THE POLYTECHNIC OF RIJEKA
TRANSPORT DEPARTMENT

STUDY PROGRAMME

SPECIALIST GRADUATE PROFESSIONAL STUDY OF TRANSPORT

- **LIST OF COURSES**

SPECIALIST GRADUATE PROFESSIONAL STUDY OF TRANSPORT
Courses: Road Transport, Rail Transport, Postal Services

1st year of study – Semester I (shared subjects; Winter Semester)

Course unit no.	Title of the course unit	Hours weekly				ECTS credits	Exam
		L	S	E	P		
1	Flow of Goods and Terminals	2	1	-	-	4	1
2	Information and Communication Systems in Transport	2	2	-	-	6	1
3	Management in Transport	2	1	-	-	5	1
4	Analysis and planning in Transport Enterprises	2	2	-	-	6	1
5	Transport Logistics	2	1	-	-	4	1
6	Marketing in Transport	2	1	-	-	4	1
	Total / Semester	**12**	**8**	**-**	**-**	**29**	**6**

1st year – Semester II (shared subjects; Summer Semester)

Course unit no.	The title of the course unit	Hours weekly				ECTS credits	Exam
		L	S	E	P		
7	Planning and Programming in Transport	2	2	-	-	6	1
8	Quantitative Methods in Transport	2	2	-	-	6	1
9	Multimodal Transport	2	2	-	-	6	1
10	Transport and Sustainable Development	2	1	-	-	4	1
11	Transport Economics	2	2	-	-	5	1
12	Insurance and Reinsurance in Transport	2	1	-	-	4	1
	Total / Semester	**12**	**10**	**-**	**-**	**31**	**6**

2nd year – Semester III (Winter Semester)

Course unit no.	The title of the course unit	Hours weekly				ECTS credits	Exam
		L	S	E	P		
	Elective subject A	2	2	-	-	5	1
	Elective subject B	2	2	-	-	6	1
	Elective subject C	2	2	-	-	7	1
	Elective subject D	2	2	-	-	7	1
	Elective subject E	2	2	-	-	5	1
	Total / Semester	**10**	**10**	**-**	**-**	**30**	**5**

Depending on the chosen course of study, a student chooses a respective group of elective subjects.

Elective subjects A, B, C, D, E:

The course of Road Transport – group of elective subjects

13 Infrastructure Planning in Road Transport
14 Technical Facilities in Road Transport
15 Technological Processes in Road Transport
16 Road Transport Safety System
17 Quality Control System in Road Transport

The Course of Rail Transport – group of elective subjects

18 Infrastructure Planning in Rail Transport
19 Railway Vehicles in Rail Transport
20 Technological Processes in Rail Transport
21 Rail Transport Safety System
22 Quality Control System in Rail Transport

The Course of Postal Services – group of elective subjects

23 Infrastructure Planning in Postal Services
24 Postal Services and Processes
25 Management in Postal Services
26 Postal Services Safety System
27 Postal Services Quality Management System

2nd year – Semester IV

Course unit no.	The title of the course unit	Hours weekly				ECTS credits	Exam
		L	S	E	P		
28	Practical Specialist Training	-	-	-	(x)	15	-
29	Specialist Graduation Thesis	-	-	(x)	-	15	1
	Total / Semester	**-**	**-**	**(x)**	**(x)**	**30**	**1**

Entire programme of Specialist Graduate Professional Study of Transport – total:

Study Semester	Hours / Semester					ECTS credits	Exam
	L	S	E	P	Total		
Semester I	180	120	-	-	300	29	6
Semester II	180	150	-	-	330	31	6
Semester III	150	150	-	-	300	30	5
Semester IV	-	-	(x)	(x)	-	30	1
Total at the Study	**510**	**420**	**(x)**	**(x)**	**930**	**120**	**17**

During studies a student attends 930 hours. By fulfilling all the study obligations a student is awarded a total of 120 ECTS credits.

