Study plan

Name of study plan: Systematic Integration of Pprocesses 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 Vojt ch Kamenský, Vladimír Rogalewicz Vojt ch Kamenský Vladimír Rogalewicz (Gar.)	Z,ZK	4	12P+8S	Z	Z
F7KMSBE	Business English Jitka Mari áková Jitka Mari áková Jitka Mari áková (Gar.)	KZ	2	8S	L	Z
F7KMSEMM	Economic-mathematical Methods 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 (Gar.)	Z,ZK	3	12P+8S	L	Z
F7KMSHZT	Health Technology Assessment Vladimír Rogalewicz, Gleb Donin, Ond ej Gajdoš Vladimír Rogalewicz 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 Vojt ch Kamenský, Gleb Donin Gleb Donin Gleb Donin (Gar.)	KZ	3	4P+8S	Z	Z
F7KMSIZS	Integrated Rescue System and the Disaster Medicine Renata Havránková, Zden k Hon, Leoš Navrátil, Lukáš Miklas, Tomáš ermák Leoš Navrátil Leoš Navrátil (Gar.)	ZK	5	8P	L	Z
F7KMSLKH	Legislation in Healthcare and Clinical Evaluation Vojt ch Kamenský, Ond ej Gajdoš, Anna Erfányuková, Barbora Mašková Vojt ch Kamenský Peter Kneppo (Gar.)	Z,ZK	5	12P+8S	z	Z
F7KMSMZT	Health Technology Management Vojt ch Kamenský, Martin Rožánek, Ji í Petrá ek Petr Volf Martin Rožánek (Gar.)	КZ	5	12P+8S	L	Z
F7KMSMZZ	Management of Medical Facilities Petra Hospodková, Martina Caithamlová, Ján Lešták Petra Hospodková Ján Lešták (Gar.)	Z,ZK	4	8P+8S	z	Z
F7KMSNIS	Hospital Information Systems Jan Bruthans, Anna Hor áková Anna Hor áková Jan Bruthans (Gar.)	Z,ZK	3	8P+4S	Z	Z

F7KMSOP	Professional Training Petra Hospodková Jan B íza (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 Anna Erfányuková Gleb Donin (Gar.)	Z	2	8S	L	Z
F7KMSRKZ	Quality Management in Healthcare Vojt ch Kamenský, Peter Kneppo, Alena Plášková Vojt ch Kamenský Peter Kneppo (Gar.)	Z,ZK	5	12P+8S	L	z
F7KMSRLZ	Management of Human Resources Zuzana Dvo áková Zuzana Dvo áková Zuzana Dvo áková (Gar.)	Z,ZK	3	4P+4S	Z	Z
F7KMSRNZ	Management of Costs in Healthcare Martina Caithamlová Martina Caithamlová Jind ich 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 B íza, V ra Adámková Jan B íza V ra Adámková (Gar.)	ZK	5	8P	Z	Z
F7KMSVZ2	Public Healthcare II. Jan B íza, V ra Adámková Jan B íza V ra Adámková (Gar.)	Z,ZK	4	8P	L	Z
F7KMSVKZP	Selected Chapters from Medical Processes	KZ	5	8P+4S	Z	Z
F7KMSZSED	Medical Systems and their Economic Dimension 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	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 wi	l 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 no	t only terminolog	y 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, Organisatio	ons, 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 word	k out the rules fo	r 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	s 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	deas, 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 co	ntinues with the t	neory of the firm,
including costs and production, profit maximization, etc. The end of the microeconomics part introduces the theory of perfect/imperfect competition	monopoly, oligop	oly, monopolistic
competition). As concerns macroeconomics, the course deals above all with the gross domestic product, its creation, distribution, and practical utilization		
the theory of money market, monetary policy, its tools and goals. Inflation, its nature, forms, causes and effects. Unemployment. The following part of	f the course deal	s 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 b		
with the efficient allocation of scarce resources with respect to health and healthcare. It aims to develop and deepen the knowledge and skills of stu		
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 v	vith an opportunit	y to practice
theoretical knowledge in the form of independent work supervised by a professional worker. The Individual professional training represents such for	n of a tuition in w	hich the students
are placed in individual workplaces within medical facilities, or in production or servicing organizations in the field of medical devices. The students, o	n the basis of pre	determined study
plans, acquire deeper practical skills and work independently under supervision of an appointed worker. The training on selected workplaces must be	e on a high profe	ssional level. All
hygienic, safety and other measures, relevant for the specific workplace must be followed within the training. Students are acquainted with the regul	-	
training is supervised and evaluated by its guarantor. The professional training of students of the program Systematic integration of processes in He	althcare is focuse	ed namely on the
area of legislation, documentation of medical devices in medical facilities, medical procedures reports to health insurance companies, area of tende		
		materials for
procurements, preparation and realisation of purchase of medical devices, management quality in medical facilities, work with information systems, o		materials for
		materials for

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	I I	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 stra		
with the role of the public authorities in handling emergency situations and within the population protection. The course furthermore provides information		
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	s of inpatient facili	ties to provide
care in emergency and crisis situations involving mass casualties, including the processes and procedures arising from trauma plans of outpatient a	nd inpatient faciliti	es.
