



1. Subject name	Algorithm Design				
2. Code	KOKAM326	3. Evaluation	midterm	4. Credit	5
5. Seminars per week	2 lecture	0 practice	2 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	18 hours	Homework	30 hours
Reading written syllabus	34 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Control for Transportation and Vehicle Systems				
9. Responsible lecturer	Dr. Bécsi Tamás				
10. Lecturers	Dr. Bécsi Tamás				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
The course aims the introduction of algorithm theory and numerical complexity.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Automation of logistics systems				
2. Code	KOALM325	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	0 practice	2 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	18 hours	Homework	40 hours
Reading written syllabus	22 hours	Exam preparation	4 hours	Final exam preparation	10 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bohács Gábor				
10. Lecturers	Gáspár Dániel, Szabó Péter				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
This subject introduces integration of logistics automation into the higher levels of corporate governance. Communication possibilities in PLC networks are also addressed. Introduction of industrial communication protocols and interfaces. Effects of humans, identification and quality checking on automation.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Construction of logistics machinery				
2. Code	KOALM324	3. Evaluation	exam	4. Credit	3
5. Seminars per week	2 lecture	1 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	42 hours	Preparation for seminars	8 hours	Homework	0 hours
Reading written syllabus	19 hours	Exam preparation	6 hours	Final exam preparation	15 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bohács Gábor				
10. Lecturers	Dr. Bohács Gábor, Odonics Boglárka				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Introduction of main constructional issues of continuous and discontinuous operating materials handling machines.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Control of transport logistics				
2. Code	KOALM341	3. Evaluation	exam	4. Credit	3
5. Seminars per week	2 lecture	0 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	42 hours	Preparation for seminars	11 hours	Homework	13 hours
Reading written syllabus	10 hours	Exam preparation	4 hours	Final exam preparation	10 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Kovács Gábor				
10. Lecturers	Dr. Kovács Gábor, Dr. Tokodi Jenő, Dr. Bóna Krisztián				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>The components of the transport logistics control systems. Summary of GIS funds. Operational control problems and tasks of the transport logistics systems. Mathematical modelling techniques, decision supporting of transport logistics control systems. The mathematical model of transportation network. The shortest path search methods. The exact and the provisional planning. Modelling of routes: direct routes, collecting and distributing routes. The traveling salesman problem (TSP) and the vehicle routing problem (VRP). Soft computing methods. The IT architecture of the freight control systems. The mobile devices. The connection between the freight exchanges and the transport logistics control systems.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Control theory				
2. Code	KOKAM122	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	1 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	15 hours	Homework	0 hours
Reading written syllabus	52 hours	Exam preparation	12 hours	Final exam preparation	15 hours
8. Department	Department of Control for Transportation and Vehicle Systems				
9. Responsible lecturer	Dr. Gáspár Péter				
10. Lecturers	Dr. Gáspár Péter				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
The course provides deepening of knowledge in control theory. Provides theoretical knowledge, and discusses modern tools, which are necessary in later engineering practice. This is introduced through different examples, taken from vehicle, transportation and logistics systems.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Demand planning and inventory management				
2. Code	KOALM328	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	1 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	15 hours	Homework	40 hours
Reading written syllabus	18 hours	Exam preparation	6 hours	Final exam preparation	15 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Lénárt Balázs				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Specific resource planning areas in the enterprise logistics. Mathematical modeling in the demand planning process, model identification and parameter optimisation. Mathematical modeling in the inventory planning process, select inventory models, optimisation of control parameters, inventory control systems. Measurement of demand and inventory planning efficiency. Specific planning tools of ERP systems. The role of inventory and demand planning in the S&OP process.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Enterprise logistics project 1.				
2. Code	KOALM339	3. Evaluation	midterm	4. Credit	4
5. Seminars per week	0 lecture	4 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	56 hours	Preparation for seminars	16 hours	Homework	40 hours
Reading written syllabus	2 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Antal Norbert				
10. Lecturers	Dr. Bóna Krisztián, Dr. Kovács Gábor, Antal Norbert, Bakos András, Lénárt Balázs, Sztrapkovicz Balázs, Takács András, Fésüs Norbert, Kosztolányi János				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>Within the framework of the course, project groups are formed from the students, which are led by mentors. The project topics may include: operations management, complex project tasks, R&D tasks, based on the interests of student's. During the contact hours, the students consult with their mentors, moreover, each week brief report is held. The students present the problems and the suggested solutions, they practice the techniques of discussion, argumentation, and persuasion.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Enterprise logistics project 2.				