FLOW OF GOODS AND TERMINALS

Course unit number: 1

Hours weekly: 2+1+0+0 / I

ECTS credits: 4

Syllabus outline

International exchange of commodities; World maritime trade; Dynamics and structure of the flow of goods; World exporters of strategic raw materials and main shipping routes; Bulk freight; General cargo; Container and RO-RO transport; International maritime transport and ports; Port as a system; Logistic approach in defining the port system ; Port infrastructure;
Port superstructure; Port facilities and vessels; Organization of ports; Liquid cargo terminals; Container terminals; RO-RO terminals; Bulk cargo terminals; General cargo terminals; Passanger terminals.

Developing of general and specific competence (knowledge and skills)

Getting acquainted with the structure and dynamics of the domestic and international goods flow ; Getting briefed on the international maritime trade and ports; Getting acquainted with the port as a system; Getting acquainted with the logistic approach in defining the port system; Getting acquainted with terminal's types and capacities.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

INFORMATION AND COMMUNICATION SYSTEMS IN TRANSPORT | **Course unit number: 2**

Hours weekly: 2+2+0+0 / I **ECTS credits: 6**

Syllabus outline

Information systems: Fundamental information systems theories, their purpose and aim. Flows of information in information transfer: Flows of information within logistic processes. Information system as a support in market research, in collecting and analyzing data regarding transport flow of people, goods and information. Development of information systems: information systems developmental stages. Designing, implementation and maintenance of information systems in transport. Data bases and data approach. Knowledge bases. Computer networks and products. Internet. E-business running. Information support: to processes and transport. Forwarding and agency business. Computer planning methods in transport. Role of information technology and communications in transport and logistic flows. Computer managed warehouse-transport centers. Basic processes in transport depending on the type of transport. Intelligent transport systems (ITS). European and global designs in ITS programming. ITS navigational devices (satellite positioning, robot devices). "Bravo" – business-information system in transport.

Developing of general and specific competence (knowledge and skills)

Mastering of the most important informatics terms and their meaning. Learning about information system user and his role in information system. Perceiving of the importance of relationship between business system and information system. Importance of information in planning and making of business decisions.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

MANAGEMENT IN TRANSPORT

Course unit number: 3

Hours weekly: 2+1+0+0 / I

ECTS credits: 5

Syllabus outline

Lectures: Introductory discussions. Management theory global development. Conventional and unconventional theories and recent trends. Overall quality management. Business process reengineering. Learning organization. Management as a system. Strategic management. Management and decision making. Organizational culture. Change management. Management creativity. Conflict management. Global management and comparative management study.
Seminars (case study): Transition company management. Large-sized, medium-sized, and small-sized company management. Institution management. Administration management. Entrepreneurship and management. Management functions in companies. Company planning. Company organization. Placement within a company. Management within a company. Control within a company.

Developing of general and specific competence (knowledge and skills)

Developing general and specific organization management competences with an emphasis on recent trends and practical implementation.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

ANALYSIS AND PLANNING IN TRANSPORT

Course unit number: 4

Hours weekly: 2+2+0+0 / I

ECTS credits: 6

Syllabus outline

Transport business operation specific features – holistic approach. Analytic and statistical-mathematical methods. Business assessment quantitative and qualitative approach. Analyses of assets and utilization of transport capacities. Specific cost analysis. Human resources analysis. Problem concerning analysis based on services rendered. Income analysis – business income and assortment. Cover point. Cash flow analysis. Financial operation – financial position assessment. Solvency, stability, and indebtedness. Advanced business assessment methods. Short-term and long-term planning. Operational planning by the position. Projection techniques and business estimate methods.

Developing of general and specific competence (knowledge and skills)

Acquiring knowledge on relevant planning and analysis methods and transport organization business assessment.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TRANSPORT LOGISTICS

Course unit number: 5

Hours weekly: 2+1+0+0 / I

ECTS credits: 4

Syllabus outline

Notion and meaning of logistics. Logistics basic principles. Contents of logistics. Transport logistics. Transport logistics elements. Transport logistics organization. Transport logistics and planning of participants in the logistic chain. Cargo transport – quantity and structure. Logistics organization in enterprises. Information logistics. Trends in transport logistics. Analysis of actual cases in the field of common and transport logistics.

