

PhD study

Management of Health Information Systems

Contents

Evaluation methods in management research.....	4
E-health.....	6
Health Economics.....	7
Information communication technologies in health management.....	9
Qualitative methods in management research.....	10
Quantitative Methods in Health Management.....	12
Marketing and Public Relations in Health Care System.....	13
Medical law and ethics.....	15
Diabetes Management.....	17
Management and Organization in Health Care.....	19
Quality Management.....	21
Drug management.....	23
Management of human resource – selected chapter.....	24
Management of Sustainable Technology Development in Health Care.....	25
Performance Management.....	27
Management of pulmonary diseases.....	29
Management of hypertension.....	31
Management of cerebrovascular diseases.....	33
Methodology of scientific research.....	35
Basics of health policy research.....	36
Basics of Health Systems Research.....	38
Health Technology Assessment.....	40
Health promotion strategies.....	42
Strategic financial management.....	44

Research proposal	46
Independent research work on the preparation of the doctoral dissertation.....	48
Final exam.....	49

Course:
Evaluation methods in management research
Teacher: Bjegović-Mikanović M. Vesna, Vuković Dejana, Đikanović Bosiljka, Matejić Bojana, Šipetić-Grujičić B. Sandra, Pekmezović Tatjana, Žarkić-Joksimović A. Nevenka, Ilić J. Bojan, Benković S. Slađana
Course status: Elective
ECTS points: 5 ECTS
Prerequisites: None
Course objective: The objective of the course is that students accept research knowledge and competences using the evaluation methods in management research in terms of systematic analysis of the health care process in relation to outcomes using the previously established criteria in order to improve efficiency.
Learning outcomes: Apart from reviewing the purpose of evaluation studies, students will acquire knowledge about different types of evaluation and organization of steps in the evaluation process. Upon completion of the course, students are expected to be ready to conduct research that, in addition to economic evaluation, also provides an evaluation of the efficacy, effectiveness or successfulness in achieving availability and accessibility of health care services and health promotion interventions. Students will be able to answer research questions: whether the healthcare procedure, service or program brings more benefits than harm to people who fully comply with recommendations or treatments, and whether the procedure, service or program is acceptable to all people who expect benefits from them.
Course structure and content: The course content includes actual theories in the field of principles and perspective of evaluation studies in the promotion of health and in primary, secondary and tertiary health care. Improving health care based on evidence of successful outcomes and economically viable interventions for vulnerable population groups is a constant challenge and one of the priorities in national development strategies in Serbia, especially when adverse socio-economic determinants of health are observed.
Theoretical instruction: The basic contents are derived from the leading international and national documents in the field of health care following modern approaches to economic analysis, and on the evidence provided by previous research. Bearing in mind that the economic analysis of health programs is complex, that costs are difficult to determine due to the numerous actors involved in the programs, the content refers to theoretical settings in this area, description and assessment of the effectiveness / impact of health programs and a detailed analysis of key stakeholders (financiers, users, volunteers, staff and local community) along with identifying ways to improve the program in the near future.
Practical instruction: The focus is on the importance of synthesizing information on socio-economic determinants of health (education, housing, employment, social security and protection, health care and health insurance) and health disorders, as well as systematic presentation of measurable and non-measurable benefits, direct and indirect costs of introducing innovative programs in regular activities of health institutions. The stages of evaluation are presented in a logical manner, highlighting examples of good practice and potential future benefits from investing in preventive interventions. The importance of economic analysis is highlighted, as well as the procedure for conducting cost-benefit, cost-effectiveness and cost utility analysis, as a complete economic analyses, include identifying, measuring, evaluating and comparing the costs and effects of all activities carried out within the project.
Literature/Readings:
1. WHO. Evaluation in Health Promotion. Principles and Perspectives. Geneva: WHO Publication Office 2001.