2. Code	KOALM343	3. Evaluation	midterm	4. Credit	7
5. Seminars per week	0 lecture	7 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					210
Contact hours	98 hours	Preparation for seminars	28 hours	Homework	70 hours
Reading written syllabus	8 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Antal Norbert				
10. Lecturers	Dr. Bóna Krisztián, Dr. Kovács Gábor, Antal Norbert, Bakos András, Lénárt Balázs, Sztrapkovic Balázs, Takács András, Fésüs Norbert, Kosztolányi János				
11. Mandatory requirement	KOALM339				
12. Recommended requirements	-				
13. Objective of the subject					
As the continuation of the Enterprise logistics project 1., the project groups get operations management tasks, complex project tasks or R&D tasks, based on the interests of student's. The task can be the continuation of what are launched in Enterprise logistics project 1., however, a new task also can be started. During the contact hours, the students consult with their mentors, moreover, each week brief report is held. The students present the problems and the suggested solutions, they practice the techniques of discussion, argumentation, and persuasion.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Forwarding Management 1				
2. Code	KOKKM132	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	2 practice	0 lab	6. Curriculum	K1 L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	12 hours	Homework	30 hours
Reading written syllabus	20 hours	Exam preparation	12 hours	Final exam preparation	20 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Mészáros Ferenc				
10. Lecturers	Dr. Mészáros Ferenc				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
History and attributes of freight forwarding, international agreements, different contract types, rules of extra ordinary freight forwarding, legal framework of customs, tasks of national and international forwarding services.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Forwarding Management 2				
2. Code	KOKKM133	3. Evaluation	exam	4. Credit	5
5. Seminars per week	3 lecture	1 practice	1 lab	6. Curriculum	K1 L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	70 hours	Preparation for seminars	17 hours	Homework	30 hours
Reading written syllabus	1 hours	Exam preparation	12 hours	Final exam preparation	20 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Mészáros Ferenc				
10. Lecturers	Dr. Mészáros Ferenc				
11. Mandatory requirement	KOKKM132				
12. Recommended requirements	-				
13. Objective of the subject					
Mode specific knowledge of freight forwarding management (road, rail, aviation, inland waterway and maritime, combined and LTL transport).					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Forwarding marketing				
2. Code	KOKKM135	3. Evaluation	midterm	4. Credit	4
5. Seminars per week	1 lecture	0 practice	2 lab	6. Curriculum	K1 L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	42 hours	Preparation for seminars	16 hours	Homework	20 hours
Reading written syllabus	36 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Kővári Botond				
10. Lecturers	Dr. Kővári Botond				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Marketing concepts, overview of resources. Market analysis methods. Product mix reviews. Advertising strategies.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Forwarding project 1.				
2. Code	KOKKM338	3. Evaluation	midterm	4. Credit	4
5. Seminars per week	0 lecture	4 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	56 hours	Preparation for seminars	16 hours	Homework	30 hours
Reading written syllabus	6 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Török Ádám				
10. Lecturers	Dr. Török Ádám				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Executive knowledge in managing freight forwarding companies					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Forwarding project 2.				