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 i	ssues. Emphasis is	s 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 ar	d 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 distril	bution, systems of	power, sources,
drives, compensation, spaces in health care - specifics of elementary spaces, steam distribution). Practical seminars from design of the project. Typ	ical 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 intr	oduction to the cris	is 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 t	o connect the theo	ry 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 info	ormation is put in t	he context of
Czech eHealth systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHea	alth systems and it	s 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 princi	ples of typical med	lical 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 a	nd therapeutic med	lical 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	s categorization
of the medical equipments, devices for measurement of blood pressure, measurement of bioelectric heart activity (ECG) - electrocardiograph, monit	or of vital signs, m	easurement of
bioelectrical activity of the brain (EEG) – electroencephalograph, measurement of bioelectric activity of the muscles (EMG) – electromyograph, electrosurg	ical units (ESU), ca	rdio-stimulators,
defibrillators, equipment of anesthesia care units, lung ventilators and basic concepts of imaging systems, X-ray, CT, SPECT, PET a US systems. The	e 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		
continuity, derivation, function path, integrals). They will be able to solve systems of linear equations and apply linear algebra and differential method	-	
examples. In the teaching of physics, emphasis is placed on the context of individual physical disciplines and the application of mathematics. Through		
students will acquire basic knowledge of physics with a focus on medical practice. Upon completion of the course students will be ready to study oth		
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 a	-	
well as his / her knowledge from the previous stages of study. Subject "Annual project" represents the first stage of the diploma thesis. The main goa		
approved current state of the issue of generating a suitable topic of the diploma thesis, description of the goals, overview of the planned methods, ex		
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		-
the study program Systematic Integration Processes in Healthcare concept (ie focusing on at least 2 of the three basic disciplines: economic, manage of planned existence and headfile). The tenior are propagated by 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 t listed in the "PROJECTS" system, and during the semester they are specified. To ensure the aforementioned conditions, the student cooperates with		
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	-	
of yearly projects become the starting point for the second seminar, ie the Diploma Thesis Seminar 1, where the student elaborates further parts of		eu assignments
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	· · ·	
requirement, customer satisfaction, fitness. They will also learn about the relevant standards. The subject is the following topics: •Quality of systems		-
•Procedural proceedings. Lean Management. •Standards of the ISO series. Implementation of the Quality Management System (SMJ) in a healthcare		
needs for healthcare organizations, process approach. •Quality Policy and Quality Targets, Quality Manual, Quality System Audit, Quality Plan, Objective		
Examination, Validation Verification, Qualification Process. •Audit: Review, Audit Program, Audit Criteria, Audited Organization, Audit Team, Expert, H		-
TQM. •Management and implementation of processes in healthcare facilities, definition and mapping of processes and subprocesses. •Design of int	egration of healthc	are facility
management. Possibilities of using TQM within healthcare facilities. Standards and indicators in the quality of health care. •Quality in laboratories. Ac		ical facilities
according to SAK and JCI. •Quality management tools. •Risk management.	creditation of med	
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F7KMSRLZ Management of Human Resources		3
F7KMSRLZ Management of Human Resources After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a fe	Z,ZK	3
	Z,ZK	3 to a centralized
After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a fee	Z,ZK w scattered tasks ganization - unders	3 to a centralized stand and apply
After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a fer activity, assuming additional necessary responsibilities as they arose describe or formulate the mission of HR department or area in healthcare or the principles of teamwork - describe the principles of good leadership and people management Objectives: -to enable students to approach Human systematic manner and to recognize its importance for strategic management in Health Care Institutions; -to enable students to reflect and where approach the management in Health Care Institutions; -to enable students to reflect and where approach the management in Health Care Institutions; -to enable students to reflect and where approach the management is the student of the management in Health Care Institutions; -to enable students to reflect and where approach the management is the student of the management is the student of the student of the management is the student of the management is the student of the student of the management is the student of the	Z,ZK ew scattered tasks ganization - unders n Resource Manag opropriate, modify	3 to a centralized stand and apply ement in a policies and
