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I. DESCRIPTION OF STUDY PROGRAMME FORM

BASIC INFORMATION	
Title of study programme	QUALITY MANAGEMENT IN HEALTH
study programme coordinator	Rijeka University School of Medicine, Dubrovnik International University
Study programme implementer	Rijeka University School of Medicine, Dubrovnik International University
Type of study programme	University specialized fellowship program
Level of study programme	
Academic/professional degree awarded upon completion of study	Specialist for quality management in health

1. INTRODUCTION

1.1 Reasons for launching the study programme

Rapid changes in health care systems require new professionals with a deep understanding of health and healthcare issues and wide spectrum of skills to promote and manage changes at the organizational and policy level. Postgraduate Fellowship program on *Quality management in health* is designed to broaden the knowledge and skills on health system organization, management of quality and patient safety in all parts and segments of system for different professionals involved in organization and delivery of health care. The global changes in technologies and transition of health systems around the world have raised the interest for efficient, rational and timely use of new technologies based on scientific evidence and high quality of care. The management of quality and safety in health care become therefore one of priorities for health system providers, consumers and health insurance companies. The objective of this innovative program is to foster the rapid acquisition, integration and implementation of quality standards and into all levels of health system through education of different specialties to become experts for the organization and management of quality assurance based on scientific evidence along the health system in general. Moreover, this program offers to participants the insight into global health problems, methodology for the assessment of structural, financial and technological problems in health system and the best methodology for quality assessment and improvement. This program is dedicated to medicine doctors, dentists, residents in different specialties in medicine and pharmacy, experts in laboratory medicine, family doctors, nurses, midwifes and other professions working in health system. Moreover, through this postgraduate program participants will be trained for planning and performing research projects in the field.

1.2.Evaluation of purposefulness in respect to the market needs in public and private sector

In Republic of Croatia, as well as in other developed countries quality of health care is regulated through country legislative. Health care institutions, particularly hospitals are ranged in some countries according to quality of their services based on quality indicators, thus allowing transparent information to their consumers. The accreditation of hospital and outpatient care providers is foreseen as voluntary or mandatory in almost all countries as well as programs for continuous improvement of quality and safety. For the implementation of quality system and accreditation there is a need for well trained professionals on different levels of health system. This postgraduate program is designed for health service managers, clinicians and other health professionals, as well as those in social services, for private and public health care systems, which have a commitment to ensuring quality of service in their organization. Positions such as Accreditation Coordinator, Quality Manager, Human resources manager, Head nurse, Head of medical laboratory, Internal or External auditor, are essential within health service. They are competent to work in consultancy companies, pharmaceutical and medical devices industry too. Successful completion of this study will put postgraduate students in a favorable position to fill such roles in public or non-governmental and for non –profit organizations. After finishing this postgraduate study participants have very broad

working possibilities in own and other countries.

1.2.1.Connection with the local community (economy, entrepreneurship, civil society)

This program is important for all parts of health system, all specialties particularly for those professionals who have managerial function in hospital or outpatient care, clinical disciplines, nursing, dental medicine, agencies for accreditation, health insurance organizations. Furthermore the program is important at the same level for private and public sector in local community, on country and regional level. Through national and international regulations on patient rights citizen are nowadays well informed and they expect the best possible quality of safe care when they need it. Patient organizations and civil society organizations are particularly interested in this issue which become one of important part of EC directive on cross border care (June 2011/24).

1.2.2.Compliance with professional association's requirements (recommendations)

Postgraduate program is designed for health service managers, clinicians and other health professionals, nurses, pharmacists, doctor of dental medicine, as well as those in social services or the private and charitable health care sectors, which have a commitment to ensuring quality of their services, consumers satisfaction as well as the involvement of consumers in the process. The program is in concordance with programs on other universities, the Croatian Law on Health Care Quality, Bylaw on Quality Standards in Health, health care legislation in other countries, legislation on patient rights, EU quality standards of international professional associations on European and international level (WHO, ESQH and ISQH).

1.2.3. Name possible partners outside higher education system that showed interest in the study programme

Public and private health care providers in Croatia, surrounding countries, healthcare systems worldwide, accreditation agencies, private and public health insurance agencies.

1.3 Comparability of the study programme with similar programmes of accredited higher education institutions in the Republic of Croatia and the EU (name and explain comparability of the proposed programme with two programmes, whereas at least one of which should be from the EU (provide their web sites))

Program for quality of care management is not present in Croatian universities as jet. School of Public Health in Zagreb University organize postgraduate course in Management and Leadership in Health for health care managers, where quality is one of the topics (3 ECTS), bringing to participants an overview on quality issue. Rijeka University School of Medicine organize study program (diploma) for managers in health sector with one module on Quality management but this program will finish with school year 2013/2014. Split University have within the program of doctoral study one module for Quality in Health (1, 5 ECTS).
The proposed postgraduate study program is comparable with programs performed by some worldwide universities as:
Harvard School of Public Health(www.hsph.harward.edu)
Leeds University (UK)www.leeds.ac.uk),
Bocconi School of Management (www.sdabocconi.it/mihmep),
Murdoch University, Australia, www.murdoch.edu.au/
University of Udine (www.uniud.it)
and Heidelberg University (www.klinikum.uni-heidelberg.de),
George Washington University(www.gwu.edu/),
Northwestern University(www.northwester.edu),
John Hopkins Bloomberg School of Public Health (www.mph.iiihmr.org) ,
University of Helsinki (www.graschool.com).
Imperial College London (www.findmasters.com)

GEORG WASHINGTON UNIVERSITY, **(www.gwu.edu/),** in partnership with the National Committee for Quality Assurance (NCQA), developed program (to meet the growing need for quality and patient safety specialists who can grow and sustain a culture of continuous improvement. Graduates will be prepared for quality and patient safety leadership, management, and research positions within health care organizations or policy agencies, and be able to:

Develop, implement, and evaluate quality and patient safety improvement initiatives
Learn strategies to lead organizational change toward a quality-focused culture
Translate national quality expectations into daily operations
Apply processes and tools to measure, analyze, and interpret quality improvement data
Design and implement information technology systems to support quality assurance
Conduct research to drive clinical and operational decision-making

The MSc in *QUALITY AND SAFETY IN HEALTHCARE* performed by Imperial college London is the year part-time course primarily aimed to healthcare professionals who have experience in their chosen field such as surgeons, physicians, nurses, pharmacists and allied health professions. The programme offers theoretical background to the principles of clinical risk management, quality improvement and patient safety; an introduction to appropriate research methods and the opportunity for intellectual development within stimulating environment.

Program *MASTER OF SCIENCE IN HEALTHCARE QUALITY AND PATIENT SAFETY* performed by Northwestern University **(www.northwester.edu)** contain very comparable topics to our proposed program such as healthcare quality context and measurement, changing health care delivery, accountability and public health policy, safety interventions and practices, health information technology, risk assessment methods, health management, advanced patient safety, research, etc. This program allows participant further to enter PhD study in quality management.

QUALITY MANAGEMENT IN EUROPEAN HEALTH SYSTEMS master program organized by University of Udine **(www.uniud.it) is** two step program in duration of 12 or 18 months (60 or 120 credits).The program is oriented as support to those who would like to make professional carrier in health system on European level. The aim of this program is to train expert professionals in promoting continual improvement of quality in healthcare systems. Participants acquire skills in quality management and measurement in healthcare, change management and human resources development, risk management, project management and process management. Moreover they are trained to conduct research in order to drive clinical and operational decision-making based on scientific evidence. The attendance into the program is foreseen for those with working experience in health system and ends with master diploma.
The second step is for those who attend further specialization in quality management.
This program is highly comparable with our proposed program *QUALITY MANAGEMENT IN HEALTH.*
Our proposed *QUALITY MANAGEMENT IN HEALTH* postgraduate study is specifically devoted to integral quality management in health care with additional courses bringing the newest knowledge on pharmacoeconomics, pharmacogenomics and personalized medicine. The study is in English and is dedicated to English speaking students/learners.

1.4. Openness of the study programme towards horizontal and vertical mobility of students within national and international higher education area

Postgraduate students should complete 6 mandatory modules and at least two elective modules (altogether 60 ECTS). Mandatory modules should be completed and acknowledged only by leader of the course defined by the program of this postgraduate study Quality management in health.
In order to enlarge their knowledge and skills students are free to choose course or elective module at other comparable post-graduate studies organized at University of Rijeka and other universities in the Republic of Croatia, European Union or elsewhere with prior approval of program postgraduate study leader.

1.5. Alignment with the Mission and the Strategy of the University of Rijeka

The proposed program fits into main stream of education at DIU and the Strategy of the Faculty of Medicine University of Rijeka from 2010 to 2015, which provides for the international cooperation increase for at least 25 percent.