Developing of general and specific competence (knowledge and skills)

Making experts capable of successful organizing of logistic processes, particularly in segment of transport logistics. Mastering of advanced logistic concepts and strategies. Acquisition of measures and procedures for realization of basic principles of transport logistics in actual cases of goods transport.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

MARKETING IN TRANSPORT

Course unit number: 6

Hours weekly: 2+1+0+0 / I

ECTS credits: 4

Syllabus outline

Conception of marketing, basic terms and definition of marketing. Concept of transport, its types and features. Application of marketing to various branches of transport. Roles of marketing in transport. Notion and dimensions of market and special features of transport services market. Positioning towards customers in transport services market. Human factor as a basic success factor in dealing with customers. Strategic analysis of transport enterprises. Management of the marketing process and marketing planning. Marketing mix in transport enterprises. Marketing information systems and marketing research. Market research and transport services research. Methods and techniques of transport services market research. Analysis of marketing environment. Product policy in transport enterprises. Product. Product life cycle. Distribution policy in transport enterprises. Functions and choice of distribution channels. Pricing policy peculiarities in transport enterprises. Factor influencing the price formation. Promotion policy in transport enterprises. Aims and elements of promotion.

Developing of general and specific competence (knowledge and skills)

Analysis of development of particular transport branches as a cause and consequence of the economic development. Analysis of advanced transport technologies and possibility of their application in national traffic and transport system. Analysis of particular variables of marketing mix and variables optimization.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

PLANNING AND PROGRAMMING IN TRANSPORT

Course unit number: 7

Hours weekly: 2+2+0+0 / II

ECTS credits: 6

Syllabus outline

Plan and planning basic features: planning methods, transport plan types, transport department and zone planning, transport demand planning. Plan draw-up process: assignment of operational and transport document processing staff, and transport itinerary planning. Plan evaluation: functional and economical. Project planning: project evaluation, project plan risks and uncertainty, transport project evaluation cases. Simulation and simulation models: simulation model possibilities and limitations, simulation by the random number table, simulation model, data organizing, simulation statistics-related fundaments. Simulation languages: features, GPSS, SIMSCRIPT, and SLAM. Queuing and service rendering simulation: arrival distribution, service rendering process, analytical approach to queing theory, simulation approach to queing theory. Simulation in transport: motorway pay toll model, bus departure and arrival model, urban public bus transport model, urban traffic flow simulation, port-transport system model and economic indicators.

Developing of general and specific competence (knowledge and skills)

Familiarization with planning and programming basic features and their implementation in the transport system. Business plan and programme draw-up, natural and financial indicator estimate by the project.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

QUANTITATIVE METHODS IN TRANSPORT

Course unit number: 8

Hours weekly: 2+2+0+0 / II

ECTS credits: 6

Syllabus outline

Basic quantitative methods in transport sciences and possibilities of their application.
Mathematical models and optimizing methods: introduction, basic phases in mathematical modelling, models building, motivation problems.
Theory of graphs: introduction and basic terms, matrices in theory of graphs, application of theory of graphs on some traffic regulating problems.
Transport network: definition and basic terms, transport problem in the network, network simplex method, maximum flow through transport network, problem of the shortest way, optimization on the network.
Network planning: networks with the activities on the arches and networks with the activities at intersections, structure planning, time analysis by means of CPM method and the basic idea of Pert method.

Developing of general and specific competence (knowledge and skills)

Upon realization of the program, a student acquires the contents of the course and masters the basic techniques of mathematical modelling. While doing so, the accent is on those mathematical notions, methods and procedures required to solving problems in transport.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

MULTIMODAL TRANSPORT

Course unit number: 9

Hours weekly: 2+2+0+0 / II

ECTS credits: 6

Syllabus outline

Theoretical features and achieved level of multimodal transport development.
Multimodal transport international legislation. Advanced transport technologies as a base of multimodal transport development. Palletization, containerization, Ro-Ro transport technology, huckepack transport technology, other multimodal transport technologies. Transport documents in multimodal transport. Goods transport model designing and analysis in multimodal transport. Interrelatedness of participants in multimodal transport.