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After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a fe activity, assuming additional necessary responsibilities as they arose describe or formulate the mission of HR department or area in healthcare or the principles of teamwork - describe the principles of good leadership and people management Objectives: -to enable students to approach Human systematic manner and to recognize its importance for strategic management in Health Care Institutions; -to enable students to reflect and where are practices internal to the organization with reference to pressures from external institutions; -to help students to come to terms with the complex nature and how the interlocking tasks of Human Resource management respond to changes which occur over time in individual employees and the workfor F7KMSRNZ Management of Costs in Healthcare The students are acquainted with basic economic concepts connected with the issue of costs, their division and methods of determination. The costs	Z,ZK ew scattered tasks ganization - unders n Resource Manag opropriate, modify re of the employme rce as a whole. KZ	3 to a centralized stand and apply ement in a policies and ent relationship 5 nore detail both
After completing the course the student will be able to: - understand the history of human resources in health care organizations, originating from a fe activity, assuming additional necessary responsibilities as they arose describe or formulate the mission of HR department or area in healthcare or the principles of teamwork - describe the principles of good leadership and people management Objectives: -to enable students to approach Human systematic manner and to recognize its importance for strategic management in Health Care Institutions; -to enable students to reflect and where are practices internal to the organization with reference to pressures from external institutions; -to help students to come to terms with the complex nature and how the interlocking tasks of Human Resource management respond to changes which occur over time in individual employees and the workfor F7KMSRNZ Management of Costs in Healthcare The students are acquainted with basic economic concepts connected with the issue of costs, their division and methods of determination. The costs from the point of view of corporate practice and economic theories. Students strive to apply theoretical knowledge and solve practical examples. Pot	Z,ZK ew scattered tasks ganization - unders n Resource Manag opropriate, modify re of the employme rce as a whole. KZ are discussed in r ential options on h	3 to a centralized stand and apply ement in a policies and ent relationship 5 nore detail both pow to reduce
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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 a	bility to integrate	
knowledge from the pre	vious stages of study. The Diploma Thesis Seminar 1 follows up the subject "Annual Project". The seminar is conceived as a	continuous and c	ontrolled work	
on the methodology of t	the student's research work. On the basis of the current state of the problem, the student will choose the appropriate method	s for the Diploma	Thesis solution	
and develop a specific of	chapter - Methods. The seminar presentations are the presentation of the progress, the elaboration and the ongoing results o	f the students' dip	oloma 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 a	bility to integrate	
knowledge from the pre	vious stages of study. The Diploma Thesis Seminar 2 builds on the outputs of the Seminar for Diploma Thesis 1 and the Annu	al Project. The ai	m of the seminar	
is to teach students how	v to process the results and the discussion and thus bring the diploma work to a successful conclusion. Students will present	2 presentations of	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 di	oloma 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 co	omplex process calling for the fulfillment of a whole range of different technical requirements in order to provide quality health s	ervices. In its intro	oductory section,	
the subject of the cours	e deals with issues such as providing healthcare facilities with resources, delivering pharmaceutical drugs, medical aids and	other essential co	ommodities for	
their operation. It also se	eeks to clarify the issues involving requirements for technical equipment, measuring devices, examination and check-ups of me	dical instrumentati	ion, occupational	
safety and health, fire p	rotection, handling of chemicals and chemical compounds, and waste disposal in healthcare facilities. The final set of lecture	s is focused on qu	uestions of	
safeguarding quality and	d patient safety, protection of employees' and patients' data, procedures for checking the quality of provided care by means of	certification of hea	althcare facilities.	