1.6 .Institutional strategy for study programmes development

Dubrovnik International University has possibility to engage internationally recognized professors of the highest possible quality and competencies for this programme as well as infrastructure. Faculty of Medicine in Rijeka and DIU will include into education process associated institutions, their professors and assistants, which will be of mutual interest. The Welcare

Hospital from Dubai through signed contract with DIU is supporting such educational activities having a good infrastructure to enable teaching of theoretical and/or practical skills of the high quality.
1.7. Other important data – according to the coordinator's opinion
This program will not bring any financial burden to the Medical Faculty of Rijeka University, because program is financed through scholarship paid by postgraduate students. DIU has signed a contract on financial support with the Welcare Hospital in Dubai. The program allows participants to get the license for external auditors in the process of accreditation. After finishing the program the students will be offered to continue the doctoral studies at different universities. This program offers extensive experience in assessment and follow-up of quality in health services, accreditation process as well as formal training and mentorship in research.

2. GENERAL PART
2.1. Title of study programme
Quality Management in Health
2.1.1.Type of study programme
University postgraduate study
2.1.2.Level of study programme
University postgraduate specialized program
2.1.3.Area of study programme (scientific/artistic) – indicate the title
8. International field of science
2.2. Study programme coordinator
Dubrovnik International University, Medical Faculty University of Rijeka
2.3. Implementor/s of study programme
Dubrovnik International University, Medical Faculty University of Rijeka
2.4. Duration of study programme (indicate possibilities *of part-time study, long distance study)*
The duration of the program is one academic year (two semesters)**.** Participants will follow study program at DIU and their collaborating institutions. The program is organized as part-time and teaching will be organized from Friday to Sunday. Participants will be stimulated for self-learning, preparation of essays, seminars and reports. Practical part of the program will be organized for participants in their hospitals where they are employed along their working hours, depending on their working place and basic knowledge or collaborating hospitals and institutions in the country or abroad under the supervision of their mentors.
2.4.1. ECTS credits – minimal number of credits required for completion of study programme
60 ECTS credits
2.5. Enrolment requirements and selection procedure
The enrolment requirements are: University degree in medicine, biomedical sciences, nursing, pharmacy, midwifes, residents

or specialists in biomedical and diagnostic specialties, health system managers, health economics (mandatory 300 ECTS). The program will be announced in national and international journals together including selection procedure. English language is mandatory. The maximal number for this program is 25 participants in one year. The criteria for the selection of candidates include beside university diploma, additional education, working experience and letter of recommendation.

2.6. Study programme learning outcomes

2.6.1. Competences which student gains upon completion of study (according to CROQF (HKO): knowledge, skills and competences in a restricted sense –independence and responsibility):

This postgraduate program is ranged 7, 2 according to CROQF or 7 on scale according to EQF, bringing 60 ECTS for specialized knowledge and skills in management of quality and safety in health care.
After finishing this program the participants will:

- broaden the knowledge on main public health problems, global and local, and be able recognize main risks for them
- achieve solid theoretical knowledge and substantial skills on implementation and management of QI system on international level
- gain experience in applying qualitative and quantitative methods to promote and management of change in culture of quality and patient safety
- identify, map and optimize the core processes in health services and programs
- understand different quality improvement methodologies in healthcare
- understand principles of patient safety, and identify patient safety risks and best practices
- be competent for management of quality system and accreditation in health sector
- be competent for quality assessment, quality improvement based on evidence based quality indicators
- be able to anticipate resistance to change management and propose solutions
- achieve knowledge on biostatistics and informatics –advanced methods for research
- be fully comprehended and learn to lead the important new developments occurring in health related industries and competent for the implementation of health technology assessment.
- understand the background of health economics and pharmacoeconomics
- competency for the designing, planning and performing scientific projects on quality improvement.

2.6.2. Employment possibility (list of possible employers and compliance with professional association's requirements)

Program is important for all professions in health system and associated institutions and agencies. The employment is possible in public, governmental and private health care institutions, insurance companies and foundations, health administration, consultation agencies, accreditation agencies, pharmaceutical industry.

2.6.3. Possibility of continuation of study on higher level

After successful completion of the modules and satisfactory performance on final exam, the fellow receive a certificate that he/she has successfully completed a Specialized fellowship program on Quality management in Health and become a Specialist of Quality Management in Health. After receiving the certificate, they may continue the doctoral study in Rijeka

University, DIU or other in order to obtain PhD degree (CROQF and EQF).

2.7. Upon applying for graduate studies list proposer's or other Croatian institution's undergraduate study programmes which enable enrolment to the proposed study programme

The postgraduate study program is foreseen for all professions working in health system which have finished appropriate diploma study (300 ECTS).

2.8. Upon application of integrated studies - name reasons for integration of undergraduate and graduate level of study programme

3. PROGRAMME DESCRIPTION

3.1. List of compulsory and elective subjects and/or modules (if existing) with the number of active teaching hours required for their implementation and number of ECTS-credits (appendix: Table 1)

Program consists from 6 obligatory modules (O) and list of electives (E). Each module is one logical issue and divided into courses. Modules are organized by coordinator and courses are carried out by one or two leaders.
Data included into the Table 1

3.2. Description of each subject (appendix: Table 2)

Data included into the Table 2
Each course leader has right to choose one more assistants who will participate in seminars or exercise. All of them should be elected according the rules for appropriate scientific degree.

3.3. Structure of study programme, dynamic of study and students' obligations

The program is carried out through two semesters with the total load of 60 ECTS credits. In first semester students have 22 ECTS from obligatory and 4 from elective modules. In second semester students have 20 ECTS from obligatory and 8 from elective modules. Final exam bring 6 ECTS. The program is organized as part-time and lectures and seminars will be performed from Friday to Sunday in both semesters. Participants will be stimulated for self-learning, preparation of essays, seminars and reports what brings to students certain number of ECTS. Practical part of the program will be organized for participants in their hospitals where they are employed along their working hours, depending on their working place and basic knowledge or collaborating hospitals and institutions in the country or abroad under the supervision of their mentors.

Students enrolled full academic year or two semesters at a time. Each student has own mentor named by postgraduate study coordinator. Students are required upon registration obligatory and elective modules to attend lectures, seminars and exercises to gain the requirements for the final exam.

3.3.1. Enrolment requirements for the next semester or trimester (course title)

Each candidate is expected to complete his/her log book describing gained practical skills and present it at the end of each course to be signed by mentor. Postgraduate students are obliged to have signed log book of all obligate courses before entering second semester. Moreover they have to fulfill at least 10 ECTS exams from first semester for the attendance into second semester.

3.4. List of courses and/or modules student can choose from other study programmes

Postgraduate students may choose elective modules from other postgraduate programs of Medical Faculty of Rijeka University, Dubrovnik International University or other universities in EU but recommended by their mentor. At the same time participants in other postgraduate specialist studies from other areas, may enter some of the elective modules of this

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program.
3.5. List of courses and/or modules that can be implemented in a foreign language (specify the language)
All parts of the program will be performed in English language.
3.6. Allocated ECTS credits that enable national and international mobility
The Council of postgraduate study Quality management in health may authorize the transfer of ECTS credits from other studies at the University or other universities according to the criteria that one working week of 40 hours of student workload, is 1.5 ECTS credits. In direct teaching that is 15 - 25 contact hours, depending on whether it is hours of lectures, seminars or exercises.
3.7. Multidisciplinarity/interdisciplinarity of study programme
This program is interdisciplinary involving public health specialists, economics, IT specialists, biomedical specialists, health workers, statisticians, and others on all levels of health system. Almost all profession working as professionals in health or teachers in health issues can participate in postgraduate program Quality management in health. Lecturers on the program are experts in different clinical, public health, economics, IT and other disciplines. All relevant data for lecturers are enclosed in additional forms (CV) and agreements from their universities for lecturers coming from other universities.
3.8. Mode of study programme completion
University specialized Fellowship study on Quality Management in Health finishes with final exam.
3.8.1. Conditions of approval of final work /thesis and/or final/thesis exam application
Postgraduate study is finished after successful pass of final exam. Postgraduates may applicate for final exam after finalizing all single exams of each course and present signed book with the description of competencies achieved. They should have at least 54 ECTS before entering final exam. Final exam is foreseen to be performed in oral form in front of commission (three members) after successful exams of all courses from mandatory and elective modules and brings 6 ECTS. Mentor might be a member of commission, but not a chairman. Final exam brings 6 ECTS.
3.8.2. Composing and furnishing of final work/thesis
It is not foreseen for this program.
3.8.3. Final work/thesis assessment procedure and evaluation and defence of final work/thesis
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Table 1.