2. Code	KOKKM342	3. Evaluation	midterm	4. Credit	2
5. Seminars per week	0 lecture	2 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					60
Contact hours	28 hours	Preparation for seminars	8 hours	Homework	15 hours
Reading written syllabus	3 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Mészáros Ferenc				
10. Lecturers	Dr. Mészáros Ferenc				
11. Mandatory requirement	KOKKM338				
12. Recommended requirements	-				
13. Objective of the subject					
Executive knowledge in managing freight forwarding companies					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Integrated material flow systems				
2. Code	KOALM332	3. Evaluation	exam	4. Credit	4
5. Seminars per week	2 lecture	1 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	42 hours	Preparation for seminars	8 hours	Homework	19 hours
Reading written syllabus	24 hours	Exam preparation	12 hours	Final exam preparation	15 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bohács Gábor				
10. Lecturers	Dr. Bohács Gábor, Gáspár Dániel, Szabó Péter, Odonics Boglárka				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Traditionally materials handling systems are separated from technology. There are however special applications, such as assembly lines in the electronic industry where the material handling systems are in strong integration with the technological equipment. During the classes these special machines are addressed.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Lean management				
2. Code	KOALM322	3. Evaluation	midterm	4. Credit	4
5. Seminars per week	2 lecture	1 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	42 hours	Preparation for seminars	8 hours	Homework	30 hours
Reading written syllabus	28 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Kosztolányi János				
10. Lecturers	Kosztolányi János, Sztrapkovic Balázs, Takács András				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>Methods of continuous improvement. The teamwork, establishment of suggestion systems, the role of motivation. Main brainstorming methods, the advantages and disadvantages of each method. Introduction and application of problem finding tools, methods for failure analysis, applicability of the main methods. Data request for failure analysis methods. The basics of standardization, the steps of making standard processes, the zero failure concept (Jidoka, Poka-Yoke), production equalization in lean management: mathematical methods for Heijunka. Process development methods, and techniques. The importance of changeover time, methods for the reduction of changeover time in the companies. The basics of ergonomics, types of workplaces from the aspect of ergonomics, the steps of REBA analysis. Lean office methods and tools. The basics of Six Sigma method, mathematical background, the levels of quality. Description of six sigma analysis, evaluation of the results. The relationship between six sigma and lean.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Logistics controlling				
2. Code	KOKKM330	3. Evaluation	midterm	4. Credit	3
5. Seminars per week	2 lecture	0 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	28 hours	Preparation for seminars	4 hours	Homework	12 hours
Reading written syllabus	34 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Duleba Szabolcs				
10. Lecturers	Nagy Zoltán				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>The primary task of logistics controlling is managing all logistics activities using comprehensive measures on all levels of a company with the provision of information processing systems based on the management's information needs. After the completion of this module, the graduate will have the knowledge and an understanding of the fundamentals and characteristics of reporting systems for logistics, logistics accounting and cost accounting, activity-based costing, strategic logistics controlling and logistics benchmarking.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Logistics information system planning				
2. Code	KOALM321	3. Evaluation	midterm	4. Credit	5
5. Seminars per week	2 lecture	0 practice	2 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	18 hours	Homework	30 hours
Reading written syllabus	34 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Tokodi Jenő				
10. Lecturers	Dr. Tokodi Jenő, Lénárt Balázs				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Logistics information system (LIS) databases. LIS planning. IT representation of system elements, purchase orders, sales, production, quality assurance. System and software planning methods. IT representation of data formats, schemes, process description. Service oriented architecture, webservices, interfaces, Enterprise Service Bus, Orchestrating. ERP webservices, workbench, dictionary, business warehouse, reporting. BI systems. Transactional database.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Logistics planning softwares				
2. Code	KOALM336	3. Evaluation	midterm	4. Credit	3
5. Seminars per week	0 lecture	0 practice	2 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	28 hours	Preparation for seminars	14 hours	Homework	36 hours
Reading written syllabus	12 hours	Exam preparation	0 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Tokodi Jenő				
10. Lecturers	Lénárt Balázs, Fésűs Norbert, Sztrapkovics Balázs				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Classification of softwares in logistics planning. Introduction of software tools in corporate process planning, including designing flow chart (EPC, BPMN), Gantt chart, Fishbone diagram. The functions of computer aided design softwares, basic components, transformations, dynamic blocks, scaling, managing layers. Standard symbols of logistics components. Basic of spatial designing. Project management softwares.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Mathematics ML				