F7KMSZSED	Medical Systems and their Economic Dimension	Z,ZK	4	
Different elements of he	althcare systems are studied so as the different possibilities of healthcare system design, its conditions and consequences. The	e healthcare syste	ms are analyzed	
in international dimension	on, the Czech healthcare system is presented in details.			
F7KMSZSVS	Healthcare as Part of the Public Sector	ZK	3	
"Healthcare as part of th	he public sector" this course ekes out the gained general economic knowledge with issues from public economy discipline, al	l applied to the he	althcare 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 gov	/ernment 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, Martin Rožánek Petr Kudrna Martin Rožánek (Gar.)	KZ	3	8P+4C	L	S
F7KMSPIZ	Work with Information Sources and Research Methodology Jakub Ráfi Jakub Ráfi Jakub Ráfi (Gar.)	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 stude	nts should be able to actively communicate with a clinical physician and assist with optimal methods of solution in specific ca	ises.				
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, Ond ej 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, Ji í Petrá ek, Eva Smolíková Petra Hospodková Eva Smolíková (Gar.)	КZ	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 an	multi-criteria decision analysis.					
F7KMSOVZ	Operation Research in Healthcare	KZ	3			
Art of modeling and ele	nents of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs t	heory, Nonlinear	programming,			
Project management (C	PM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and	d risk, Decisions v	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, custo	om display options etc. Students further elaborate a fictitious project using current software tools to support project managem	nent.				

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	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	o express criticism and praise and identify their preferred styles of conflict resolution and interpersonal interaction. As potentic	onal non-medical :	staff in hospitals,			
they will become more	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.)	КZ	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 (Gar.)	Z,ZK	3	8P+4S	L	S
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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

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.						
KZ	3					
Progressive competition, increased demand for medical s	ervices, higher					
healthcare. These facts make the management of healthc	are facilities more					
ic management, principles of creation and strategic mana	gement applied					
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.						
,	Alth, their foundations and principles, especially in the Czer KZ Progressive competition, increased demand for medical s healthcare. These facts make the management of healthc gic management, principles of creation and strategic mana Z,ZK					

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 Petra Hospodková Petra Hospodková (Gar.)	KZ	2	8P+4S	L	S
F7KMSZU	Fundamentals of Accounting Martina Caithamlová Martina Caithamlová Martina Caithamlová (Gar.)	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 co	ntemporary health facilities is not possible without a high degree of information technology integration and its impact will furt	her increase in th	e future. This			
places high demands or	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	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 a	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 re	elational 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 treat	ed. Focus is on			
the quality of the produc	t. 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						
oncepts 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 Mari áková Jitka Mari áková Jitka Mari áková (Gar.)	KZ	2	12S	L	S
F7KMSZMS	Fundamentals of Modelling and Simulation Vojt ch Kamenský Vojt ch Kamenský Vojt ch 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	on in English language is primarily focused on the development of communication skills, both from the field of general English,	, and the field of B	usiness English.			
Through the simulation	s of real situations, the students practise conversation phrases, relevant terminology and appropriate vocabulary. The empha-	sis is placed on th	ne accuracy of			
communication skills ar	nd vocabulary expansion.					
