Study plan

Name of study plan: Systematic Integration ofPprocesses in Healthcare - combined study

Faculty/Institute/Others:
Department:
Branch of study guaranteed by the department: Welcome page
Garantor of the study branch:
Program of study: Systematic Integration of Processes in Healthcare
Type of study: Follow-up master 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: 105
The role of the block: Z

Code of the group: F7KMS POV 19
Name of the group: Systematic Integration of Processes in Healthcare compulsory course
Requirement credits in the group: In this group you have to gain 105 credits
Requirement courses in the group: In this group you have to complete 29 courses
Credits in the group: 105
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
17BOZP	**Occupational Safety and Health, Fire Protection and First Aid** *Petr Kudrna **Petr Kudrna** Petr Kudrna (Gar.)*	Z	0	1P	Z	z
F7KMSBSCD	**Statistical Methods in the Analysis of Clinical Studies** *Aleš Tichopád, Marian Rybář, Vojtěch Kamenský, Martina Homolková **Vojtěch Kamenský** Aleš Tichopád (Gar.)*	Z,ZK	4	12P+8S	Z	z
F7KMSBE	**Business English** *Jitka Mariňáková **Jitka Mariňáková** Jitka Mariňáková (Gar.)*	KZ	2	8S	L	z
F7KMSEMM	**Economic-mathematical Methods** *David Vrba, Vladimír Rogalewicz **David Vrba** David Vrba (Gar.)*	KZ	2	4P+4S	Z	z
F7KMSEK	**Economics** *Petra Hospodková, Lucie Severová, Martina Caithamlová **Petra Hospodková** Lucie Severová (Gar.)*	Z,ZK	5	8P+8S	Z	z
F7KMSEZZ	**Economy of Healthcare Facilities** *Petra Hospodková **Petra Hospodková** Petra Hospodková (Gar.)*	Z,ZK	3	12P+8S	L	z
F7KMSHZT	**Health Technology Assessment** *Gleb Donin, Ondřej Gajdoš, Martina Holá **Martina Holá** Vladimír Rogalewicz (Gar.)*	Z,ZK	4	12P+8S	L	z
F7KMSIP	**Individual Training** *Martina Caithamlová **Martina Caithamlová** Martina Caithamlová (Gar.)*	Z	2	2XT	Z	z
F7KMSIZZ	**Information Sources in Healthcare** *Vojtěch Kamenský, Gleb Donin **Vojtěch Kamenský** Gleb Donin (Gar.)*	KZ	3	4P+8S	Z	z
F7KMSIZS	**Integrated Rescue System and the Disaster Medicine** *Ondřej Šedivka, Renata Havránková, Zdeněk Hon, Leoš Navrátil, Lukáš Miklas, Tomáš Čermák **Leoš Navrátil** Leoš Navrátil (Gar.)*	ZK	5	8P	L	z
F7KMSLKH	**Legislation in Healthcare and Clinical Evaluation** *Vojtěch Kamenský, Ondřej Gajdoš, Peter Kneppo **Vojtěch Kamenský** Peter Kneppo (Gar.)*	Z,ZK	5	12P+8S	Z	z
F7KMSMZT	**Health Technology Management** *Vojtěch Kamenský, Martin Rožánek, Jiří Petráček **Petr Volf** Martin Rožánek (Gar.)*	KZ	5	12P+8S	L	z
F7KMSMZZ	**Management of Medical Facilities** *Petra Hospodková, Martina Caithamlová, Ján Lešťák **Petra Hospodková** Ján Lešťák (Gar.)*	Z,ZK	4	8P+8S	Z	z
F7KMSNIS	**Hospital Information Systems** *Jan Bruthans, Anna Horňáková **Anna Horňáková** Jan Bruthans (Gar.)*	Z,ZK	3	8P+4S	Z	z

F7KMSOP	**Professional Training** ***Petra Hospodková*** *Jan Bříza (Gar.)*	Z	2	4XT	L	z
F7KMSPLPT	**Overview of Medical Devices** *Petr Kudrna, Martin Rožánek* ***Petr Volf*** *Martin Rožánek (Gar.)*	Z,ZK	4	12P+8C	L	z
F7KMSPMF	**Overview of Mathematics and Physics** *David Vrba, Jana Urzová* ***David Vrba*** *David Vrba (Gar.)*	Z,ZK	4	8P+8S	Z	z
F7KMSRP	**Annual Project** *Gleb Donin, Ondřej Gajdoš* ***Anna Erfányuková*** *Gleb Donin (Gar.)*	Z	2	8S	L	z
F7KMSRKZ	**Quality Management in Healthcare** *Vojtěch Kamenský, Peter Kneppo* ***Vojtěch Kamenský*** *Peter Kneppo (Gar.)*	Z,ZK	5	12P+8S	L	z
F7KMSRLZ	**Management of Human Resources** *Zuzana Dvořáková* ***Zuzana Dvořáková*** *Zuzana Dvořáková (Gar.)*	Z,ZK	3	4P+4S	Z	z
F7KMSRNZ	**Management of Costs in Healthcare** *Martina Caithamlová* ***Martina Caithamlová*** *Jindřich Nový (Gar.)*	KZ	5	8P+8S	Z	z
F7KMSSDP1	**Diploma Thesis Seminar I.** ***Vladimír Rogalewicz*** *Vladimír Rogalewicz (Gar.)*	Z	2	8S	Z	z
F7KMSSDP2	**Diploma Thesis Seminar II.** ***Gleb Donin*** *Gleb Donin (Gar.)*	Z	2	12S	L	z
F7KMSVZ1	**Public Healthcare I.** *Jan Bříza* ***Jan Bříza*** *Jan Bříza (Gar.)*	ZK	5	8P	Z	z
F7KMSVZ2	**Public Healthcare II.** *Jan Bříza, Věra Adámková* ***Jan Bříza*** *Věra Adámková (Gar.)*	Z,ZK	4	8P	L	z
F7KMSVKZP	**Selected Chapters from Medical Processes** *Milan Bednařík*	KZ	5	8P+4S	Z	z
F7KMSZSED	**Medical Systems and their Economic Dimension** *Miroslav Selčan, Miroslav Barták* ***Miroslav Barták*** *Miroslav Barták (Gar.)*	Z,ZK	4	8P+8S	L	z
F7KMSZSVS	**Healthcare as Part of the Public Sector** *Miroslav Barták, Zuzana Kotherová, Andrea Vodochodská* ***Andrea Vodochodská*** *Zuzana Kotherová (Gar.)*	ZK	3	8P	Z	z
F7KMSDP	**Diploma Thesis** *Martina Caithamlová, Gleb Donin*	Z	8	4XT	L	z