Developing of general and specific competence (knowledge and skills)

Rendering students theoretically and professionally capable of performing highly qualified and operative jobs in multimodal transport organizing. Capability of defining and analyzing optimum methods in multimodal transport. Introduction to participants of advanced transport technologies.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TRANSPORT AND SUSTAINABLE DEVELOPMENT

Course unit number: 10

Hours weekly: 2+1+0+0 / II

ECTS credits: 4

Syllabus outline

Plans, programs, strategic documents regarding transport, space, influence on the environment and sustainable development: features, types, component parts, methodology of making, passing and implementation.
Laws, regulations (conventions), institutions (organizations), participation of the public and other entities in process of designing and application of plans and other important documents: levels of local districts, regions, state, international levels – particularly the European Union.
Elaboration of particular chapters, i. e. thematic fields regarding transport and sustainable development and space: transport infrastructure, i.e. designing of traffic networks, - instruments of policy of development and planning of traffic and space, taking into consideration the principles of a sustainable development, - examples of evaluation of the influence of traffic and transport infrastructure on the environment, - sustainable development indicators system, -application of multicriteria analysis, Delphy and other methods

Developing of general and specific competence (knowledge and skills)

Introduce students to essential aspects of very complex interacting among transport infrastructure, space and influence on the environment; develop in them the capability to assess as objectively as possible various standpoints and arguments in the integral decision making process, in accordance with sustainable development principles.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TRANSPORT ECONOMICS | **Course unit number: 11**

Hours weekly: 2+2+0+0 / II | **ECTS credits: 5**

Syllabus outline

Theoretical determinants of a modern transport system. Important feature of transport economics and of transport market. Relevant features of European transport market. Transport and economic development theories. Transport demands. Transport regulation. Transport policy. Expenses and production rate in transport. Calculation and tariffs in transport system. Parameters of efficiency and business operation stability of transport enterprises. Modern phenomena in transport.

Developing general and specific competence (knowledge and skills)

Introduction to functioning of a transport market, measures and instruments of transport policy, qualification of expenses and calculations in transport system, implementation of tariffs in transport system, assessment of business operation efficiency of transport companies; modern transport phenomena.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

INSURANCE AND REINSURANCE IN TRANSPORT **Course number 12**

Hours weekly: 2+1+0+0/II **ECTS credits: 4**

Syllabus outline

The term, characteristics and parties in the insurance contract. Entering into, transferring and entering the insurance contract. Annulment and suspension of the insurance contract. The insurance policy. Elements of the insurance relationship: risk, object of insurance, premium, insured case, insurance amounts and value of insured interest. Rights and obligations of an insured person, insurer and policyholder. Reinsurance and a statute of limitations. Obligatory insurance in transport. Goods, vehicle and freight insurance in transport. Insuring responsibility in different transport branches.

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Developing general and specific competence (knowledge and skills)

Gaining theoretical and practical knowledge on insurance and reinsurance. Familiarizing types and ways of insuring goods and passengers in transport, motor vehicles, ships and airplanes.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

INFRASTRUCTURE PLANNING IN ROAD TRANSPORT | **Course unit number: 13**

Hours weekly: 2+2+0+0 / III | **ECTS credits: 5**

Syllabus outline

Introduction, basic terms, definition, terminology, statutory regulations, rules and institutions concerning communication line design and construction. Basic architectonic features of transport facilities, parking area, parking garage (lazy traffic), urban and motorway filling station, bus terminal, pedestrian underpass, elevated passage, level crossroad, circular crossroad, multi-levelled interchange, pedestrian zone and communication, and urban and rural road communication environmental aspects.

Developing of general and specific competence (knowledge and skills)

Familiarization with transport facilities relevant projection and design parameters, searching the optimum model to satisfy pedestrians' and road transport aspects and safety of persons and goods.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TECHNICAL FACILITIES IN ROAD TRANSPORT

Course unit number: 14

Hours weekly: 2+2+0+0 / III

ECTS credits: 6

Syllabus outline

Introduction. Classification of road transport means. Road transport means basic features. Driving dynamics analysis. Output unit and its driving utilization features analysis. Friction limits influence. Static and dynamic load distribution on wheel shafts. Wheels affecting driving stability and control. Curve affecting driving stability. Road means assemblies and elements. Power engine (combustion, engine mechanism, engine main parts, engine distribution, fuel system, air filtration and supercharging system, exhaust system, lubricating system, cooling system), clutch, gear box, power distributor, shafts and joints, reducing gear, pneumatics, braking system, steering system, and signalling system.