F7KMSZMS	Fundamentals of Modelling and Simulation	KZ	2			
Basic notions and princi	ples of system modelling generally. Theoretical and applied analysis of qualities of models representing various medical, bioche	mical, epidemiolo	gical, ecological,			
and biological systems.	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
the field of busines	Business English by material is to make students familiar with the Business English before embarking on a career in business. The course covers not or ss English, but also grammar most often used in the given context. The material depicts a wide range of business topics including Jo g 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 o	bs, Organisations,	Marketing,
students practise th	heir newly acquired knowledge in the exercises related. The material is also designed to help the students to orientate in business en e their speaking skills, using open questions for the students to discuss and talk about. Thus it allows the student to express their idea opinions and get prepared for real business sphere.	vironment of differ	ent cultures
F7KMSBSCD The course focuses	Statistical Methods in the Analysis of Clinical Studies on methods of statistical analysis designed primarily for medical research and clinical evaluation of medical devices. Students will be methodology, clinical study design and then to commonly used methods of processing and testing clinical data.	Z,ZK introduced to clinic	4 cal research
F7KMSDEV	Design and Ergonomics of Medical Devices	KZ	2
F7KMSDP	Diploma Thesis	Z	8
F7KMSEAZ	Economic Analyses in Healthcare	KZ	3
The subject follow	is the subject of Health Technology Assessment. During the semester the student will get acquainted with specific types of analyzes rsis, cost-benefit analysis), learn how to work with TreeAge and create meta-analyzes and Markov models. The student will further ex multi-criteria decision analysis.	(cost-effectivenes	s analysis,
F7KMSEHG	E-Health and E-Government	KZ	3
The course intro	duces students to the e-Government (especially given in relation to health care) and e-health, their foundations and principles, especially	cially in the Czech	Republic.
F7KMSEK	Economics	Z,ZK	5
competition). As cor	production, profit maximization, etc. The end of the microeconomics part introduces the theory of perfect/imperfect competition (moncerns macroeconomics, the course deals above all with the gross domestic product, its creation, distribution, and practical utilization. And practical utilization, and practical utilizat	Moreover, the coune course deals wit	rse contains
F7KMSEMM	Economic-mathematical Methods Selected topics in mathematics to support economic courses	KZ	2
financial manageme with the efficient	Economy of Healthcare Facilities uces the basic categories of economics of healthcare facilities (hospitals, public and private clinics) with respect to cost, revenues are ant, marketing and other health-related professional activities and functions and their management. Health economics is a specific brand allocation of scarce resources with respect to health and healthcare. It aims to develop and deepen the knowledge and skills of stud- ols, financing of healthcare needs and performance analysis. The accent is also put on the understanding of the healthcare facility in especially with respect to the basic target function.	ch within economic lents in the field of	s concernec financial
F7KMSHZT	Health Technology Assessment	Z,ZK	4
F7KMSIP	Individual Training	7	2
The Individual pre- theoretical knowled are placed in individ plans, acquire deep hygienic, safety and training is supervise area of legislation	ofessional training is an integral part of good and qualified properation for prospective occupation. The training provides a student wi ge in the form of independent work supervised by a professional worker. The Individual professional training represents such form of lual workplaces within medical facilities, or in production or servicing organizations in the field of medical devices. The students, on the per practical skills and work independently under supervision of an appointed worker. The training on selected workplaces must be of d other measures, relevant for the specific workplace must be followed within the training. Students are acquainted with the regulation ed and evaluated by its guarantor. The professional training of students of the program Systematic integration of processes in Health and documentation of medical devices in medical facilities, medical procedures reports to health insurance companies, area of tenders aration and realisation of purchase of medical devices, management quality in medical facilities, work with information systems, opera audit and other activities.	a tuition in which to basis of predeter n a high profession ns of the given wor care is focused na , preparation of ma	b practice the students mined study hal level. All kplace. The mely on the aterials for