Characteristics of the courses of this group of Study Plan: Code=F7KMS POV 19 Name=Systematic Integration of Processes in Healthcare compulsory course

17BOZP	Occupational Safety and Health, Fire Protection and First Aid	Z	0
F7KMSBSCD	Statistical Methods in the Analysis of Clinical Studies	Z,ZK	4
The course focuses on methods of statistical analysis designed primarily for medical research and clinical evaluation of medical devices. Students will be introduced to clinical research methodology, clinical study design and then to commonly used methods of processing and testing clinical data.			
F7KMSBE	Business English	KZ	2
The aim of this study material is to make students familiar with the Business English before embarking on a career in business. The course covers not only terminology connected with the field of business English, but also grammar most often used in the given context. The material depicts a wide range of business topics including Jobs, Organisations, Marketing, Finance, Accounting etc. It presents and explains new words in the context of real situations and shows the student how to use them and how to work out the rules for using them. The students practise their newly acquired knowledge in the exercises related. The material is also designed to help the students to orientate in business environment of different cultures as well as to improve their speaking skills, using open questions for the students to discuss and talk about. Thus it allows the student to express their ideas, support or question different opinions and get prepared for real business sphere.			
F7KMSEMM	Economic-mathematical Methods	KZ	2
Selected topics in mathematics to support economic courses			
F7KMSEK	Economics	Z,ZK	5
The course introduces the main rules and notions of microeconomics, the market theory, market environment, market balance, demand and supply. Furthermore, the course covers the topic of demand and supply elasticity - graphiical and mathematical expression of elasticity, consumer´s behavious, his optimum. The lecture continues with the theory of the firm, including costs and production, profit maximization, etc. The end of the microeconomics part introduces the theory of perfect/imperfect competition (monopoly, oligopoly, monopolistic competition). As concerns macroeconomics, the course deals above all with the gross domestic product, its creation, distribution, and practical utilization. Moreover, the course contains the theory of money market, monetary policy, its tools and goals. Inflation, its nature, forms, causes and effects. Unemployment. The following part of the course deals with the fiscal policy, national budget, Maastricht criteria. The course is finished with international trade, balance of payments, exchange rates.			
F7KMSEZZ	Economy of Healthcare Facilities	Z,ZK	3
The course introduces the basic categories of economics of healthcare facilities (hospitals, public and private clinics) with respect to cost, revenues and performance. It deals with financial management, marketing and other health-related professional activities and functions and their management. Health economics is a specific branch within economics concerned with the efficient allocation of scarce resources with respect to health and healthcare. It aims to develop and deepen the knowledge and skills of students in the field of financial management tools, financing of healthcare needs and performance analysis. The accent is also put on the understanding of the healthcare facility in its integrity and complexity, especially with respect to the basic target function.			
F7KMSHZT	Health Technology Assessment	Z,ZK	4
F7KMSIP	Individual Training	Z	2
The Individual professional training is an integral part of good and qualified preparation for prospective occupation. The training provides a student with an opportunity to practice theoretical knowledge in the form of independent work supervised by a professional worker. The Individual professional training represents such form of a tuition in which the students are placed in individual workplaces within medical facilities, or in production or servicing organizations in the field of medical devices. The students, on the basis of predetermined study plans, acquire deeper practical skills and work independently under supervision of an appointed worker. The training on selected workplaces must be on a high professional level. All hygienic, safety and other measures, relevant for the specific workplace must be followed within the training. Students are acquainted with the regulations of the given workplace. The training is supervised and evaluated by its guarantor. The professional training of students of the program Systematic integration of processes in Healthcare is focused namely on the area of legislation, documentation of medical devices in medical facilities, medical procedures reports to health insurance companies, area of tenders, preparation of materials for procurements, preparation and realisation of purchase of medical devices, management quality in medical facilities, work with information systems, operating of medical facility, internal audit and other activities.			
F7KMSIZZ	Information Sources in Healthcare	KZ	3

F7KMSIZS	Integrated Rescue System and the Disaster Medicine	ZK	5

The aim of the course is to acquaint the students with the origin and development of the Integrated Rescue System (IRS) in the Czech Republic, its characteristics and main tasks of the basic and other IRS bodies in the preparedness and solution of emergency and crisis situations, with the principles of tactical, operational and strategic management of IRS bodies, with the role of the public authorities in handling emergency situations and within the population protection. The course furthermore provides information on current threats that can negatively affect health care service in relation to the provision of medical care, on the field of crisis management, and above all on the preparedness of inpatient facilities to provide care in emergency and crisis situations involving mass casualties, including the processes and procedures arising from trauma plans of outpatient and inpatient facilities.

F7KMSLKH	Legislation in Healthcare and Clinical Evaluation	Z,ZK	5

Learning outcomes of the course unit The goal is to acquaint students with the rights and obligations arising from current legislation on health care issues. Emphasis is not placed on memorizing the literal wording of the legislation, but on familiarizing students with the main points and ideas contained in EU directives, regulations, laws, standards and EU directives in healthcare. The student should have a comprehensive overview of health legislation after completing the course.

F7KMSMZT	Health Technology Management	KZ	5

Infrastructure of hospital and its architecture. Distributions of stuff (engineering distributions electro-circuits, specifics of the circuits, water, gas distribution, systems of power, sources, drives, compensation, spaces in health care specifics of elementary spaces, steam distribution). Practical seminars from design of the project. Typical Czech norms and standards Ministry of health CR specifying all requirements for different departments and devices. Barrier-free construction of health institutions.

F7KMSMZZ	Management of Medical Facilities	Z,ZK	4

The aim of the course is to introduce the basic categories in management such as organizing, decision making, influencing or human resources. The introduction to the crisis management is a part of the course. The accent is put on the differences of the health facilities in comparison with the classical company. The aim of seminars is to connect the theory and practice, so case studies and team activities form the content of seminars.