2. Code	TE90MX60	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	2 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	12 hours	Homework	0 hours
Reading written syllabus	50 hours	Exam preparation	12 hours	Final exam preparation	20 hours
8. Department	Mathematical Institute				
9. Responsible lecturer	Dr. Sági Gábor				
10. Lecturers					
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
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14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Numerical optimization				
2. Code	KOVRM334	3. Evaluation	exam	4. Credit	5
5. Seminars per week	3 lecture	0 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	13 hours	Homework	28 hours
Reading written syllabus	38 hours	Exam preparation	0 hours	Final exam preparation	15 hours
8. Department	Department of Aeronautics, Naval Architecture and Railway Vehicles				
9. Responsible lecturer	Dr. Rohács József				
10. Lecturers	Dr. Rohács József, Bicsák György				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Introduction. System modeling. General model, assumptions, errors. Solving the non-linear equation, Newton iteration. Polynomial equations, Horner, Newton methods. Systems of linear equations: Gauss elimination, Matrices, eigenvalues. optimization. Linear programming. Transformation to standard forms. Simplex Method. Sensitivity analysis. Transport logistics. Supply chain and production processes, distributing systems. Genetic algorithm. Non-linear optimization, gradient method. Specific cases. Theory of play. Stockpiling. Interpolation. Newton's, Lagrange Hermite methods, spline. Approximation: Chebyshev, Padé. Fast Fourier transformation. Numerical differentiation, integration. Solving the differential equations. Euler, Runge-Kutta, predictor-corrector methods. Systems of partial differential equations. Finite differences, finite volumes methods. Stochastic modeling. Markov models.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Planning of extra-logistics networks				
2. Code	KOALM337	3. Evaluation	exam	4. Credit	4
5. Seminars per week	2 lecture	1 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	42 hours	Preparation for seminars	8 hours	Homework	30 hours
Reading written syllabus	19 hours	Exam preparation	6 hours	Final exam preparation	15 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Dr. Kovács Gábor				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
Architecture and mathematical representation of extra-logistics networks. Key performance indicators of extra-logistics networks, methodology of network-performance measurement. Criteria set of network optimization. Optimization methods of network topology, one or more region centre searching techniques. Logistics performance based optimization methods. The rule of inventories in the topology optimization of extra-logistics network. Multi-echelon inventory networks.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Planning of plant logistics systems				
2. Code	KOALM327	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	2 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	12 hours	Homework	40 hours
Reading written syllabus	16 hours	Exam preparation	6 hours	Final exam preparation	20 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Dr. Bohács Gábor, Kosztolányi János				
11. Mandatory requirement	KOALM331, KOALM336				
12. Recommended requirements	KOALM335				
13. Objective of the subject					
<p>The specific properties and planning process of plant logistics systems. The main steps and tasks of logistics planning. The plant layout planning techniques and methods. The specific plant layout topologies. Optimization and heuristic methods in plant layout design. How to create a logistics system plan in case of a plant logistics system? The material flow system architecture in a plant. The planning steps of the material flow systems in a plant. The methodology of material flow system planning, the main heuristic and optimization models. Analytical queueing theory and simulations methods in the planning of plant logistics systems. Integration of the basic arguments of lean in the planning process.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Planning of warehousing systems				
2. Code	KOALM323	3. Evaluation	exam	4. Credit	5
5. Seminars per week	2 lecture	2 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					150
Contact hours	56 hours	Preparation for seminars	12 hours	Homework	40 hours
Reading written syllabus	16 hours	Exam preparation	6 hours	Final exam preparation	20 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Bakos András				
11. Mandatory requirement	KOALM331, KOALM336				
12. Recommended requirements	KOALM335				
13. Objective of the subject					
The main material flows and processes in a warehouse. Specific logistics system planning methodology of warehousing systems. The typical logistics technology variations of storing. Planning of transporting connections and loading technology. Planning the dimensions of loading bays, and preparation areas of warehouses. Order picking methods and systems. The technology of order picking. Planning of order picking process. Planning the topology and layout of storage systems. How to create a logistics system plan of a warehousing technology?					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Process planning				
2. Code	KOALM331	3. Evaluation	exam	4. Credit	3
5. Seminars per week	2 lecture	1 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	42 hours	Preparation for seminars	8 hours	Homework	15 hours
Reading written syllabus	4 hours	Exam preparation	6 hours	Final exam preparation	15 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Kovács Gábor				