Developing of general and specific competence (knowledge and skills)

Familiarization with the main power unit and assemblies, power transmission (to wheels) assemblies, and driving dynamics and various circumstances affecting driving safety.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TECHNOLOGICAL PROCESSES IN ROAD TRANSPORT

Course unit number: 15

Hours weekly: 2+2+0+0 / III

ECTS credits: 7

Syllabus outline

Fundamental principles of road transport technology: fundamental, classic and advanced technologies of road transport and their phases. Structure of technology and organization of road transport: infrastructure and superstructure, means of transport and equipment, transport documentation. Features of passengers and cargo transport requirements in interurban transport: travelling models, choice methodology, analysis of procedures and flow of cargo in road transport, concept of road hierarchy. Methods of quantification of transport requirements: rostering criterion. Analysis of transport procedures in road transport: technological processes (lists) designing, methodology of technological processes designing, indicators of work and business results. Information system in road transport.

Developing of general and specific competence (knowledge and skills)

Introduction to fundamental features of technological processes in road transport and their application in transport system. Designing of technological processes and work organization. Calculation of physical and financial indicators after technological designs.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

ROAD TRANSPORT SAFETY SYSTEM | **Course unit number: 16**

Hours weekly: 2+2+0+0 / III | **ECTS credits: 7**

Syllabus outline

Road transport safety in the United Nations countries and in the Republic of Croatia. Trends in number of traffic accidents. Traffic accidents – causes and incident factor. Traffic demands safety. Level of motorization, population and mobility. Goods transport safety. Transport supply safety. Law on Traffic Safety on the Roads and safety in conformity with legal legislation. Transport infrastructure. Safety elements in traffic routes and intersections architectural shaping. Standard, light and dynamic traffic signalization and equipment. Possibilities of improvement of state of safety. Education and prevention. Necessary amendments to legal legislation, accompanying regulations and normization. Identification of dangerous spots by drivers. Nonstandard signalization, equipment and marking of possibly dangerous spots on traffic routes.

Developing of general and specific competence (knowledge and skills)

Introduction to traffic accidents problem. Accent on safety regarding correlation between transport supply and demand. Developing of consciousness that a safer state in traffic is possible. Awareness of driver's perception. Insight into traffic accidents analyses and offering of dangerous spots solution.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

QUALITY CONTROL SYSTEM IN ROAD TRANSPORT

Course unit number: 17

Hours weekly: 2+2+0+0 / III

ECTS credits: 5

Syllabus outline

Quality, notion and meaning. Quality of products, services and processes. Definitions and types of basic processes. Approach to quality ensuring. International norms of Quality control system HRN EN ISO 9000 ff. Elements of norm HRN EN ISO 9001:2002. Requirements of Quality control system. Documentation of Quality control system. Independent evaluation of Quality control system. Certification of Quality control system. Elimination of disproportions and quality improvement methods. Supervision and recertification visits. Quality expenses. Application of Quality control system in road transport.

Developing of general and specific competence (knowledge and skills)

Students get introduced to basics of building and implementation of Quality control system in enterprises, with the accent on road transport enterprises.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

INFRASTRUCTURE PLANNING IN RAIL TRANSPORT | **Course unit number: 18**

Hours weekly: 2+2+0+0 / III **ECTS credits: 5**

Syllabus outline

Railway infrastructure global history. Railway infrastructure development in Croatia. Railway infrastructure construction elements. Rail route design general principles. Railway line and bridge categorization. Railway line equipment. Railway line unloaded and loaded profile. Rail construction elements. Rail upper level elements. Rail upper level planning and maintenance methods. Rail geometry. Express railway lines worldwide and in Croatia. Inclination technique. Roadbed elements. Rail body. Rail body fastening and securing. Embankments, cuttings, and slopes. Drainage. Flood control. Supporting structures. Protective walls. Coatings. Railroad protection facilities. Environment protection facilities. Tunnels. Level crossings and passages. Railroad area. Railroad equipment. Bridges. Drains. Platform roofing. Goods station weighing machines. Railway stations. Railway station structures and facilities.