F7KMSNIS	Hospital Information Systems	Z,ZK	3

The subject addresses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information is put in the context of Czech eHealth systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth systems and its development and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intranet systems).

F7KMSOP	Professional Training	Z	2

Individual practical training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get acquinted with an organization of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical setting.

F7KMSPLPT	Overview of Medical Devices	Z,ZK	4

The course is focused on medical devices and equipment and medical imaging systems. The aim of the course is to present to students basic principles of typical medical devices. A content of the course is prepared so that student can understand topics with medical devices within the further courses. The course covers diagnostic and therapeutic medical technology together with imaging modalities. The student will know basic technical parameters of typical medical devices used commonly in the clinical practice. The course covers categorization of the medical equipments, devices for measurement of blood pressure, measurement of bioelectric heart activity (ECG) - electrocardiograph, monitor of vital signs, measurement of bioelectrical activity of the brain (EEG) electroencephalograph, measurement of bioelectric activity of the muscles (EMG) electromyograph, electrosurgical units (ESU), cardio-stimulators, defibrillators, equipment of anesthesia care units, lung ventilators and basic concepts of imaging systems, X-ray, CT, SPECT, PET a US systems. The overview of the methods used in radiotherapy is also a part of the course.

F7KMSPMF	Overview of Mathematics and Physics	Z,ZK	4

Students will acquire basic knowledge of linear algebra (vectors, matrices, systems of linear equations), and differential and integral calculus of the functions of one variable (limit, continuity, derivation, function path, integrals). They will be able to solve systems of linear equations and apply linear algebra and differential methods and integral calculus to practical examples. In the teaching of physics, emphasis is placed on the context of individual physical disciplines and the application of mathematics. Through lectures and numerical exercises, students will acquire basic knowledge of physics with a focus on medical practice. Upon completion of the course students will be ready to study other technical subjects.

F7KMSRP	Annual Project	Z	2

The course is designed to prepare students for the final work of Faculty of Biomedical Engineering, CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her knowledge from the previous stages of study. Subject "Annual project represents the first stage of the diploma thesis. The main goal is based on the elaborated and approved current state of the issue of generating a suitable topic of the diploma thesis, description of the goals, overview of the planned methods, expected benefit and rationale of the topic selection. At the end of the second semester, the selected entry is entered into the approval process of the department, subject to the following conditions: 1. Thematically fit into the study program Systematic Integration Processes in Healthcare concept (ie focusing on at least 2 of the three basic disciplines: economic, managerial, medical, technical). 2. The scope of planned scientific work to meet the parameters for DP (especially in terms of planned methods and benefits) The topics are prepareed by the relevant supervisors and are listed in the "PROJECTS" system, and during the semester they are specified. To ensure the aforementioned conditions, the student cooperates with the supervisor and the consultant and actively participates in the adaptation. Pursuant to Act 111/1998 Coll. the student has the opportunity to design a topic for which the above conditions apply. Approved assignments of yearly projects become the starting point for the second seminar, ie the Diploma Thesis Seminar 1, where the student elaborates further parts of the diploma thesis.

F7KMSRKZ	Quality Management in Healthcare	Z,ZK	5

Within the subject of Quality Management in Health care the student acquaints himself with basic concepts such as: product, its characteristics and definition, quality, management, requirement, customer satisfaction, fitness. They will also learn about the relevant standards. The subject is the following topics: Quality of systems and processes in healthcare. Procedural proceedings. Lean Management. Standards of the ISO series. Implementation of the Quality Management System (SMJ) in a healthcare organization, justification of SMU needs for healthcare organizations, process approach. Quality Policy and Quality Targets, Quality Manual, Quality System Audit, Quality Plan, Objective Evidence, Inspection, Inspection, Examination, Validation Verification, Qualification Process. Audit: Review, Audit Program, Audit Criteria, Audited Organization, Audit Team, Expert, Health Care Standards. Euromodel TQM. Management and implementation of processes in healthcare facilities, definition and mapping of processes and subprocesses. Design of integration of healthcare facility management. Possibilities of using TQM within healthcare facilities. Standards and indicators in the quality of health care. Quality in laboratories. Accreditation of medical facilities according to SAK and JCI. Quality management tools. Risk management.

F7KMSRLZ	Management of Human Resources	Z,ZK	3

After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a few scattered tasks to a centralized activity, assuming additional necessary responsibilities as they arose. - describe or formulate the mission of HR department or area in healthcare organization - understand and apply the principles of teamwork - describe the principles of good leadership and people management Objectives: -to enable students to approach Human Resource Management in a systematic manner and to recognize its importance for strategic management in Health Care Institutions; -to enable students to reflect and where appropriate, modify policies and practices internal to the organization with reference to pressures from external institutions; -to help students to come to terms with the complex nature of the employment relationship and how the interlocking tasks of Human Resource management respond to changes which occur over time in individual employees and the workforce as a whole.

F7KMSRNZ	Management of Costs in Healthcare	KZ	5

The students are acquainted with basic economic concepts connected with the issue of costs, their division and methods of determination. The costs are discussed in more detail both from the point of view of corporate practice and economic theories. Students strive to apply theoretical knowledge and solve practical examples. Potential options on how to reduce costs are also discussed. An integral part of the course is to practice the given topic using examples and graphs, everything being solved in connection with the practice. Students learn to understand the meaning and significance of budgeting and costing from the point of view of management and in relation to economic activities of a company.