3.1. List of obligatory (O) and elective courses (E) and/or modules with teaching hours required and ECTS credits allocated

Modules							
Year of the study: 1.							
Semestar: 1.							
MODUL	MODUL	Coordinator	L	E	S	ECTS	STAT US[1]
	QM1 Public health and global health issues –selected chapters	Professor Izet Mašić	15	40	20	7	O
	QM2 Strategy policies for quality improvement in health system	Professor Ana Stavljenić-Rukavina	10	30	20	6	O
	QM3 Management of quality system in health sector	Professor Charles Shaw	20	40	20	9	O
		Total:	45	110	60	22	

Year of the study: 1.							
Semester: 1.							
MODUL	COURSE	LEADER	L	E	S	ECTS	STAT US[2]
QMI-QM3	QM1 /1 Selected lectures on Public health QM1/2 Health promotion and disease prevention	Professor Izet Mašić Professor Ana Stavljenić-Rukavina	10 5	30 10	10 10	4, 5 2,5	O O
	QM2 /1 Strategy policies for quality improvement QM2/2 Good clinical praxis	Professor Ana Stavljenić-Rukavina and professor Davor Štimac Dr. Gunter Jonitz and professor Herman Haller	5 5	20 10	10 10	3,5 2,5	O O

[1]IMPORTANT: **O** compulsory/obligatory /mandatory **E elective**
[2] **VAŽNO:** Upisuje se **O** ukoliko je predmet obvezan ili **I** ukoliko je predmet izborni.

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	QM3 /1 Quality management in health QM3/2 Quality standards in health sector	Professor Charles Shaw Professor Charles Shaw and professor Herman Haller	10 10	30 10	10 10	6 3	O O

Modules

Year of the study: 1.

Semester: 2.

MODUL	MODUL	Coordinator	L	E	S	ECTS	STATUS
	QM4 Implementation and management of quality system in health	Professor Davor Štimac	20	40	20	9	O
	QM 5 Health economics, pharmacoeconomics and health technology assessment	Professor Josip Čulig and professor Ratko Magjarević	10	40	15	6	O
	QM6 Biostatistics	Professor Ana Maria Šimundić	15	30	15	5	O
		Total	45	110	50	20	

LIST OF COURSES IN MODULES QM4-QM6

Year of the study: 1.

Semester: 2.

MODUL	COURSE	LEADER	L	E	S	ECTS	STATUS
QM4-QM6	QM4/1 Implementation and management of quality system in health	Professor Davor Štimac and professor Sanja Balen	7	10	5	3,0	O
	QM4/2 Quality management in nursing care	Professor Bojana Filej	3	10	5	2,5	O
	QM4/3 Patient safety and risk management	Ass. professor Vladimir Mozetic and Professor Ana Stavljenić-Rukavina	5	20	10	3,5	O

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	QM 5/1 Health technology assessment	Professor Ratko Magjarević and professor Herman Haller	5	20	10	3,5	O
	QM5/2 Health economics and pharmacoeconomics	Professor Josip Čulig and professor Maja Vehovec	5	20	5	2,5	O
	QM6 Biostatistics and bioinformatics	Professor Ana Maria Šimundić	15	30	15	5	O

ELECTIVE MODULES				
Year of the study: 1.				
Semester: 1 **All elective modules (E) have 10 hours lectures, 20 hours exercise and 10 hours for seminars**				
Module		Leader	ECTS	STATUS
	QME1 Pharmacoeconomics and pharmacogenomics and	Professor Elizabeta Topić Professor Goran Palčevski	4	E
	QME2 Strategic planning in health system	Professor Charles Shaw	4	E
	QME3 Research and projects planning	Professor Vlatko Silobrčić i Ass. professor Vladimir Mozetič	4	E

ELECTIVE MODULES				
Year of the study: 1.				
Semester: 2 **All elective modules (E) have 10 hours lectures, 20 hours exercise and 10 hours for seminars**				
Module		Leader	ECTS	STATUS
	QME3 Change management in health	Professor Ana Stavljenić-Rukavina	4	E
	QME4 Personalized medicine and patient safety	Professor Elizabeta Topić and Professor Milan Stanojević	4	E
	Study visit for one month in Agency for quality and accreditation in health		4	E

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Table 2

3.2. Description of course in Module QM 1/1

General		
Course coordinator	Professor Izet Mašić	
Course	Selected lectures in Public health	
Study program	University specialized study in Quality Management in Health	
Course status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	4,5
	Hours (L+E+S)	10+30+10

1. Description		
1.1. Goals of course		
Main goal is to get students acquainted with organization of health systems in different parts of the world, basic health indicators as morbidity, mortality, global health problems and most advanced methods for eradication of most common infectious and non-infectious diseases.		
1.2. Course enrolment requirements		
Participation in all teaching activities		
1.3. Outcome of the course		
Development of general competencies in understanding of differences, advantages and disadvantages of health systems and global health problems. Development of specific competencies for : Planning and implementation of programs for eradication and/or lowering the incidence and morbidity of chronic noninfectious diseases Planning and implementation of programs for lowering of morbidity and mortality from infectious diseases.		
1.4. Content of course		
Organization of health systems in developed and developing countries. Finances in health sector. Global public health problems. Advanced methods for diagnosis, therapy and prevention of most common infectious and noninfectious diseases within the frame of global public health problems. Infectious diseases in 21 century, STD, HIV/AIDS, chronic noninfectious diseases, malignant disorders, mental health, injuries, malnutrition and obesity, invalidity, healthy ageing. Planning and implementation of public health campaigns on global, national and local level. The role of WHO, CoE,EC, OECD, and international professional organizations.		
1.5. Teaching methods	☒ lectures ☒ seminars and workshops ☒ exercises ☐ long distance ☐ field work	☒ individual assignment ☐ multimedia ☐ laboratory ☐ mentors work

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		☐ other
1.6. Comments		

1.7. Students obligation.

The students should attend the lectures, seminars and exercises. They should actively participate on daily basis in teaching activities

1.8. Follow up of students work

Lectures	0,5	Activity/participation		Seminars	0,5	Experimental work	
Oral exam	3	Written exam		Essay		Research	
Projects		Sustained knowledge check		Report		Exercise	0,5
Portfolio							

1.9. Assessment and evaluation of student's work during classes and on final exam

Assessment and evaluation according to rules of University.

1.10. Assigned reading (at the time of the submission of study programme proposal)

- Richard Dicker at al.: Principles of Public health Practice. CDC Atlanta, 2006
- Petrie A, Sabin C. Medical Statistics at a Glance. Oxford: Blackwell Science Ltd, 2000.
- Gordis L. Epidemiology, W.B.Sanders Company, Philadelphia, 1996.
- Martin McKee, P.Garner and R.Stott: International co-operation in health. Oxford University Press, 2001
- Preventing Chronic Diseases: A vital Investment. World Health Organization, WHO, 2005

1.11. Optional / additional reading (at the time of proposing study programme)

- WHO yearly reports
- Health Care Systems in Transition. European Observatory on Health Care Systems, 1999-2003.

1.12. Number of assigned reading copies with regard to the number of students currently attending the course

Title	*Number of books*	*Number of students*
Richard Dicker at al.: Principles of Public health Practice. CDC Atlanta, 2006 Petrie A, Sabin C. Medical Statistics at a Glance. Oxford: Blackwell Science Ltd, 2000.	2 2	15-25
Gordis L. Epidemiology, W.B.Sanders Company, Philadelphia, 1996	2	15-25
Martin McKee, P.Garner and R.Stott: International co-operation in health. Oxford University Press, 2001 Preventing Chronic Diseases: A vital Investment World Health Organization , WHO, 2005	1 1	15-25

1.13. Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data. Each of postgraduates is followed through the study by mentor who control and monitor his work by approving log book.

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Table 2.