Developing of general and specific competence (knowledge and skills)

Familiarization with design, construction, and maintenance of railroads and facilities (upper level and facilities), as well as with rail transport development directions and possibilities, and advantages over any other transport type.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

RAILWAY VEHICLES IN RAIL TRANSPORT

Course unit number: 19

Hours weekly: 2+2+0+0 / III

ECTS credits: 6

Syllabus outline

Terms, types and classification of railway vehicles. Hauling vehicles. Diesel hauling vehicles. Electric hauling vehicles. Hauled vehicles. Passenger coaches, goods vans and wagons, special wagons. Railway vehicle braking system. Hauling vehicle output. Driving resistance. Train moving equation. Power consumption determination. Railway technical facilities control and maintenance latest achievements.

Developing of general and specific competence (knowledge and skills)

Familiarization with railway vehicle types and railway vehicle and infrastructure maintenance.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

TECHNOLOGICAL PROCESSES IN RAIL TRANSPORT

Course unit number: 20

Hours weekly: 2+2+0+0 / III

ECTS credits: 7

Syllabus outline

Railway system. Rail transport organization factors. Criterion and objective defining.
Railway station technological processes. Rail technical capacity. Rail transport models. Wagon flows.
Train traffic planning and operational control. Timetable draw-up. Technical and economic exploitation estimates.

Developing of general and specific competence (knowledge and skills)

Familiarization with rail transport technological process basic features and implementation in transport system.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

RAIL TRANSPORT SAFETY SYSTEM

Course unit number: 21

Hours weekly: 2+2+0+0 / III

ECTS credits: 7

Syllabus outline

Analysis of safety and reliability in rail transport. Measures to be taken to improve rail transport safety. Human factor in rail transport safety. Influence of occupational environment and working area on transport safety. Railway vehicles safety elements. Railway infrastructure control and maintenance. Modern warning-safety devices. Safety at railway-road crossings. Control information systems in railway transport. Trains automatic control system.

Developing of general and specific competence (knowledge and skills)

Introduction to safety factors, their importance and influence on safety improvement in rail transport. Defining the safety problem and ways of solving it by application of modern engineering achievements.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

QUALITY CONTROL SYSTEMS IN RAIL TRANSPORT

Course unit number: 22

Hours weekly: 2+2+0+0 / III

ECTS credits: 5

Syllabus outline

Quality, the term and meaning. Quality of products, services, and processes. Basic process definition and types. Approach to quality assurance. International standards in Quality Management System HRN EN ISO 9000 ff. The HRN EN ISO 9001:2002 standard elements. Quality Management System requirements. Respective documentation. Implementation and monitoring. Evaluation. Independent assessment. Certification. Non-compliance correction and quality upgrading methods. Supervision and recertification visits. Quality costs. Quality Management System implementation in rail transport.

Developing of general and specific competence (knowledge and skills)

Students acquire basic knowledge on the Quality Management System implementation in organizations, and particularly in railway transport organizations.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

INFRASTRUCTURE PLANNING IN POSTAL SERVICES | **Course unit number: 23**

Hours weekly: 2+2+0+0 / III **ECTS credits: 5**

Syllabus outline

Cable ducting system. Cable duct piping. Cable wells. Traction force estimate. Cable ducting. Cable ducting design draw-up. Air TC networks. Air TC network route marking. Fulcrum and traction force estimate. Laying of air TC networks. Cable burying. Cable laying and protection technology. Postal service premises design technical regulations. Postal service premises technical requirements. Technical requirements for exchange areas. Technical requirements for relay areas. Technical requirements for power system areas. Public postal premises specific interior design. Technical documentation. Familiarization with cadastral register and its updating.