F7KMSSDP1	Diploma Thesis Seminar I.	Z	2
The course is designed to prepare students for the final work of FBMI CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her ability to integrate knowledge from the previous stages of study. The Diploma Thesis Seminar 1 follows up the subject Annual Project. The seminar is conceived as a continuous and controlled work on the methodology of the student's research work. On the basis of the current state of the problem, the student will choose the appropriate methods for the Diploma Thesis solution and develop a specific chapter - Methods. The seminar presentations are the presentation of the progress, the elaboration and the ongoing results of the students' diploma thesis and their continuous control and discussion. All students will present their research on Student Scientific Conference.			
F7KMSSDP2	Diploma Thesis Seminar II.	Z	2
The course is designed to prepare students for the final work of FBMI CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her ability to integrate knowledge from the previous stages of study. The Diploma Thesis Seminar 2 builds on the outputs of the Seminar for Diploma Thesis 1 and the Annual Project. The aim of the seminar is to teach students how to process the results and the discussion and thus bring the diploma work to a successful conclusion. Students will present 2 presentations of the progress, the elaboration and the ongoing results of their diploma thesis and their continuous control and discussion. The student is also prepared for the final defense of his diploma thesis.			
F7KMSVZ1	Public Healthcare I.	ZK	5
F7KMSVZ2	Public Healthcare II.	Z,ZK	4
F7KMSVKZP	Selected Chapters from Medical Processes	KZ	5
Healthcare is a highly complex process calling for the fulfillment of a whole range of different technical requirements in order to provide quality health services. In its introductory section, the subject of the course deals with issues such as providing healthcare facilities with resources, delivering pharmaceutical drugs, medical aids and other essential commodities for their operation. It also seeks to clarify the issues involving requirements for technical equipment, measuring devices, examination and check-ups of medical instrumentation, occupational safety and health, fire protection, handling of chemicals and chemical compounds, and waste disposal in healthcare facilities. The final set of lectures is focused on questions of safeguarding quality and patient safety, protection of employees´ and patients´ data, procedures for checking the quality of provided care by means of certification of healthcare facilities.			
F7KMSZSED	Medical Systems and their Economic Dimension	Z,ZK	4
Different elements of healthcare systems are studied so as the different possibilities of healthcare system design, its conditions and consequences. The healthcare systems are analyzed in international dimension, the Czech healthcare system is presented in details.			
F7KMSZSVS	Healthcare as Part of the Public Sector	ZK	3
Healthcare as part of the public sector this course ekes out the gained general economic knowledge with issues from public economy discipline, all applied to the healthcare sector. In the introductory part, the role of the public sector within the national economy is studied and discussed from different points of view. The concept of market and government failure problematic is presented and discussed - the accent is put mainly on public goods, externalities and control mechanism in the public sector.			
F7KMSDP	Diploma Thesis	Z	8

Name of the block: Compulsory elective courses
Minimal number of credits of the block: 15
The role of the block: S

Code of the group: F7KMS PV 2S A
Name of the group: Systematic Integration of Processes in Healthcare combined studies compulsory optional course
Requirement credits in the group: In this group you have to gain at least 3 credits (at most 6)
Requirement courses in the group: In this group you have to complete at least 1 course (at most 2)
Credits in the group: 3
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
F7KMSJIP	**Icus and Mobile Healthcare Units** ***Petr Kudrna***	KZ	3	8P+4C	L	S
F7KMSPIZ	**Work with Information Sources and Research Methodology** ***Jakub Ráfl***	KZ	3	8P+4S	L	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 2S A Name=Systematic Integration of Processes in Healthcare combined studies compulsory optional course

F7KMSJIP	Icus and Mobile Healthcare Units	KZ	3
The course offers a brief overview of resuscitation and intensive care in anesthesia-resuscitation units, specialized and mobile intensive care units. The aim of the course is present current trends in biomedical engineering in this area to students. Studying course assumes basic knowledge especially from internal and chirurgic specializations. After the completion of the course, the students should be able to actively communicate with a clinical physician and assist with optimal methods of solution in specific cases.			
F7KMSPIZ	Work with Information Sources and Research Methodology	KZ	3
The subject introduces the students to the principles of the correct writing of research texts, studies and presentations; also with principles of preparation, execution and processing of biomedical experiments, including ethical issues of biomedical research.			

Code of the group: F7KMS PV 3S A
Name of the group: Systematic Integration of Processes in Healthcar combined studies compulsory optional course
Requirement credits in the group: In this group you have to gain at least 3 credits (at most 9)
Requirement courses in the group: In this group you have to complete at least 1 course (at most 3)
Credits in the group: 3
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
F7KMSEAZ	**Economic Analyses in Healthcare** *Gleb Donin, Ondřej Gajdoš **Barbora Mašková** Gleb Donin (Gar.)*	KZ	3	8P+4S	Z	S
F7KMSOVZ	**Operation Research in Healthcare**	KZ	3	8P+4S	Z	S
F7KMSMIP	**Project Management** *Petra Hospodková, Venuše Kneppo **Petra Hospodková** Petra Hospodková (Gar.)*	KZ	3	8P+4S	Z	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 3S A Name=Systematic Integration of Processes in Healthcar combined studies compulsory optional course

F7KMSEAZ	Economic Analyses in Healthcare	KZ	3

The subject follows the subject of Health Technology Assessment. During the semester the student will get acquainted with specific types of analyzes (cost-effectiveness analysis, cost-benefit analysis, cost-benefit analysis), learn how to work with TreeAge and create meta-analyzes and Markov models. The student will further expand his / her knowledge of multi-criteria decision analysis.

F7KMSOVZ	Operation Research in Healthcare	KZ	3

Art of modeling and elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs theory, Nonlinear programming, Project management (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and risk, Decisions with multiple objectives.

F7KMSMIP	Project Management	KZ	3

The subject deals with project management, its purpose, concepts and tools. Emphasis is placed on resource planning, allocation of resources to tasks, duration and change, monitoring of project progress, re-planning of work in progress, etc. The course also includes project visualization, formatting of tables and graphs, form displays, calendar display, network diagram, resource diagram, custom display options etc. Students further elaborate a fictitious project using current software tools to support project management.

Code of the group: F7KMS PV 3S B

Name of the group: Systematic Integration of Processes in Healthcar combined studies compulsory optional course

Requirement credits in the group: In this group you have to gain at least 2 credits (at most 4)

Requirement courses in the group: In this group you have to complete at least 1 course (at most 2)

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
F7KMSRKD	**Development of Communication Skills** *Dana Rebeka Ralbovská **Dana Rebeka Ralbovská** Dana Rebeka Ralbovská (Gar.)*	KZ	2	8P+4S	Z	S
F7KMSUPS	**Application of Psychology and Sociology in Practice**	KZ	2	8P+4S	Z	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 3S B Name=Systematic Integration of Processes in Healthcar combined studies compulsory optional course

F7KMSRKD	Development of Communication Skills	KZ	2

The subject is aimed at enhancing the communication and presentation skills and knowledge that are important for a graduate´s successful start in employment. An important part of the subject is training in effectively dealing with people. Students will improve in preparing and delivering professional speeches in front of a small group, in writing business letters and emails. They will learn to express criticism and praise and identify their preferred styles of conflict resolution and interpersonal interaction. As potentional non-medical staff in hospitals, they will become more familiar with the specifics of communicating with patients.