3.2. Description of course QM1/2

General information		
Course leader	Professor Ana Stavljenić-Rukavina	
Course title	Health promotion	
Study program	University specialized study in Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS workload coefficient	2,5
	Hours (L+E+S)	5+10+5

2. DESCRIPTION OF COURSE		
1.1. Goals of the course		
To acquire knowledge and competencies for methods of primary and secondary prevention, public health campaign for health promotion and disease prevention, to acquire skills for citizens' enrollment into public health campaigns for health.		
1.2. Outcome of the course		
General competencies: 1. To become competent for planning and performance of primary and secondary prevention for main public health disease problems Specific competencies: 1. Development of programs and plans for the primary and secondary prevention of diabetes, cardiovascular and malignant disorders, and for other non-infectious health problems, 2. Development of programs and plans for health promotion and education on global infectious diseases on HIV/AIDS model 3. Acquired skills for the evaluation of outcomes of primary and secondary prevention. 4. To earn and improve skills for the communication with citizen .To earn skills for public enrollment into activities of health promotion programs.		
1.3. Content		
Review of methods for planning and performance of public health campaigns .Health promotion as a method of choice for the lowering morbidity and mortality from chronic noninfectious disorders. The role of public education in eradication of infectious diseases. WHO, HNPproject. Quality indicators for public health campaigns, QI for health promotion programs. QI for programs for HIV/AIDS prevention. Communication methods. Civil society education. Media and its role in health promotion.		
1.4. Teaching methods	☒ lectures ☒ seminars ☒ exercise ☐ distant learning ☐ field learning	☒ self learning ☐ multimedia and network ☐ laboratory ☒ mentor ☐ other
1.5. Comments	The students will participate in planning of one public health campaign and performing it in collaboration with one patients organization.	

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1.6. Students obligation

Participation in all teaching activities and exam.

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1.7. Follow up of students

Lectures	0,2			Seminar	0,4	Experimental	
Written exam	1,7	Oral Exam				Research	
Project				Essay	0,2	Practical work	
Portfolio							

1.8. Assessment and evaluation of student's work during classes and on final exam

Basic evaluation according to rules of University (approved by Senate)

1.9. Mandatory literature

- Best practices in Health Promotion. Centre for Health Promotion. University of Toronto, 2005
- CDC. SMDP. Healthy Plan. A tool for planning and managing public health programs. Workshop kit. Atlanta., CDC, 2004

a. Additional literature

http://www.utoronto.ca/chp/ selected publications
www.hcjz.hr selected publications

b. Number of pieces in library

Title	*number*	*Number of students*
Best practices in Health Promotion. Centre for Health Promotion. University of Toronto	2	15-25
CDC. SMDP. Healthy Plan-it. A tool for planning and managing public health programs. Workshop kit. Atlanta., CDC, 2004	1	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences
Conducting surveys among students and evaluation of data.
Each participant has his mentor who control and monitor students work and approve log book.

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Table 2.

3.2. Description of course in Module QM2/1

General information		
Course leader	Professor Ana Stavljenić-Rukavina and Professor Davor Štimac	
Course	Strategy policies for QI	
Study program	Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	3,5
	Hours (L+E+S)	5+20+10

3. DESCRIPTION OF COURSE		
Goals		
Basic knowledge in planning of internal and external policies for quality in health care and effective management of health care.		
Outcome of the course		
Development of general competencies: 1. Establishment of partnership for quality in health system. Understanding the importance of QI in health system. To become competent for identification, mapping and integration of quality system in the working environment. Development of specific competencies 1. Communication skills for partnership among stakeholders in health system, 2. Knowledge about National , EU and international legislation on health care quality 3. Risk assessment for health 4. Development , implementation and evaluation of strategies for QI		
Content of the course		
Definition of quality in health sector and health services. Global, national, regional and institutional strategies for QI. National and EU legislative. Communication with main stakeholders for health care policy. Planning of internal and national policies for QI. The change in principles: from static control to dynamic quality improvement- key steps. International community.:WHO,EC, OECD,WB. The context of national quality culture, legislation, organization, role of professions. Definition of strategies for improvement which are consistent with health system development. Defining the strategy for quality consistent with health system. Consultation, dissemination and monitoring of quality.		
Teaching methods	☒ lectures ☒ seminars ☒ exercise ☐ distant learning ☐ field	☐ self-learning ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
Comment	The course is organized in order to stimulate active participation, discussion and negotiation with main stakeholders in health policy development.	
Student obligations		
Participation in lectures, seminars and exercises. Exam.		

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Follow up of students							
Lectures	0,5	Lectures	0,	Seminar	0,5		
Written exam		Oral exam	2,0	Essey		Research	
Projects		Knowledge				Practical work	0,5
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate)

Mandatory literature

- To Error is Human: Building a safer health system. IOM. National Academy of Sciences NY 2000
- Shaw CD, Kalo I. A background for national quality policy in health systems. WHO: Copenhagen, 2002

Additional literature

Shaw CD. Health-care quality is a global issue. Clin Governance Bull 2002; 3: July: 2-8
Health Care Systems in Transition. European Observatory on Health Care Systems, 2002
National Strategy for Quality Improvement in Health Care, Government of Canada. March, 2011.
http://www.health.gov.au/internet/main/publishing.nsf/Content/4D9AB3396D926315CA2577CB0005D65D/$File/PHCRED%20Strategy%20Oct%202010%20PRINT.pdf
http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/nphc-draft-report-toc/$FILE/NPHC-Draft.pdf
http://www.jabfm.org/content/25/Suppl_1/S18.full.pdf+html

Number of literature pieces in library

Title	*Number of pieces*	*Number of students*
To Error is Human: Building a safer health system. IOM . National Academy of Sciences NY 2000	2	15-25
Shaw CD, Kalo I. A background for national quality policy in health systems. WHO: Copenhagen, 2002	4	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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Table 2.

3.2. Description of course in Module QM 2/2

General information		
Course leader	Professor Gunter Jonitz and Professor Herman Haller	
Course title	Good clinical praxis	
Program	Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	1,5
	Hours (L+E+S)	5+10+10

4.DESCRIPTION OF COURSE			
Goals			
Knowledge and skills for the implementation and assessment of good clinical practice. Development of clinical guidelines, pathways and protocols for most common disorders based on EBM principles. Knowledge and skills for evaluation of good clinical practice.			
Outcome			
Competencies and skills for the understanding variations in clinical practice. Acquired methodologies for development of clinical guidelines, pathways and protocols. Acquired skills for development of informed consent protocols for patients and relatives. Competencies for the evaluation of outcomes.			
Content			
Clinical practice: variations, guidelines, pathways, protocols. Methods for the evaluation of clinical guidelines. On –line sources for information on best clinical guidelines. Good clinical practice requirements. Requirements and criteria of quality in health services along all levels of health system. Good clinical practice in family medicine**.** Assessment and evaluation of implementation of clinical guidelines and protocols. Benchmarking.			
Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distance learning ☐ field	☒ self ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other	
comments			
Students obligations			
Participation in all teaching activities. Exam.			

c. Follow up of students

Lectures	0,2	Activity	0,2	Seminar	0,2	Experimental work	
Written exam	1,7	Oral exam		Essay		Research	

Project						Practice	0,2
Portfolio							

d. Assessment and evaluation of student's work during classes and on final exam

Basic evaluation according to rules of University(approved by Senate).

e. Obligatory literature

- The AGREE Collaboration. Appraisal of Guidelines for Research & Evaluation EC,WHO
- To Error is Human: Building a safer health system. IOM . National Academy of Sciences NY. 2000
- National Institute for Health and Clinical Excellence: The Guidelines Manual, 2009. www.nice.org.uk
- Lewitt C, Hilts L: Quality in Family Practice. Book of Tools. Mc Master Innovation Press, 2010.
- Boy O, Bredehöft J, Bungard S, Chop I, Eberlein-Gonska M, Fellmann E, Klakow-Franck R, Krahwinkel W, Kuch C, Rink O, Adomeit J, Albrecht A, Borg E, Bouzinou F, Bristrup R, Brüggemann M, Bücker-Nott J, Engelbrecht J, Felsenstein M, Huber H-G, Jonitz G, Jungbluth A, Leffmann C, Macher-Heidrich S, Märker J, Weidringer JW. Curriculum "Ärztliches Peer Review". Bundesärztekammer (Hrsg.) 2011;
- Barth S, Bergner MH, Bristrup R, Hintzenstein U, Jonitz G, Klakow-Franck R, Klünspies-Lutz A, Lüthy A, Pfaff H, Rossi R, Schrappe M, Selbmann HK,Weidringer J-W. Curriculum "Ärztliche Führung". Bundesärztekammer (Hrsg.). (2007);Auflage, Berlin, 2005 [CME-Curriculum]
- Shaw CD. Managing clinical performance Chapter 6 in: Dubois, C-A, McKee M, Nolte E. Human resources for health in Europe. European Observatory on Health Systems. Maidenhead: Open University Press, 2006

f. Additional literature)

AGREE) Instrument. www.agreecollaboration.org
Shaw CD. Editorial: Standards for better health: fit for purpose? BMJ 2004; 329: 1250

www.nice.org.uk ;www.endodiab.si ;www.akaz.be :www.akaz.hr ; www.azus.gov.sr

g. Number of titles in comparisson with number of students

Title	*Number of titles*	*Number of students*
The AGREE Collaboration. Appraisal of Guidelines for Research Evaluation	10	15-25
Shaw CD. Editorial: Standards for better health: fit for purpose? BMJ 2004; 329: 1250	4	15-25
To Error is Human: Building a safer health system. IOM . National Academy of Sciences NY, 2000	2	15-25
National Institute for Health and Clinical Excellence: The Guidelines Manual, 2009. www.nice.org.uk	1	15-25
Lewitt C, Hilts L: Quality in Family Practice. Book of Tools. Mc Master Innovation Press, 2010.	1	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

h. Conducting surveys among students and evaluation of data.
Each participant has his mentor who controls and monitors the students work

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Table 2.