Effective operation places high demand of huge amount of c	the of contemporary health facilities is not possible without a high degree of information technology integration and its impact will further the of contemporary health facilities is not possible without a high degree of information technology integration and its impact will further the on all employees who must guarantee the operation of health care information systems and other database applications as well as data produced by these systems using common office applications. The course introduces students with basic and advanced concept with advanced application of computer technology for storing, analysis and presentation of data. Students will also familiarize with a networks, structure of relational databases, data types and their storage and will also adopt basics of informational safety.	er increase in the f perform advanced as and principals of rchitecture of comp	uture. This I processing information

F7KMSIZS	Integrated Rescue System and the Disaster Medicine	ZK	5
	urse is to acquaint the students with the origin and development of the Integrated Rescue System (IRS) in the Czech Republic, its cha		
	r IRS bodies in the preparedness and solution of emergency and crisis situations, with the principles of tactical, operational and strateg	-	
	e public authorities in handling emergency situations and within the population protection. The course furthermore provides information nealth care service in relation to the provision of medical care, on the field of crisis management, and above all on the preparedness of the second s		
	rgency and crisis situations involving mass casualties, including the processes and procedures arising from trauma plans of outpatier	-	-
F7KMSIZZ	Information Sources in Healthcare	KZ	3
F7KMSJIP	Icus and Mobile Healthcare Units	KZ	3
	a brief overview of resuscitation and intensive care in anesthesia-resuscitation units, specialized and mobile intensive care units. The	1	-
current trends in bi	iomedical engineering in this area to students. Studying course assumes basic knowledge especially from internal and chirurgic special	alizations. After the	completion
of th	ne 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
-	rsation in English language is primarily focused on the development of communication skills, both from the field of general English, and		-
I hrough the simu	lations of real situations, the students practise conversation phrases, relevant terminology and appropriate vocabulary. The emphasis	s is placed on the a	accuracy of
F7KMSLKH	communication skills and vocabulary expansion. Legislation in Healthcare and Clinical Evaluation	Z,ZK	5
	s of the course unit The goal is to acquaint students with the rights and obligations arising from current legislation on health care issu		-
-	eral wording of the legislation, but on familiarizing students with the main points and ideas contained in EU directives, regulations, laws	-	-
Ū	in healthcare. The student should have a comprehensive overview of health legislation after completing the course.		
F7KMSMIP	Project Management	KZ	3
The subject deals w	with project management, its purpose, concepts and tools. Emphasis is placed on resource planning, allocation of resources to tasks, du	uration and change	, monitoring
	, re-planning of work in progress, etc. The course also includes project visualization, formatting of tables and graphs, form displays, cale		ork diagram,
	purce diagram, custom display options etc. Students further elaborate a fictitious project using current software tools to support project		-
F7KMSMKZ	Marketing and PR in Healthcare	KZ	2
The goal of this su	ubject is to present the basics of marketing in health care institutions and medical devices companies. Specificities of marketing of ser the quality of the product. In the continuous team work, students set up a marketing strategy of a specified institution or produ-		Focus is on
ETKNEMDD			2
F7KMSMPR	Use of Modern Technical Devices in Rehabilitation Irse is to acquaint students with the possibilities of diagnostics and therapy using technical instruments. Emphasis is placed on explai	Z,ZK	of this type
	of therapy and on the use of specific rehabilitation systems in clinical practice.		