F7KMSUPS	Application of Psychology and Sociology in Practice	KZ	2

Code of the group: F7KMS PV 4S A

Name of the group: Systematic Integration of Processes in Healthcar combined studies compulsory optional course

Requirement credits in the group: In this group you have to gain at least 3 credits (at most 9)

Requirement courses in the group: In this group you have to complete at least 1 course (at most 3)

Credits in the group: 3

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
F7KMSEHG	**E-Health and E-Government** *Dagmar Brechlerová Dagmar Brechlerová (Gar.)*	KZ	3	8P+4S	L	S
F7KMSSZZ	**Strategy of Healthcare Facilities** *Martina Caithamlová **Martina Caithamlová** Martina Caithamlová (Gar.)*	KZ	3	8P+4S	L	S

F7KMSMPR	**Use of Modern Technical Devices in Rehabilitation** *Markéta Janatová* ***Markéta Janatová*** *Markéta Janatová (Gar.)*	Z,ZK	3	8P+4S	L	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 4S A Name=Systematic Integration of Processes in Healthcar combined studies compulsory optional course

F7KMSEHG	E-Health and E-Government	KZ	3
The course introduces students to the e-Government (especially given in relation to health care) and e-health, their foundations and principles, especially in the Czech Republic.			
F7KMSSZZ	Strategy of Healthcare Facilities	KZ	3
A long-term, successful existence of each market entity is conditioned by a clear long-term strategy vision. Progressive competition, increased demand for medical services, higher demands of patients and significant development of medical science characterise the state of contemporary healthcare. These facts make the management of healthcare facilities more challenging and complicated. This subject provides the students with the fundamentals and steps of strategic management, principles of creation and strategic management applied to healthcare facilities conditions.			
F7KMSMPR	Use of Modern Technical Devices in Rehabilitation	Z,ZK	3
The aim of the course is to acquaint students with the possibilities of diagnostics and therapy using technical instruments. Emphasis is placed on explaining the principles of this type of therapy and on the use of specific rehabilitation systems in clinical practice.			

Code of the group: F7KMS PV 2S B

Name of the group: Systematic Integration of Processes in Healthcar combined studies compulsory optional course

Requirement credits in the group: In this group you have to gain at least 2 credits (at most 6)

Requirement courses in the group: In this group you have to complete at least 1 course (at most 3)

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**
F7KMSITZ	**Information Technology in Healthcare**	KZ	2	8P+4S	L	S
F7KMSMKZ	**Marketing and PR in Healthcare** ***Petra Hospodková***	KZ	2	8P+4S	L	S
F7KMSZU	**Fundamentals of Accounting** ***Martina Caithamlová***	KZ	2	8P+4S	L	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 2S B Name=Systematic Integration of Processes in Healthcar combined studies compulsory optional course

F7KMSITZ	Information Technology in Healthcare	KZ	2
Effective operation of contemporary health facilities is not possible without a high degree of information technology integration and its impact will further increase in the future. This places high demands on all employees who must guarantee the operation of health care information systems and other database applications as well as perform advanced processing of huge amount of data produced by these systems using common office applications. The course introduces students with basic and advanced concepts and principals of information technologies and with advanced application of computer technology for storing, analysis and presentation of data. Students will also familiarize with architecture of computers and networks, structure of relational databases, data types and their storage and will also adopt basics of informational safety.			
F7KMSMKZ	Marketing and PR in Healthcare	KZ	2
The goal of this subject is to present the basics of marketing in health care institutions and medical devices companies. Specificities of marketing of services are treated. Focus is on the quality of the product. In the continuous team work, students set up a marketing strategy of a specified institution or product.			
F7KMSZU	Fundamentals of Accounting	KZ	2
The subject provides students with the fundamentals of accounting, principles of accounting management and accounting terminology. The aim of the subject is to introduce the field of accounting, to acquaint the students with the meaning of accounting and its place in the system of an organization management. To teach the student show to work with the basic concepts of accounting and legal regulations related to accounting.			

Code of the group: F7KMS PV 4S B

Name of the group: Systematic Integration of Processes in Healthcar combined studies compulsory optional course

Requirement credits in the group: In this group you have to gain at least 2 credits (at most 6)

Requirement courses in the group: In this group you have to complete at least 1 course (at most 3)

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**
F7KMSDEV	**Design and Ergonomics of Medical Devices**	KZ	2	8S+4C	L	S
F7KMSKAJ	**English Conversation** *Jitka Mariňáková* ***Jitka Mariňáková*** *Jitka Mariňáková (Gar.)*	KZ	2	12S	L	S
F7KMSZMS	**Fundamentals of Modelling and Simulation** *Vojtěch Kamenský* ***Vojtěch Kamenský*** *Vojtěch Kamenský (Gar.)*	KZ	2	8P+4C	L	S

Characteristics of the courses of this group of Study Plan: Code=F7KMS PV 4S B Name=Systematic Integration of Processes in Healthcar combined studies compulsory optional course

F7KMSDEV	Design and Ergonomics of Medical Devices	KZ	2
F7KMSKAJ	English Conversation	KZ	2
The subject Conversation in English language is primarily focused on the development of communication skills, both from the field of general English, and the field of Business English. Through the simulations of real situations, the students practise conversation phrases, relevant terminology and appropriate vocabulary. The emphasis is placed on the accuracy of communication skills and vocabulary expansion.			
F7KMSZMS	Fundamentals of Modelling and Simulation	KZ	2
Basic notions and principles of system modelling generally. Theoretical and applied analysis of qualities of models representing various medical, biochemical, epidemiological, ecological, and biological systems. Population modelling. Epidemiological models. Models of pharmacokinetics. Economic Models and Models in Health Technology Assessment.			