3.2. Description of course in Module QM3/1

General information		
Course leader	Professor Charles Shaw	
Course title	Health quality system management -introduction	
Study program	Postgraduate course Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	6
	Number of hours (L+E+S)	10+30+10

5. DESCRIPTION OF COURSE		
Goal		
Acquired working knowledge skills for the implementation of effective health quality management system in public health. Development of managerial skills for public health sector.		
Outcome		
During the course students should develop general competencies for recognition of different models of quality systems starting from ISO 2000, certification, licensing up to accreditation. They will gain working knowledge and skills of basic data quality standards, assessment criteria, advantages and disadvantages of different models around the world. They will bw informed on functioning of governmental and non-governmental bodies and accreditation agencies.		
Content		
Models of health quality systems. Certification, licensing, accreditation. Specific programs and standards for medical laboratories and diagnostic specialties. Accreditation agencies. Criteria for quality systems on national level for all parts of health system. Defining quality standards in the context of public health service. The implementation of quality system in public health and quality management. The role of national and international agencies for accreditation and certification.		
Teaching methods	☒ lectures ☒ seminars ☒ exercise ☐ distal learning	☐ self learning ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments	Students are obliged based to literature data to perform the analysis of one model for QI , risks and benefit of it.	
Student obligations		
Active participation in all teaching activities. Exam.		

Follow up of students							
lectures	0,5	Activity	0,5	Seminar			
Written exam	4	Oral exam		Essay			

Project						Practical work	1
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

Assessment of students according to rules of Rijeka University (approved by Senate).

Mandatory literature

- Bashshur R, Donabedian A. An Introduction to Quality Assurance in Healthcare. Oxford University Press, 2002.
- Guest G. Globalization, Health, and the Environment : An Integrated Perspective (Globalization and the Environment), AltaMira Press,2005.
- Shaw CD. Managing clinical performance Chapter 6 in: Dubois, C-A, McKee M, Nolte E. Human resources for health in Europe. European Observatory on Health Systems. Maidenhead: Open University Press, 2006

Additional literature

http://www.euro.who.int/Document/E87923.pdf
Health is global. A UK Government Strategy 2008-2013. http://www.hm.government

Number of titles in comparison with number of students

Title	*Number of titles*	*Number of students*
Bashshur R, Donabedian A. An Introduction to Quality Assurance in Healthcare. Oxford University Press, 2002.	3	15-25
Guest G. Globalization, Health, and the Environment : An IntegratedPerspective (Globalization and the Environment), AltaMira Press,2005	2	15-25
Shaw CD. Managing clinical performance Chapter 6 in: Dubois, C-A, McKee M, Nolte E. Human resources for health in Europe. European Observatory on Health Systems. Maidenhead: Open University Press, 2006	2	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences
Conducting surveys among students and evaluation of data.
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Table 2.

Description of course in Module QM3/2

General information		
Course leader	Professor Charles Shaw and Professor Herman Haller	
Course title	Quality standards in health	
Study program	Postgraduate study on Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	3
	Number of hours (L+E+S)	10+10+10

6.DESCRIPTION OF COURSE		
Goals		
To get skills for the election and implementation of quality standards for family medicine, hospitals, public health, outpatient departments, dental medicine, emergency services, nursing care palliative care and rehabilitation.		
Outcome		
Acquired knowledge and skills necessary for the election, implementation and assessment of quality standards for family medicine, hospitals, outpatient clinics, emergency service, public health, dental medicine, laboratory medicine, nursing and rehabilitation.		
Content		
Definition of quality standards, Methodology for standard development and implementation. Methods to prepare local national standards. International quality standards: Canadian, French, Scotish, German, JCHO, DNV. Measurement of standard concordance from different programs: qualitative, quantitative, internal and external. Management of change: learning based on assessment. Criteria and quality indicators. Internal and external quality assessment methods. Accreditation standards. Accreditation standards for medical laboratories ISO 15189. Accreditation process and research on outcomes.		
Teaching methods	☒ lectures ☒ seminar ☒ practice ☐ distant learning ☐ field	☒ self learning ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		
student obligations		
Active participation in all learning processes. Exam.		

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Follow up of students

Lectures	0,3	Activity		Seminar	0,3	Experiments	
Written exam	2	Oral exam				Research	
Project						Practice	0,4
Portfolio							

Mandatory literature

- Patient Safety. Establishing a Set of EU Patient Safety Indicators. ESQH Office for Quality Indicators, Aarhus, 2007
- Shaw CD. Managing clinical performance Chapter 6 in: Dubois, C-A, McKee M, Nolte E. Human resources for health in Europe. European Observatory on Health Systems. Maidenhead: Open University Press,
- Shaw CD, Bruneau C, Kutryba B, de Jongh G, Sunol R. *Towards hospital standardization in Europe* International Journal for Quality in Health Care 2010; 22: 244-9 doi: 10.1093/intqhc/mzq030

www.jointcommission.org/
www.jointcommissioninternational.org/
www.aacsb.edu/accreditation/standards/
www.ansi.org/standards.../

Additional literature

- Shaw C: Accreditation and Patient Safety. Journal on Quality and Patient Safety. 2006. 32: 266-275
- http://www.euro.who.int/Document/E87923.pdf
  2006
- Shaw CD. Editorial: Standards for better health: fit for purpose? BMJ 2004; 329: 1250-1

Number of titles in comparisson with number of students

Title	*Number of pieces*	*Number of students*
Patient Safety. Establishing a Set of EU Patient Safety Indicators. ESQH Office for Quality Indicators, Aarhus, 2007	5	15-25
Shaw CD. Managing clinical performance Chapter 6 in: Dubois, C-A, McKee M, Nolte E. Human resources for health in Europe. European Observatory on Health Systems. Maidenhead: Open University Press,	2	15-25
Shaw CD, Bruneau C, Kutryba B, de Jongh G, Sunol R. *Towards hospital standardization in Europe* International Journal for Quality in Health Care 2010; 22: 244-9 doi: 10.1093/intqhc/mzq030	4	15-25

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.Table 2.

3.2. Description of course in Module QM 4/1

General information		
Course leaders	Professor Davor Štimac and Professor Sanja Balen	
Course title	Implementation and management of quality system	
Study program	Postgraduate study on Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	3,0
	Number of hours (L+E+S)	7 + 10+5

7.DESCRIPTION OF COURSE		
Goals		
To get specific qualification for the implementation of quality standards in health care at all level of system.		
Outcomes		
Competencies for the implementation of quality standards in hospital and outpatient health care, qualifications for the implementation of criteria and quality indicators for measuring of improvement. Assessment of quality at all level of health care. Qualification for the assessment of patient safety.		
Content		
The implementation of quality system standards and quality indicators for hospital care. Internal organization: Rights and responsibilities of staff, members of commissions, team leader. Hospital admitting and discharge, medical documentation, hospital infection prevention and control, continuity of care, hand-over care, treatment care, drugs and medical devices management, system for registration and resolving of sentinel events. Management of services (nutrition, equipment and sterilization. Quality standards and indicators in public and private outpatient care. Emergency care. Palliative care. Tools for follow up and evaluation of management. Patient satisfaction.		
Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ field	☒ self teaching ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		
Student obligations		
Active participation in all teaching activities. Exam.		
Follow up of students		

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Lectures	0,2	Activity	0,2	Seminar	0,5	Exercise	0,5
Written exam	1,6	Oral exam		Essay		Research	
Project							
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

Assessment of students according to rules of University (approved by Senate).