F7KMSMZT	Health Technology Management	KZ	5
	spital and its architecture. Distributions of stuff (engineering distributions – electro-circuits, specifics of the circuits, water, gas distributions	1	-
drives, compensat	tion, spaces in health care – specifics of elementary spaces, steam distribution). Practical seminars from design of the project. Typica	I Czech norms and	d standards
	Ministry of health CR specifying all requirements for different departments and devices. Barrier-free construction of health institu		
F7KMSMZZ	Management of Medical Facilities	Z,ZK	4
	rese is to introduce the basic categories in management such as organizing, decision making, influencing or human resources. The introdu		
is a part of the cou	rse. The accent is put on the differences of the health facilities in comparison with the classical company. The aim of seminars is to cc so case studies and team activities form the content of seminars.	onnect the theory a	and practice,
F7KMQNIQ	Hospital Information Systems	7 7K	3
F7KMSNIS The subject addre	Hospital Information Systems esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This inform	Z,ZK mation is put in the	3 context of
The subject addre	Hospital Information Systems esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This inforr stems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth	nation is put in the	context of
The subject addre Czech eHealth sys	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This inform	mation is put in the systems and its d	context of
The subject addre Czech eHealth sys	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This inforr stems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth	mation is put in the systems and its d	context of
The subject addre Czech eHealth sys a F7KMSOP	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This inform stems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get	mation is put in the systems and its d net systems). Z acquinted with an	e context of evelopment 2
The subject addr Czech eHealth sys a F7KMSOP Individual practical	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s	nation is put in the systems and its d net systems). Z acquinted with an etting.	e context of evelopment 2 organization
The subject addrr Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare	nation is put in the systems and its d net systems). Z acquinted with an etting. KZ	e context of evelopment 2 organization 3
The subject addrr Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ Art of modeling a	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems of undividual health facilities. This information systems of undividual health facilities. This information systems of undividual health facilities. This information systems, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Independent of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the	nation is put in the systems and its d net systems). Z acquinted with an etting. KZ eory, Nonlinear pro-	context of evelopment 2 organization 3 gramming,
The subject addrr Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ Art of modeling a	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Indegration models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the ment (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and	nation is put in the systems and its d net systems). Z acquinted with an etting. KZ eory, Nonlinear pro-	context of evelopment 2 organization 3 gramming,
The subject addr Czech eHealth sys F7KMSOP Individual practical F7KMSOVZ Art of modeling a Project manager	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Ind elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the ment (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and objectives.	ation is put in the systems and its d net systems). Z acquinted with an etting. KZ ory, Nonlinear pro- risk, Decisions wit	context of evelopment 2 organization 3 gramming, th multiple
The subject addre Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ Art of modeling a Project manager F7KMSPIZ	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This informations stems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Ind elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the ment (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and objectives.	Anation is put in the systems and its d net systems). Z acquinted with an etting. KZ sory, Nonlinear pro risk, Decisions wit	context of evelopment 2 organization 3 gramming, th multiple 3
The subject addre Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ Art of modeling a Project manager F7KMSPIZ	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This information systems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Ind elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the ment (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and objectives.	Anation is put in the systems and its d net systems). Z acquinted with an etting. KZ sory, Nonlinear pro risk, Decisions wit	context of evelopment 2 organization 3 gramming, th multiple 3
The subject addre Czech eHealth sys a F7KMSOP Individual practical F7KMSOVZ Art of modeling a Project manager F7KMSPIZ	esses all subsystems of Hospital information systems (HIS) which means information systems of individual health facilities. This informations stems. Not only single components (including examples from practice) are addressed, but also adjacent topics are accented (eHealth and perspectives, classification systems, technical standards, security of information systems, basic knowledge of database and intrar Professional Training training completes the practical part of education in the study program Systematic Integration of Processes in Health Care. Students get of operations and with basic documentation in a healthcare facility, and train to do selected activities themselves in a practical s Operation Research in Healthcare Ind elements of decision models, Linear programming, Transportation problem, Integer linear programming, Introduction to graphs the ment (CPM, PERT) System approach and decision making, Decision models, Games theory, Decision making under uncertainty and objectives. Work with Information Sources and Research Methodology uces the students to the principles of the correct writing of research texts, studies and presentations; also with principles of preparation biomedical experiments, including ethical issues of biomedical research.	Anation is put in the systems and its d net systems). Z acquinted with an etting. KZ sory, Nonlinear pro risk, Decisions wit	context of evelopment 2 organization 3 gramming, th multiple 3
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•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 Z,ZK Management of Human Resources 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. Management of Costs in Healthcare F7KMSRNZ ΚZ 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 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. 7 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. 7 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 ΚZ 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 K7 2 F7KMSVKZP ΚZ Selected Chapters from Medical Processes 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. ΖK 5 F7KMSVZ2 Public Healthcare II. Z,ZK 4 Fundamentals of Modelling and Simulation 2 F7KMSZMS ΚZ 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 Z.ZK 4 Medical Systems and their Economic Dimension 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 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

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concepts of accounting and legal regulations related to accounting.