List of courses of this pass:

Code	Name of the course	Completion	Credits
17BOZP	Occupational Safety and Health, Fire Protection and First Aid	Z	0
F7KMSBE	Business English	KZ	2
The aim of this study material is to make students familiar with the Business English before embarking on a career in business. The course covers not only terminology connected with the field of business English, but also grammar most often used in the given context. The material depicts a wide range of business topics including Jobs, Organisations, Marketing, Finance, Accounting etc. It presents and explains new words in the context of real situations and shows the student how to use them and how to work out the rules for using them. The students practise their newly acquired knowledge in the exercises related. The material is also designed to help the students to orientate in business environment of different cultures as well as to improve their speaking skills, using open questions for the students to discuss and talk about. Thus it allows the student to express their ideas, support or question different opinions and get prepared for real business sphere.			
F7KMSBSCD	Statistical Methods in the Analysis of Clinical Studies	Z,ZK	4
The course focuses on methods of statistical analysis designed primarily for medical research and clinical evaluation of medical devices. Students will be introduced to clinical research methodology, clinical study design and then to commonly used methods of processing and testing clinical data.			
F7KMSDEV	Design and Ergonomics of Medical Devices	KZ	2
F7KMSDP	Diploma Thesis	Z	8
F7KMSEAZ	Economic Analyses in Healthcare	KZ	3
The subject follows the subject of Health Technology Assessment. During the semester the student will get acquainted with specific types of analyzes (cost-effectiveness analysis, cost-benefit analysis, cost-benefit analysis), learn how to work with TreeAge and create meta-analyzes and Markov models. The student will further expand his / her knowledge of multi-criteria decision analysis.			
F7KMSEHG	E-Health and E-Government	KZ	3
The course introduces students to the e-Government (especially given in relation to health care) and e-health, their foundations and principles, especially in the Czech Republic.			
F7KMSEK	Economics	Z,ZK	5
The course introduces the main rules and notions of microeconomics, the market theory, market environment, market balance, demand and supply. Furthermore, the course covers the topic of demand and supply elasticity - graphiical and mathematical expression of elasticity, consumer´s behavious, his optimum. The lecture continues with the theory of the firm, including costs and production, profit maximization, etc. The end of the microeconomics part introduces the theory of perfect/imperfect competition (monopoly, oligopoly, monopolistic competition). As concerns macroeconomics, the course deals above all with the gross domestic product, its creation, distribution, and practical utilization. Moreover, the course contains the theory of money market, monetary policy, its tools and goals. Inflation, its nature, forms, causes and effects. Unemployment. The following part of the course deals with the fiscal policy, national budget, Maastricht criteria. The course is finished with international trade, balance of payments, exchange rates.			
F7KMSEMM	Economic-mathematical Methods	KZ	2
Selected topics in mathematics to support economic courses			
F7KMSEZZ	Economy of Healthcare Facilities	Z,ZK	3
The course introduces the basic categories of economics of healthcare facilities (hospitals, public and private clinics) with respect to cost, revenues and performance. It deals with financial management, marketing and other health-related professional activities and functions and their management. Health economics is a specific branch within economics concerned with the efficient allocation of scarce resources with respect to health and healthcare. It aims to develop and deepen the knowledge and skills of students in the field of financial management tools, financing of healthcare needs and performance analysis. The accent is also put on the understanding of the healthcare facility in its integrity and complexity, especially with respect to the basic target function.			
F7KMSHZT	Health Technology Assessment	Z,ZK	4
F7KMSIP	Individual Training	Z	2
The Individual professional training is an integral part of good and qualified preparation for prospective occupation. The training provides a student with an opportunity to practice theoretical knowledge in the form of independent work supervised by a professional worker. The Individual professional training represents such form of a tuition in which the students are placed in individual workplaces within medical facilities, or in production or servicing organizations in the field of medical devices. The students, on the basis of predetermined study plans, acquire deeper practical skills and work independently under supervision of an appointed worker. The training on selected workplaces must be on a high professional level. All hygienic, safety and other measures, relevant for the specific workplace must be followed within the training. Students are acquainted with the regulations of the given workplace. The training is supervised and evaluated by its guarantor. The professional training of students of the program Systematic integration of processes in Healthcare is focused namely on the area of legislation, documentation of medical devices in medical facilities, medical procedures reports to health insurance companies, area of tenders, preparation of materials for procurements, preparation and realisation of purchase of medical devices, management quality in medical facilities, work with information systems, operating of medical facility, internal audit and other activities.			
F7KMSITZ	Information Technology in Healthcare	KZ	2
Effective operation of contemporary health facilities is not possible without a high degree of information technology integration and its impact will further increase in the future. This places high demands on all employees who must guarantee the operation of health care information systems and other database applications as well as perform advanced processing of huge amount of data produced by these systems using common office applications. The course introduces students with basic and advanced concepts and principals of information technologies and with advanced application of computer technology for storing, analysis and presentation of data. Students will also familiarize with architecture of computers and networks, structure of relational databases, data types and their storage and will also adopt basics of informational safety.			