Mandatory literature

- Shaw C: Accreditation and Patient Safety. Journal on Quality and Patient Safety. 2006. 32: 266-275
- R.Eldar: Quality of Care. Medicinska naklada Zagreb, 2005.
- Gawande, A. Better A Surgeon Notes Performance .Metropolitan Books, New York 2007

Additional literature

- World Health Organization, Regional Office for Europe. Investment for health: a discussion of the role of economic and social determinants Copenhagen: WHO; 2002.
- Informirani pristanak. Carmi A, Turković K, Roksandić Vidlička S (ur). Zagreb: Jedinica UNESCO katedre za bioetiku i pravo Sveučilišta u Zagrebu; 2009.
- Shaw CD, Groene O, Mora N, Sunol R Accreditation and ISO certification: Do they explain differences in quality management in European hospitals? International Journal for Quality in Health Care 2010
- McKee M, Healy J. The changing role of the hospital in Europe: causes and consequences. Clinical Medicine 2001;1:299-304.

www.jointcommission.org/
www.jointcommissioninternational.org/
www.aacsb.edu/accreditation/standards/
www.ansi.org/standards.../

Number of titles in comparisson to number of students

Title	*Number of titles*	*Number of students*
Shaw C: Accreditation and Patient Safety. Journal on Quality and Patient Safety. 2006. 32: 266-275	3	15-25
R.Eldar: Quality of Care. Medicinska naklada Zagreb, 2005.	3	
Gawande, A. Better A Surgeon Notes Performance .Metropolitan Books, New York 2007	1	

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

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Table 2.

3.2. Description of course in Module QM 4/2

General information		
Course leaders	Professor Bojana Filej	
Course title	Management in nursing care	
Study program	Postgraduate study on Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	2,5
	Number of hours (L+E+S)	3 + 10+5

8.DESCRIPTION OF COURSE		
Goals		
Competencies for the implementation of quality system in nursing care. To get qualification for the implementation of quality standards in midwifes care, physiotherapy, rehabilitation. Cmpetencies for management in nursing, midwifing, rehabilitation.		
Outcomes		
Competencies for the implementation and management of quality in nursing care in hospital and outpatient units. Qualifications for the implementation and management of quality in midwife care, physiotherapy, rehabilitation.. Management of home care and palliative care. Knowledge and skills for quality assessment in hospital and outpatient care.		
Content		
The implementation of quality system standards and quality indicators for hospital care. Internal organization: Rights and responsibilities of staff and team leaders. Communication skills. Quality standards in nursing. Protocols and guidelines for nursing care. Quality indicators of nursing care. Nursing records. The role of nurse in intensive and emergency medicine. Quality management of care in care for elderly and rehabilitation. Quality standards and indicators for midwife care. Ethical issues in nursing and midwifes care. Self-assessment of care. Quality management in outpatient units. Assessment tools for follow up of quality indicators in nursing and midwife care. The investigation of consumer's satisfaction.		
Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ field	☒ self teaching ☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		
Student obligations		
Active participation in all teaching activities. Exam.		

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Follow up of students

Lectures	0,2	Activity	0,2	Seminar	0,2	Exercise	0,2
Written exam	1,7	Oral exam		Essay		Research	
Project							
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

Assessment of students according to rules of University (approved by Senate).

Mandatory literature

- Shaw C: Accreditation and Patient Safety. Journal on Quality and Patient Safety. 2006. 32: 266-275
- R.Eldar: Quality of Care. Medicinska naklada Zagreb, 2005.
- Quality Assurance and Accreditation of Nursing and Midwifery .WHO *2007.*
- Standards for Maternity Care .Authors/editors**:** RCOG, RCM, RCA and RCPCH. RCOG Press 2008
- Clinical Nursing Skills and Techniques. Patricia A. Castaldi. Mosby 2002.
- Manual of Critical Care Nursing. Pamela L. Swearingen, Janet Hicks Keen. Mosby 2001.
- www.currentnursing.com/nursing.../quality_standards

Additional literature

www.jointcommission.org/
www.jointcommissioninternational.org/
www.aacsb.edu/accreditation/standards/
www.ansi.org/standards.../www.jointcommission.org/

Number of titles in comparisson to number of students

Title	*Number of titles*	*Number of students*
Shaw C: Accreditation and Patient Safety. Journal on Quality and Patient Safety. 2006. 32: 266-275	3	15-25
R.Eldar: Quality of Care. Medicinska naklada Zagreb, 2005.	3	
Standards for Maternity Care .Authors/editors**:** RCOG, RCM, RCA and RCPCH. RCOG Press 2008	1	
www.currentnursing.com/nursing.../quality_standards		

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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Table 2.

3.2. Description of course in Module QM 4/3

General information		
Course leader	Assistant professor Vladimir Mozetic and Professor Ana Stavljenić-Rukavina	
Course title	Patient safety and risk management	
Study program	Postgraduate study Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	3,5
	Number of hours (L+E+S)	5 + 20 +10

9.DESCRIPTION OF COURSE		
Goals		
Development of knowledge and skills for management of patient safety and risk management .TQM		
Outcome		
Participants become competent for the recognition of risks in health system, particularly risk for patients. Qualification for risk management and qualification for continuous risk prevention.		
Content		
Methods for quality improvement. Patient safety. Safety of transplantation. Environment and patient safety. Risk assessment. Near miss events. Medical errors. Registry of risk events. Clinical competencies and risk prevention. Risk scoring. Quality indicators for outcomes of risk prevention programs. Continuity of care and patient safety. Risk factors in home and outpatient care. Risk management. Research on tools for continuous improvement of patient safety. Legal and ethical dimensions of patient safety. TQM.		
Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning ☐ field	☒ elf learning ☐ multimedia and network ☐ mentor ☐ other
comments		
Students obligations		
Active participation in all teaching activities. Exam.		

Follow up of students

Lectures	0,5	Activities		Seminar	0,5		
Written exam		Oral exam	2,0				
Project						Practice	0,5
Portfolio							

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Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka university (approved by Senate)

Mandatory literature

- Gawande, A. Better A Surgeon Notes Performance .Metropolitan Books, New York 2007
- Gawande,A. CHECKLIST Manifesto. Metropolitan Books, New York 2007
- T.J.Douglas: Total Quality management: implementation and advantage, CDC. 2001
- RBruce Jennings, Mary Ann Baily, Melissa Bottrell, Joanne Lynn: Health Care Quality Improvement: Ethical and regulatory issues. The Hastings Center Garrison, New York.2007

Additional literature

Medical error: medical and legal aspects. Split: School of Medicine Split; 2007.
Borovečki A, ur. Etika u medicinskim istraživanjima i kliničkoj praksi. Zagreb: Medicinska naklada; 2003

Number of titles in comparisson to number of students

Title	*Number of titles*	*Number of students*
Gawande, A. Better A Surgeon Notes Performance .Metropolitan Books, New York 2007	1	15-25
Gawande, A. CHECKLIST Manifesto. Metropolitan Books, New York 2007	3	15-25
T.J.Douglas: Total Quality management: implementation and advantage, CDC. 2001 RBruce Jennings, Mary Ann Baily, Melissa Bottrell, Joanne Lynn:Health Care Quality Improvement: Ethical and regulatory issues.The Hastings Center Garrison, New York, 2007	1 1	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
Each participant has his mentor who controls and monitors the students work

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Table 2.

3.2. Desription of course in Module QM 5/1

General information		
Course leader	Professor Ratko Magjarević and professor Herman Haller	
Course title	Health technology assessment	
Study program	Postgraduate study on Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching hours	ECTS	3,5
	Number of hours (L+E+S)	5+20+10

10.DESRIPTION OF COURSE							
Goals							
To gain working knowledge about analytical methods and skills for the assessment of health technologies.							
Outcome							
Development of specific competencies for the implementation of health technology assessment methods : Drugs, medical devices, equipment. Acquired skills for research for benefits, risks and costs /values of new technologies.							
Content							
The assessment of new technologies (HTA): principles, methods, evaluation. Research of benefits and risks. Evaluation of new drugs, medical products and equipment. Evaluation protocols based on scientific evidence. Cochrane, AGREE and other sources of information. Statistical methods. Evidence based assessment. The planning of implementation of new technologies: criteria, costs. Skills for new technologies management. HTA management. The research of outcomes and risks. International cooperation and role of regulatory agencies.							
Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning ☐ field				☐ multimedia ☐ laboratory ☐ mentor ☐ other		
comments							
Students obligations							
Active participation in all teaching activities. Exam.							
Follow up of students							
Lectures	0,5	Activity		Seminar	0,5		
Written exam	2,5	Oral exam				Research	

Project							
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate).

Mandatory literature

- Stavljenić-Rukavina A:The impact of technology innovation on efficacy and safety in health care. Biochemia Medica, 2009: 34-39
- Goodman CS. HTA 101 – Introduction to Health Technology Assessment. The Lewin Group, Falls Church, Virginia, 2004. clifford.goodman@lewin.com.
- The Croatian Guidelines for HTA. Process and reporting. Agencija za kvalitetu i akreditaciju u zdravstvu. Zagreb 2011, www.aaz.hr

Additional literature

Patient Safety. Establishing a Set of EU Patient Safety Indicators. ESQH Office for Quality Indicators, Aarhus, 2007
Guest G. Globalization, Health, and the Environment : An Integrated Perspective (Globalization and the Environment), AltaMira Press,2005.