10. Lecturers	Dr. Kovács Gábor, Fésüs Norbert				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>Interpretation the process, parts, contacts, activities, events and processes. Standard methods for the description of the processes. Process Charting Techniques. Process Description levels. Top-down modeling. Standard process description languages. Standard Operating Procedure. Cross-Functional Flowchart. Petri net. Event Driven Process Chain (EPC). Business Process Modeling Notation (BPMN). Integrated Definition Methods (IDEF). Logistics processes modelled by using the standard languages: goal-oriented application.</p>					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Production planning & scheduling				
2. Code	KOALM329	3. Evaluation	exam	4. Credit	4
5. Seminars per week	2 lecture	0 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	42 hours	Preparation for seminars	11 hours	Homework	30 hours
Reading written syllabus	23 hours	Exam preparation	4 hours	Final exam preparation	10 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Kosztolányi János, Dr. Tokodi Jenő				
11. Mandatory requirement	KOALM328				
12. Recommended requirements	-				
13. Objective of the subject					
Theory of production planning and scheduling. Main topics, goals and constraints in the production systems, the system architecture of production control. Modelling of products and production technology. Connection points to the customer orders and forecasts. Then main production strategies. Production and capacity planning. The time view of production scheduling, the long, middle and short term planning. The informatics of the production planning and scheduling. Production planning and scheduling algorithms. The rule of production planning in the S&OP process.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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1. Subject name	Simulations planning				
2. Code	KOALM335	3. Evaluation	midterm	4. Credit	3
5. Seminars per week	1 lecture	1 practice	1 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	42 hours	Preparation for seminars	13 hours	Homework	15 hours
Reading written syllabus	8 hours	Exam preparation	12 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bóna Krisztián				
10. Lecturers	Dr. Bóna Krisztián, Dr. Bohács Gábor, Fésüs Norbert, Rinkács Angéla				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
<p>The types of models, the basics and mathematical rudiments of modelling. Stochastic and deterministic processes, and the main process properties. The definition of computer based simulation modelling and the application in the logistics system planning. Simulation algorithms and programming. Simulation and optimization, simulation based optimization methods. The simulation softwares and simulators. Application of simulation based optimization methods in logistics. Application of artificial intelligence in specific logistics optimization problems. Development of simulation systems and models in intra- and extra logistics systems.</p>					
14. Individual student assignment					
-					
15. Assessment, requirements for examination					
-					



1. Subject name	Technical logistics project 1.				
2. Code	KOALM333	3. Evaluation	midterm	4. Credit	4
5. Seminars per week	0 lecture	4 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					120
Contact hours	56 hours	Preparation for seminars	16 hours	Homework	40 hours
Reading written syllabus	2 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bohács Gábor				
10. Lecturers	Dr. Bohács Gábor, Gáspár Dániel, Szabó Péter, Rinkács Angéla, Odonics Boglárka				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
During the classes students of the technical logistics specialization learn advanced engineering planning systems, and their relation to the expert field of logisticians.					
14. Individual student assignment					
-					
15. Assessment, requirements for examination					
-					



1. Subject name	Technical logistics project 2.				
2. Code	KOALM340	3. Evaluation	midterm	4. Credit	7
5. Seminars per week	0 lecture	7 practice	0 lab	6. Curriculum	L1
7. Needed working hours for achieving the requirements of the subject					210
Contact hours	98 hours	Preparation for seminars	28 hours	Homework	70 hours
Reading written syllabus	8 hours	Exam preparation	6 hours	Final exam preparation	0 hours
8. Department	Department of Material Handling and Logistics Systems				
9. Responsible lecturer	Dr. Bohács Gábor				
10. Lecturers	Dr. Bohács Gábor, Gáspár Dániel, Szabó Péter, Rinkács Angéla, Odonics Boglárka				
11. Mandatory requirement	KOALM333				
12. Recommended requirements	-				
13. Objective of the subject					
During this subject students perform and complete a technical logistics project in groups. These can originate from either the industry or from defined research and innovation tasks.					
14. Individual student assignment					
-					
15. Assessment, requirements for examination					
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1. Subject name	Trade, Financial, Accounting Techniques				
2. Code	KOKKM138	3. Evaluation	exam	4. Credit	3
5. Seminars per week	1 lecture	1 practice	1 lab	6. Curriculum	K1 L1
7. Needed working hours for achieving the requirements of the subject					90
Contact hours	42 hours	Preparation for seminars	13 hours	Homework	0 hours
Reading written syllabus	13 hours	Exam preparation	12 hours	Final exam preparation	10 hours
8. Department	Department of Transport Technology and Economics				
9. Responsible lecturer	Dr. Mészáros Ferenc				
10. Lecturers	Dr. Mészáros Ferenc				
11. Mandatory requirement	-				
12. Recommended requirements	-				
13. Objective of the subject					
General principles of international trade, stakeholders and their relationships, trade transactions. Set and elements of the banking system, frequent financial transactions of freight forwarders. Accounting obligations and techniques of freight forwarding companies, balance sheet and profit and loss statement.					
14. Individual student assignment					
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15. Assessment, requirements for examination					
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