F7KMSIZS	Integrated Rescue System and the Disaster Medicine	ZK	5
The aim of the course is to acquaint the students with the origin and development of the Integrated Rescue System (IRS) in the Czech Republic, its characteristics and main tasks of the basic and other IRS bodies in the preparedness and solution of emergency and crisis situations, with the principles of tactical, operational and strategic management of IRS bodies, with the role of the public authorities in handling emergency situations and within the population protection. The course furthermore provides information on current threats that can negatively affect health care service in relation to the provision of medical care, on the field of crisis management, and above all on the preparedness of inpatient facilities to provide care in emergency and crisis situations involving mass casualties, including the processes and procedures arising from trauma plans of outpatient and inpatient facilities.			
F7KMSIZZ	Information Sources in Healthcare	KZ	3
F7KMSJIP	Icus and Mobile Healthcare Units	KZ	3
The course offers a brief overview of resuscitation and intensive care in anesthesia-resuscitation units, specialized and mobile intensive care units. The aim of the course is present current trends in biomedical engineering in this area to students. Studying course assumes basic knowledge especially from internal and chirurgic specializations. After the completion of the course, the students should be able to actively communicate with a clinical physician and assist with optimal methods of solution in specific cases.			
F7KMSKAJ	English Conversation	KZ	2
The subject Conversation in English language is primarily focused on the development of communication skills, both from the field of general English, and the field of Business English. Through the simulations of real situations, the students practise conversation phrases, relevant terminology and appropriate vocabulary. The emphasis is placed on the accuracy of communication skills and vocabulary expansion.			
F7KMSLKH	Legislation in Healthcare and Clinical Evaluation	Z,ZK	5
Learning outcomes of the course unit The goal is to acquaint students with the rights and obligations arising from current legislation on health care issues. Emphasis is not placed on memorizing the literal wording of the legislation, but on familiarizing students with the main points and ideas contained in EU directives, regulations, laws, standards and EU directives in healthcare. The student should have a comprehensive overview of health legislation after completing the course.			
F7KMSMIP	Project Management	KZ	3
The subject deals with project management, its purpose, concepts and tools. Emphasis is placed on resource planning, allocation of resources to tasks, duration and change, monitoring of project progress, re-planning of work in progress, etc. The course also includes project visualization, formatting of tables and graphs, form displays, calendar display, network diagram, resource diagram, custom display options etc. Students further elaborate a fictitious project using current software tools to support project management.			
F7KMSMKZ	Marketing and PR in Healthcare	KZ	2
The goal of this subject is to present the basics of marketing in health care institutions and medical devices companies. Specificities of marketing of services are treated. Focus is on the quality of the product. In the continuous team work, students set up a marketing strategy of a specified institution or product.			
F7KMSMPR	Use of Modern Technical Devices in Rehabilitation	Z,ZK	3
The aim of the course is to acquaint students with the possibilities of diagnostics and therapy using technical instruments. Emphasis is placed on explaining the principles of this type of therapy and on the use of specific rehabilitation systems in clinical practice.			
F7KMSMZT	Health Technology Management	KZ	5
Infrastructure of hospital and its architecture. Distributions of stuff (engineering distributions electro-circuits, specifics of the circuits, water, gas distribution, systems of power, sources, drives, compensation, spaces in health care specifics of elementary spaces, steam distribution). Practical seminars from design of the project. Typical Czech norms and standards Ministry of health CR specifying all requirements for different departments and devices. Barrier-free construction of health institutions.			
F7KMSMZZ	Management of Medical Facilities	Z,ZK	4
The aim of the course is to introduce the basic categories in management such as organizing, decision making, influencing or human resources. The introduction to the crisis management is a part of the course. The accent is put on the differences of the health facilities in comparison with the classical company. The aim of seminars is to connect the theory and practice, so case studies and team activities form the content of seminars.			
F7KMSNIS	Hospital Information Systems	Z,ZK	3
The subject addresses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information is put in the context of Czech eHealth systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth systems and its development and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intranet systems).			
F7KMSOP	Professional Training	Z	2
Individual practical training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get acquinted with an organization of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical setting.			
F7KMSOVZ	Operation Research in Healthcare	KZ	3
Art of modeling and elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs theory, Nonlinear programming, Project management (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and risk, Decisions with multiple objectives.			
F7KMSPIZ	Work with Information Sources and Research Methodology	KZ	3
The subject introduces the students to the principles of the correct writing of research texts, studies and presentations; also with principles of preparation, execution and processing of biomedical experiments, including ethical issues of biomedical research.			
F7KMSPLPT	Overview of Medical Devices	Z,ZK	4
The course is focused on medical devices and equipment and medical imaging systems. The aim of the course is to present to students basic principles of typical medical devices. A content of the course is prepared so that student can understand topics with medical devices within the further courses. The course covers diagnostic and therapeutic medical technology together with imaging modalities. The student will know basic technical parameters of typical medical devices used commonly in the clinical practice. The course covers categorization of the medical equipments, devices for measurement of blood pressure, measurement of bioelectric heart activity (ECG) - electrocardiograph, monitor of vital signs, measurement of bioelectrical activity of the brain (EEG) electroencephalograph, measurement of bioelectric activity of the muscles (EMG) electromyograph, electrosurgical units (ESU), cardio-stimulators, defibrillators, equipment of anesthesia care units, lung ventilators and basic concepts of imaging systems, X-ray, CT, SPECT, PET a US systems. The overview of the methods used in radiotherapy is also a part of the course.			
F7KMSPMF	Overview of Mathematics and Physics	Z,ZK	4
Students will acquire basic knowledge of linear algebra (vectors, matrices, systems of linear equations), and differential and integral calculus of the functions of one variable (limit, continuity, derivation, function path, integrals). They will be able to solve systems of linear equations and apply linear algebra and differential methods and integral calculus to practical examples. In the teaching of physics, emphasis is placed on the context of individual physical disciplines and the application of mathematics. Through lectures and numerical exercises, students will acquire basic knowledge of physics with a focus on medical practice. Upon completion of the course students will be ready to study other technical subjects.			
F7KMSRKD	Development of Communication Skills	KZ	2
The subject is aimed at enhancing the communication and presentation skills and knowledge that are important for a graduate´s successful start in employment. An important part of the subject is training in effectively dealing with people. Students will improve in preparing and delivering professional speeches in front of a small group, in writing business letters and emails. They will learn to express criticism and praise and identify their preferred styles of conflict resolution and interpersonal interaction. As potentional non-medical staff in hospitals, they will become more familiar with the specifics of communicating with patients.			
F7KMSRKZ	Quality Management in Healthcare	Z,ZK	5
Within the subject of Quality Management in Health care the student acquaints himself with basic concepts such as: product, its characteristics and definition, quality, management, requirement, customer satisfaction, fitness. They will also learn about the relevant standards. The subject is the following topics: Quality of systems and processes in healthcare.			

Procedural proceedings. Lean Management. Standards of the ISO series. Implementation of the Quality Management System (SMJ) in a healthcare organization, justification of SMU needs for healthcare organizations, process approach. Quality Policy and Quality Targets, Quality Manual, Quality System Audit, Quality Plan, Objective Evidence, Inspection, Inspection, Examination, Validation Verification, Qualification Process. Audit: Review, Audit Program, Audit Criteria, Audited Organization, Audit Team, Expert, Health Care Standards. Euromodel TQM. Management and implementation of processes in healthcare facilities, definition and mapping of processes and subprocesses. Design of integration of healthcare facility management. Possibilities of using TQM within healthcare facilities. Standards and indicators in the quality of health care. Quality in laboratories. Accreditation of medical facilities according to SAK and JCI. Quality management tools. Risk management.