Number of titles in comparisson to number of students

Title	*Number of titles*	*Number of students*
Stavljenić-Rukavina A:The impact of technology innovation on efficacy and safety in health care. Biochemia Medica, 2009: 34-39	5	15-25
Goodman CS. HTA 101 – Introduction to Health Technology Assessment. The Lewin Group, Falls Church, Virginia, 2004.	2	15-25
The Croatian Guidelines for HTA. Process and reporting. Agencija za kvalitetu i akreditaciju u zdravstvu. Zagreb, 2011, www.aaz.hr	15	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

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Table 2.

3.2. Description of course in Module QM 5/2

General information		
Course leader	Professor Josip Čulig and Professor Maja Vehovec	
Course title	Health economics and pharmacoeconomics	
Study program	Postgraduate study Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	2,5
	Number of hours (L+E+S)	5+20+5

11.DESCRIPTION OF COURSE							
Goals							
Qualification for effective use of basic health economy principles and application of econometric methods for decisions process in health sector.							
Outcomes							
General competencies: application of economic methods for decision making process in health sector. Specific competencies: implementation of health economy in the development of health care policies.							
Content							
Economy based principles in health sector. Econometric methods for the development of health policies and decisions in health sector. Economy and health interventions. Basic principles of pharmacoeconomics. Effective management of resources in health sector. Public private partnership. Financing models in health system. Health insurance. Models for financing of health services. DRG principles and practice. Qualy, casemix, reimbursement. Contracting. Health insurance models and risks.							
Teaching methods	☒ lectures ☒ seminar ☒ practice ☐ ☐			☐ multimedia ☐ laboratory ☐ mentor ☐			
Comment							
Student obligations							
Active participation in all teaching activities Exam.							
Follow up of students							
Lectures	0,5	Activity		Seminar	0,5		
Written exam	1,5	Oral exam		Essay		Research	
Project							

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Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate).

Mandatory literature

- Elias Mossialos and Julian le Grand. Health Care and Cost Containment in the European Union, The London School of Economics and Political Science; Ashgate Publishing Limited England and Ashgate Publishing Company USA.
- Wismar M, Busse R. Outcome-related health targets-political strategies for better health outcomes-A coceptual and comparative study (part 2). Health Policy. 59(3):223-241, 2002
- Andre JHA Ament at all. Pharmacoeconomics for EU Hospital Pharmacists. EJPH 2010
- Kalanj K. Menadžment promjena i izazovi reforme zdravstvenog sustava, Manual for CME, 2009, ISBN 978-953-7468-08-8. 9-21.
- Hindle D, Kalanj K, Ljubić B. " DRG manual - new payment model " 2007

Additional literature

Number of titles in comparisson to number of students

Title	*Number of titles*	*Number of students*
Elias Mossialos and Julian le Grand. Health Care and Cost Containment in the European Union, The London School of Economics and Political Science; Ashgate Publishing Limited England and Ashgate Publishing Company USA	1	15-25
Wismar M, Busse R. Outcome-related health targets-political strategies for better health outcomes-A coceptual and comparative study (part 2). Health Policy. 59(3):223-241, 2002	4	15-25
Andre JHA Ament at all. Pharmacoeconomics for EU Hospital Pharmacists. EJPH 2010 Kalanj K. Menadžment promjena i izazovi reforme zdravstvenog sustava, Manual for CME, 2009, ISBN 978-953-7468-08-8. 9-21	2	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

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Table 2.

3.2. Description of course in Module QM 6

General information		
Course leader	Professor Ana Maria Šimundić	
Course title	Biostatistics and bioinformatics	
Study program	Postgraduate course Quality Management in Health	
Status	obligatory	
Year	**1.**	
ECTS and teaching	ECTS	5
	Number of hours (L+E+S)	15+30+15

12.DESRIPTION OF COURSE		
Goals		
Learning advanced biostatistical and information methods for research, epidemiology and vital statistics. Acquire skills for application of advanced biostatistic methods in biomedical research and practice.		
Outcomes		
General competencies: Acquired basic knowledge in biostatistic and application in biomedical research. Gain epidemiological approach to health indicators based on biostatistics Specific competencies: Competent for application of advanced statistic in establishing of registries in health sector; follow up of health indicators and quality indicators based on advanced biostatistical methods and IT.		
Content		
Statistical methods appropriate in research. The choice of appropriate averages and measures of dispersion to summarize data sets, and the choice of tests of significance, including *t*-tests and a one- and a two-way ANOVA plus post-tests for normally distributed (Gaussian) data and their non-parametric equivalents. Techniques for transforming non-normally distributed data to more Gaussian distributions are discussed. Concepts of statistical power, errors and the use of these in determining the optimal size of experiments are considered. Statistical aspects of linear and non-linear regression .Tests for goodness-of-fit to the chosen model and methods for comparing fitted lines and curves. Advanced methods and technologies in applied epidemiology. Registries of diseased in population. The assessment of health system quality based on implementation of advanced biostatistical methods and IT. Biostatistical approach in HTA..		
Teaching methods	☒ lectures ☒ seminar ☒ exercise	☐ multimedia ☐ laboratory ☐ mentor ☐ other
comments		
Students obligations		

Active participation in all teaching activities. Exam.

Follow up of students

Lectures	1	Activity		Seminar	0,5	Experimental work	
Written exam	2,5	Oral exam		Essay		Research	
Project				Referat		Practice	1
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate)

Mandatory literature

- Petrie A, Sabin C. Medical Statistics at a Glance. Oxford: Blackwell Science Ltd, 2000.
- http://www.statstoft.com/textbook/stathome.html (Electronic Statistics Textbook - Stat Soft)
- Michael R. Chernick Introductory Biostatistics for the Health Sciences: Modern Applications Including Bootstrap. Wiley 2003and 2003.

Additional literature

Gordis L. Epidemiology, W.B.Sanders Company, Philadelphia, 1996.
Miler, Marijana; Šimundić, Ana-Maria; Nikolac, Nora; Štefanović, Mario; Petrovečki, Mladen, Bilić-Zulle, Lidija; Vukasović, Ines; Topić, Elizabeta.Osnove biostatistike u svakodnevnoj praksi / Šimundić, Ana-Maria (ur.).Zagreb : Medicinska naklada, 2008.

Number of books in comparisson with number of students

Title	*Number of books*	*Number of students*
Petrie A, Sabin C. Medical Statistics at a Glance. Oxford: Blackwell Science Ltd, 2000.	1	15-25

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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Table 2.

3.2. Description of course in Module QME 1

General information	
Course leader	Professor Elizabeta Topić and Professor Goran Palčevski

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Course title	Pharmacoeconomics and pharmacogenomics	
Study program	Postgraduate study on Quality Management in Health	
Status	elective	
Year	**1.**	
ECTS and teaching	ECTS	4
	Number of hours (L+E+S)	10+20+15

13.DESCRIPTION OF COURSE

Goals

To gain basic knowledge and skills for application of pharmacoeconomic model for decisions making process in health care. To understand pharmacogenomic principles in use of drugs.

Outcome

Qualified for the application of pharmacoeconomic model and pharmacogenetics in decision making process.

Content

Definition and basic model in pharmacoeconomy. From model to implementation in preparing policies for health. Pharmacogenomics. Genetic base for variation in drug dosage. The application of molecular genetics in individualized therapy and personalized medicine. Planning and research on the role of pharmacogenomics and pharmacoeconomics on quality in health care.

Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning ☐ field work	☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		

Students obligations

Active participation in all teaching activities

Follow up of students work

Lectures	0,5	Activity	0,2	Seminar	0,8	Experimental work	
Written exam	2,5	Oral exam		Essay		Research	
Project						Practice	
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate)

Obligatory literature

- Farmakogenetika // Medicinskobiokemijska dijagnostika u kliničkoj praksi / Topić, Elizabeta ; Primorac, Dragan ; Janković, Stipan (ur.).Zagreb : Medicinska naklada, 2004. Str. 325-337.
- Pharmacogenomics: Social, Ethical, and Clinical Dimensions*, edited by Mark Rothstein. 2003*
- Principles of Pharmacoeconomics J.L.Bootman, R.J.Townsend,W.F.McGhan Harwey Books company 2007
- Andre JHA Ament at all. Pharmacoeconomics for EU Hospital Pharmacists. EJPH 2010

Dopunska literatura (u trenutku prijave prijedloga studijskog programa)

The number of books in comparisson with number of students

Title	*Number of books*	*Number of students*
Farmakogenetika // Medicinskobiokemijska dijagnostika u kliničkoj praksi / Topić, Elizabeta ; Primorac, Dragan ; Janković, Stipan (ur.).Zagreb : Medicinska naklada, 2004. Str. 325-337.	2	10-15
Andre JHA Ament at all. Pharmacoeconomics for EU Hospital Pharmacists. EJPH 2010.	2	10-15
Principles of Pharmacoeconomics J.L.Bootman, R.J.Townsend,W.F.McGhan Harwey Books company 2007	1	10-15

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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Table 2.