Developing of general and specific competence (knowledge and skills)

Familiarization with design, construction, and maintenance of postal infrastructure, as well as with possibilities for postal service infrastructure upgrading.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

POSTAL SERVICES AND PROCESSES IN POSTAL SERVICES

Course unit number: 24

Hours weekly: 2+2+0+0 / III

ECTS credits: 6

Syllabus outline

Business proces concept. Business operation model. Business process modelling. Process continuous improvement. Business process reengineering. Skill management. Postal service operators. Postal service facilities. Postal service types. Postal parcel transport process. Postal parcel collection process. Postal parcel delivery process. Express delivery process. Parcel monitoring systems. Electronic operation and Internet in postal services. Process approach to Quality Management System (HRN EN ISO 9000).

Developing of general and specific competence (knowledge and skills)

Familiarization with postal process basic elements. Actual topics concerning standard and special postal services.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

MANAGEMENT IN POSTAL SERVICES

Course unit number: 25

Hours weekly: 2+2+0+0 / III

ECTS credits: 7

Syllabus outline

Postal system management. Organization and organization structure types. Public postal service operator organizational structure. International postal organization. Postal system management system (levels and competence scope). Organization and management in postal operator regional unit. Post office business control. Customer relations management. Human resources management. Quality management system – guidelines for capacity upgrading (HRN EN ISO 9004:2000).

Developing of general and specific competence (knowledge and skills)

Familiarization with postal system organizational structure and management level. Ability of involvement in postal processes.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

POSTAL SERVICES SAFETY SYSTEM

Course unit number: 26

Hours weekly: 2+2+0+0 / III

ECTS credits: 7

Syllabus outline

Safety and security equipment. Post office protection. Transport means protection. Lettermen protection. Postal safety activists (SPU). Postal safety manuals. International safety network. European postal safety network. International postal service safety and quality upgrading – postal service abuse programme MARIA 2000. Quality management systems – Requirements (HRN EN ISO 9001:2000).

Developing of general and specific competence (knowledge and skills)

Familiarization with security factors, their significance and influence upon postal service security improvement. Defining of security problems and solution finding by implementing latest models and technical achievements.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

POSTAL SERVICE QUALITY MANAGEMENT SYSTEM

Course unit number: 27

Hours weekly: 2+2+0+0 / III

ECTS credits: 5

Syllabus outline

Quality management history. Quality management system Preparation/Planning, Introduction, Control/Quality corrective measures, Business excellence, Postal service control system, Quality management systems – standards HRN EN ISO 9000.

Developing of general and specific competence (knowledge and skills)

The course provides basic knowledge on Quality Management System building and implementation in organizations, particularly in postal service organizations.

Methods of assessment

The course is carried out weekly, in the form of consultancy.

PRACTICAL SPECIALIST TRAINING

Course unit number: 28

Hours weekly: 0+0+0+(x) / IV

ECTS credits: 15

Syllabus outline

Practical specialist training assignments follow the contents of particular specialist study. Students are required to keep journals. Basic specialist training assignments are initially defined by practical training supervisors.

Developing of general and specific competence (knowledge and skills)

A 225-hour practical specialist training is performed under supervisor's control.
For quality purposes special arrangements are made with appropriate organizations through nominated mentors securing successful practical trainings. Students are required to keep journals.

Types of classes and methods of assessment

SPECIALIST GRADUATION THESIS

Course unit number: 29

Hours weekly: 0+0+(x)+0 / IV

ECTS credits: 15

Syllabus outline

Graduation thesis represents an independent work for assessment of student's professional knowledge required to evidence a certain level of skill in resolving independently a professional assignment. The content of the specialist graduation thesis is based on implementation of professional knowledge and skills acquired throughout the specialist professional study. Themes are limited to certain professional courses only. Topics are determined by mentors available for contacting throughout the thesis draw-up process. Thesis scope is determined within the 225-hour training.

Developing of general and specific competence (knowledge and skills)

Training for resolving independently a problem assigned implementing professional knowledge acquired throughout the study.

Types of classes and methods of assessment

In agreement with their mentors, students select their graduation thesis themes to be elaborated following mentor's suggestions for presentation before a commission.