility, and with respect to the international systems and obligations, the comparison of Czech and EU strategies; Legislative harmonization (Czech, EU) on the transportation field, progress in the time; Terms for Czech Republic's entrance on EU integrated transportation market; | | | |
| 17W1DZ | Transported Commodities Cognization | KZ | 4 |
| Useful features. Quality. Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention during the carriage. Optimization of the choice and effective transport means utility. | | | |
| 17W1HO | Heuristic Methods in Optimization Problems | KZ | 4 |
| Introduction and overview of heuristic methods, exact approaches for solving the Traveling Salesman Problem (TSP), Lagrangean approach, assignment problem, algorithm of Little, vehicle routing problem (VRP) - derivation from the TSP, classical heuristics solving the VRP, local search methods, Tabu Search method, genetic algorithms in location problems and its enhancements. | | | |
| 17W1LL | Logistics of Passenger and Freight Air Transport | KZ | 4 |
| Logistics airline passenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial transport process passengers and air cargo. Information systems in air transport. Global distribution systems. | | | |
| 17W1ND | Maritime Transportation | KZ | 4 |
| History and importance of the maritime transportation, theoretical discipline in maritime transportation, seafaring vessels, maritime ports and their utilization, inland logistic centre and maritime ports, transport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation, maritime transportation and smart containers, ITS in maritime transport. | | | |
| 17W1ZC | Tourist Business Transportation | KZ | 4 |
| 17X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 17X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 17ZTD | Introduction to Theory of Transport | Z,ZK | 4 |
| 18X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 18X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 20SANL | Systems Analysis | Z,ZK | 4 |
| Models and analyses of systemic features, means of detection of systemic characteristics, ways, decomposition, boundary and structure of systems, system behavior, decision-making processes, diagram characteristics, fuzzy sets/equations, formulation of states under indistinctly defined conditions, stability of systems. | | | |
| 20X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 20X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 21X17K | Seminar for Bachelor Thesis 1 | Z | 2 |
| 21X18K | Seminar for Bachelor Thesis 2 | Z | 6 |
| 22X17K | Seminar for Bachelor Thesis 1 | Z | 2 |

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

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