3.2. Description of course in Module QME 2

Genaral information	
Course leader	Professor Charles Shaw
Course title	Strategic planning of health care reforms

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Study program	Postgraduate study Quality Management in Health	
Status	Elective	
Year	**1.**	
ECTS and teaching	ECTS	4
	Number of hours L+E+S)	10+20+10

14.DESCRIPTION OF COURSE

Goals

To get the knowledge on strategic planning of reforms in health sector and evaluation of outcomes.

Outcomes

Knowledge and skills for strategic planning of reforms in health sector.

Content

Strategic planning methods. System analysis-SWOT. The assessment of dimensions of reform. Strategic planning of human resources and infrastructure. Standards for infrastructure and equipment for different parts of system. The planning of appropriate health services. The development of financing models. The research studies on outcomes of health care reforms from last century and their influence on quality of care. The research on efficacy of healthcare reforms**.**

Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning ☐ field work	☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		

Students obligations

Active participation in all teaching activities. Exam.

Follow up of students work

Lectures	0,5	Activity	0,2	Seminar		Experimental work	
Written exam	2,3	Oral exam		Essay		research	
Project		Continuous knowledge assessment	0,5			Practice	0,5
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate).

Obligatory literature

- S.Folland, A.C.Goodman, M.Stano. The Economics of Health and Health Care (3rd end), Prentice Hall, 2001. (selected chapters)

- National Strategy for Quality Improvement in Health Care, Government of Canada. March 2011.
- http://www.health.gov.au/internet/main/publishing.nsf/Content/4D9AB3396D926315CA2577CB0005D65D/$File/PHCRED%20Strategy%20Oct%202010%20PRINT.pdf

Additional literature

Number of books in comparisson with number of students

Title	*Number of books*	*Number of students*
S.Folland, A.C.Goodman, M.Stano. The Economics of Health and Health Care (3rd edn), Prentice Hall, 2001. (selected chapters)	1	10-15

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
Each participant has his mentor who controls and monitors the students work

Table 2.

3.2. Description of course in Module QME 3

General Information	
Course leader	Professor Vlatko Silobrčić and Assistant professor Vladimir Mozetic
Course title	Research and projects planning

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Study program	Postgraduate course Quality Management in Health	
Status	elective	
Year	**1.**	
ECTS and teaching	ECTS	4
	Number of hours (L+E+S)	10+20+10

15.DESCRIPTION OF COURSE

Goals

To gain knowledge and skills for the planning of research and projects, analyses scientific literature, prepare research article and report.Project management.

Outcomes

Acquired skills for review of scientific literature, planning of research projects and to publish results.

Content

The process of scientific thinking. The structure of scientific paper, source of references, scientific information bases and scientific journals. The structure of scientific projects, criteria for evaluation of projects. Specificity of international calls for financing of projects. How to apply the project on call. How to manage project. International foundations, agencies, EC funds.

Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning	☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		

Students obligations

Active participation in all forms of teaching

Follow up of students work

Lectures	0,5	Activity	0,2	Seminar		Experimental work	
Written exam	2,3	Oral exam		Essay		Research	
Project						Practice	1,0
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

According to rules of Rijeka University (approved by Senate)

Obligatory literature

- Rogers, S.M. (2007). *Mastering scientific and medical writing: A self-help guide*. N.Y.:Springer.1999.
- Victoria E. McMillan, Writing Papers in the Biological Sciences, Bedford Books, Boston, 1997

Additional literature

Number of books in comparisson with number of students

Title	*Number of copies*	*Number of students*
• Rogers, S.M. (2007). *Mastering scientific and medical writing: A self-help guide*. N.Y.:Springer.1999. • Victoria E. McMillan, Writing Papers in the Biological Sciences, Bedford Books, Boston, 1997	1 1	10-15

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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Table 2.

3.2. Description of course in Module QME 4

General Information	
Course leader	Professor Ana Stavljenić-Rukavina

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Course title	Change management in health program	
Study program	Postgraduate course Quality Management in Health	
Status	elective	
Year	**1.**	
ECTS and teaching	ECTS	4
	Number of hours (L+E+S)	10+20+10

16.DESCRIPTION OF COURSE

Goals

Course is intended to present a number of cases, ideas, experiences, best practices and personal leadership approaches from the modern business world to provide learning by example. Doctors and other professional in health will learn the key concepts, mental models, theories as well as practical solutions and approaches in managing change.

Outcomes

Development knowledge and skills for change management in health sector.

Content

Setting course expectations.
Introduction: the ever-changing world, leadership and change, trends and issues in change management, change and organizational culture
Airport game: team exercise with discussion and lessons learned
Change projects - why they fail: team exercise with problem ranking and discussion
Change management mental models: professional vs. emotional approach, change, strategy, mission and values, motivation for change, communicating change, bosses as change masters, conflict and crisis management, managing organizational change, dealing with resistance to change, optimistic vs. pessimistic attitude in times of change…
Colin Powel on leading change: presentation and discussion
Change management in four steps: model presentation with team exercise
Jack Welch and GE change management: case presentation with discussion
Fellowship game: team exercise with discussion and lessons learned
Change leadership: situational leadership, principle-centered leadership, servant leadership, harmony-based leadership
Conclusion and definition of individual assignments
Presentations of individual essays with discussion

Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distant learning	☐ multimedia and network ☐ laboratory ☐ mentor ☐ other
comments		
Students obligations		

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Active participation in all forms of teaching							
Follow up of students work							
Lectures	0,5	Activity	0,2	Seminar		Experimental work	
Written exam	2,3	Oral exam		Essay	0,5	Research	
Project						Practice	0,5
Portfolio							
Assessment and evaluation of student's work during classes and on final exam							
According to rules of Rijeka University (approved by Senate)							
Obligatory literature							
V. Srića Innovative Manager in 100 lessons", Budapest, MBA Press, 2006.							
Additional literature							
Managing People across Europe", (edited by T. Garrison and D. Rees), Butterworth-Hineman,1994							
Number of books in comparison with number of students							

Title	*Number of copies*	*Number of students*
V. Srića Innovative Manager in 100 lessons", Budapest, MBA Press, 2006	4	10-15

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences
Conducting surveys among students and evaluation of data. Each participant has his mentor who controls and monitors the students work

Table 2.

3.2. Description of course in Module QME 5

General information

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Course leader	Profsessor Elizabeta Topić and Professor Milan Stanojević	
Course title	Personalized medicine and patient safety	
Study program	Postgraduate course Quality Management in Health	
Status	elective	
Year	**1.**	
ECTS and teaching	ECTS	4
	Number of hours (L+E+S)	10+20+10

17.DESCRIPTION OF COURSE

Goals

To learn principles of advanced treatment of patients based on individualized medicine. Principles and praxis in personalized medicine.

Outcomes

Knowledge and skills for basic principles in personalized medicine.
Knowledge on genetic and environmental factors influencing individualized approach in diagnosis and therapy

Content

Definitions in concept of personalized medicine. The significance of concept and general terms. Historical development of evidence based medicine. Personalized medicine and molecular genetics. Interrelationship between theory and clinical practice. The benefit of molecular genetics for clinical outcomes. Collecting and analysis of information. Efficacy and effectiveness of personalized medicine. Quality indicators for PM

Teaching methods	☒ lectures ☒ seminar ☒ exercise ☐ distance learning ☐ field work	☐ multimedia and network ☐ laboratory ☐ mentor ☐ other

Students obligations

Active participation in all teaching activities. Exam.

Follow up of students work

Lectures	0,5	Activities in course	0,5	Seminar	1	Experimental work	
Written exam	2	Oral exam		Essay		research	
Project						Practice	
Portfolio							

Assessment and evaluation of student's work during classes and on final exam

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According to rules of Rijeka University (approved by Senate)

Obligatory literature

- Genomic and Personalized Medicine Volume I & II *Edited by: Huntington F. Willard, Ph.D., and Geoffrey S. Ginsburg, M.* 2009 Elsevier Inc.
- *Textbook on personalized medicine Edward K Jain, Springer Verlag 2004*

Additional literature

Number of books in comparisson with number of students

Title	*Number of books*	*Number of students*
Textbook on personalized medicine Edward K Jain, Springer Verlag 2004	1	10-15

Quality monitoring methods which ensure acquirement of output knowledge, skills and competences

Conducting surveys among students and evaluation of data.
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