F7KMSRLZ	Management of Human Resources	Z,ZK	3

After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a few scattered tasks to a centralized activity, assuming additional necessary responsibilities as they arose. - describe or formulate the mission of HR department or area in healthcare organization - understand and apply the principles of teamwork - describe the principles of good leadership and people management Objectives: -to enable students to approach Human Resource Management in a systematic manner and to recognize its importance for strategic management in Health Care Institutions; -to enable students to reflect and where appropriate, modify policies and practices internal to the organization with reference to pressures from external institutions; -to help students to come to terms with the complex nature of the employment relationship and how the interlocking tasks of Human Resource management respond to changes which occur over time in individual employees and the workforce as a whole.

F7KMSRNZ	Management of Costs in Healthcare	KZ	5

The students are acquainted with basic economic concepts connected with the issue of costs, their division and methods of determination. The costs are discussed in more detail both from the point of view of corporate practice and economic theories. Students strive to apply theoretical knowledge and solve practical examples. Potential options on how to reduce costs are also discussed. An integral part of the course is to practice the given topic using examples and graphs, everything being solved in connection with the practice. Students learn to understand the meaning and significance of budgeting and costing from the point of view of management and in relation to economic activities of a company.

F7KMSRP	Annual Project	Z	2

The course is designed to prepare students for the final work of Faculty of Biomedical Engineering, CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her knowledge from the previous stages of study. Subject "Annual project represents the first stage of the diploma thesis. The main goal is based on the elaborated and approved current state of the issue of generating a suitable topic of the diploma thesis, description of the goals, overview of the planned methods, expected benefit and rationale of the topic selection. At the end of the second semester, the selected entry is entered into the approval process of the department, subject to the following conditions: 1. Thematically fit into the study program Systematic Integration Processes in Healthcare concept (ie focusing on at least 2 of the three basic disciplines: economic, managerial, medical, technical). 2. The scope of planned scientific work to meet the parameters for DP (especially in terms of planned methods and benefits) The topics are prepareed by the relevant supervisors and are listed in the "PROJECTS" system, and during the semester they are specified. To ensure the aforementioned conditions, the student cooperates with the supervisor and the consultant and actively participates in the adaptation. Pursuant to Act 111/1998 Coll. the student has the opportunity to design a topic for which the above conditions apply. Approved assignments of yearly projects become the starting point for the second seminar, ie the Diploma Thesis Seminar 1, where the student elaborates further parts of the diploma thesis.

F7KMSSDP1	Diploma Thesis Seminar I.	Z	2

The course is designed to prepare students for the final work of FBMI CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her ability to integrate knowledge from the previous stages of study. The Diploma Thesis Seminar 1 follows up the subject Annual Project. The seminar is conceived as a continuous and controlled work on the methodology of the student's research work. On the basis of the current state of the problem, the student will choose the appropriate methods for the Diploma Thesis solution and develop a specific chapter - Methods. The seminar presentations are the presentation of the progress, the elaboration and the ongoing results of the students' diploma thesis and their continuous control and discussion. All students will present their research on Student Scientific Conference.

F7KMSSDP2	Diploma Thesis Seminar II.	Z	2

The course is designed to prepare students for the final work of FBMI CTU, which will demonstrate the student's own analytical and creative abilities as well as his / her ability to integrate knowledge from the previous stages of study. The Diploma Thesis Seminar 2 builds on the outputs of the Seminar for Diploma Thesis 1 and the Annual Project. The aim of the seminar is to teach students how to process the results and the discussion and thus bring the diploma work to a successful conclusion. Students will present 2 presentations of the progress, the elaboration and the ongoing results of their diploma thesis and their continuous control and discussion. The student is also prepared for the final defense of his diploma thesis.

F7KMSSZZ	Strategy of Healthcare Facilities	KZ	3

A long-term, successful existence of each market entity is conditioned by a clear long-term strategy vision. Progressive competition, increased demand for medical services, higher demands of patients and significant development of medical science characterise the state of contemporary healthcare. These facts make the management of healthcare facilities more challenging and complicated. This subject provides the students with the fundamentals and steps of strategic management, principles of creation and strategic management applied to healthcare facilities conditions.

F7KMSUPS	Application of Psychology and Sociology in Practice	KZ	2
F7KMSVKZP	Selected Chapters from Medical Processes	KZ	5

Healthcare is a highly complex process calling for the fulfillment of a whole range of different technical requirements in order to provide quality health services. In its introductory section, the subject of the course deals with issues such as providing healthcare facilities with resources, delivering pharmaceutical drugs, medical aids and other essential commodities for their operation. It also seeks to clarify the issues involving requirements for technical equipment, measuring devices, examination and check-ups of medical instrumentation, occupational safety and health, fire protection, handling of chemicals and chemical compounds, and waste disposal in healthcare facilities. The final set of lectures is focused on questions of safeguarding quality and patient safety, protection of employees´ and patients´ data, procedures for checking the quality of provided care by means of certification of healthcare facilities.

F7KMSVZ1	Public Healthcare I.	ZK	5
F7KMSVZ2	Public Healthcare II.	Z,ZK	4
F7KMSZMS	Fundamentals of Modelling and Simulation	KZ	2

Basic notions and principles of system modelling generally. Theoretical and applied analysis of qualities of models representing various medical, biochemical, epidemiological, ecological, and biological systems. Population modelling. Epidemiological models. Models of pharmacokinetics. Economic Models and Models in Health Technology Assessment.

F7KMSZSED	Medical Systems and their Economic Dimension	Z,ZK	4

Different elements of healthcare systems are studied so as the different possibilities of healthcare system design, its conditions and consequences. The healthcare systems are analyzed in international dimension, the Czech healthcare system is presented in details.

F7KMSZSVS	Healthcare as Part of the Public Sector	ZK	3

Healthcare as part of the public sector this course ekes out the gained general economic knowledge with issues from public economy discipline, all applied to the healthcare sector. In the introductory part, the role of the public sector within the national economy is studied and discussed from different points of view. The concept of market and government failure problematic is presented and discussed - the accent is put mainly on public goods, externalities and control mechanism in the public sector.

F7KMSZU	Fundamentals of Accounting	KZ	2

The subject provides students with the fundamentals of accounting, principles of accounting management and accounting terminology. The aim of the subject is to introduce the field of accounting, to acquaint the students with the meaning of accounting and its place in the system of an organization management. To teach the student show to work with the basic concepts of accounting and legal regulations related to accounting.

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