2. Zaletel-Kragelj, Bozikov J. Methods and Tools in Public Health. Lage: Hans Jacobs Publishing Company 2010.
3. Longest JBB, Darr K (2014). Managing Health Service Organization and Systems. 6th edition. Baltimore: Health professions Press.
4. CDC Evaluation Working Group. Introduction to Program Evaluation for Public Health Programs: A Self-Study Guide. Available from URL: www.cdc.gov/eval/framework.htm.
5. American Academy of Pediatrics (AAP). Evaluating Your Community-Based Program. Available from URL: www.aap.org/compeds/htpcp.

The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: Lectures, seminars, exercises, case studies, study research work		
<p style="text-align: center;">Evaluation/Grading (maximum 100 points)</p> <ul style="list-style-type: none"> • Active participation in teaching during lecture 10 points • Colloquium 20 points • Seminar work 30 points • Written exam 40 points 		

Course: E-health		
Teacher: Radojičić Zoran, Janičić Radmila, Žarković Miloš, Bajčetić Miloš		
Course status: elective course		
ECTS points: 5		
Prerequisites: None		
Course objective: The aim of this course is to enable students to design and implement electronic healthcare systems.		
Learning outcomes: The outcome of this course is to enable students to design and implement electronic systems health care.		
Course structure and content: <i>Theoretical instruction:</i> Health system and health care. Information and Communication Technologies in Health. Electronic health system. Communication in an electronic health system. Management of electronic health. Legal regulation of e-health. E-marketing in healthcare. The costs of an electronic healthcare system. Electronic health card. Electronic Documentation Management. Quality management of e-health services. <i>Practical instruction:</i> Designing e-health system. E-Health Technologies. Implementation of e-health system. Electronic health card. Software for e-Health. Diagnostic information systems. Telemedicine systems. Virtual reality in health. Case studies.		
Literature/Readings: 1. Joseph Tan, E-Health Care Information Systems: An Introduction for Students and Professionals, JOSSEY - BASS, A Wiley Imprint, ISBN-10: 0787966185, ISBN-13: 978-0787966188, Edition: 1, 2005. 2. Nilmini Wickramasinghe, Critical Issues for the Development of Sustainable E-health Solutions (Healthcare Delivery in the Information Age), Springer, ISBN-10: 1461415357, ISBN-13: 978-1461415350, Publication Date: December 31, 2011, Edition: 2012. 3. Anastasios Moutzoglou, Anastasia Kastania, E-Health Systems Quality and Reliability: Models and Standards, IGI Global, ISBN-10: 1616928433, ISBN-13: 978-1616928438, Edition: 1, 2010. 4. Wayne Pease, Malcolm Cooper, Raj Gururajan, Biomedical Knowledge Management: Infrastructures and Processes for E-Health Systems, IGI Global, ISBN-10: 1605662666, ISBN-13: 978-1605662664, Edition: 1, 2010. 5. Alan R. Shark D.P.A., Dr. Sylviane Toporkoff, eHealth - A Global Perspective, CreateSpace, ISBN-10: 1451540299, ISBN-13: 978-1451540291, 2010. 6. David C. Bangert, Robert Doktor, Michael Valdez, Human And Organizational Dynamics in E-health (Book With Cd-rom), Radcliffe Publishing, ISBN-10: 1857756665, ISBN-13: 978-1857756661, 2005.		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: Lectures, exercises, laboratory exercises, distance education, case studies.		
Evaluation/Grading (maximum 100 points)		
<ul style="list-style-type: none"> · Active participation in teaching during lecture 20 points · Seminar work 50 points · Written exam 30 points 		

<p>Course:</p> <p>Health Economics</p>
<p>Teachers: Vesna K. Milićević, Dragana P. Kragulj, Bojan J. Ilić, Sandra J. Jednak, Snežana Simić, Bosiljka Đikanović</p>
<p>Course status: elective</p>
<p>ECTS points: 10</p>
<p>Prerequisites: none</p>
<p>Course objective:</p> <p>The acquisition of knowledge in the field of health economics relevant from the standpoint of contemporary management in the health care system.</p>
<p>Learning outcomes:</p> <p>Consideration of economic aspects of health care, mastering approaches, models and methods in the field of health economics and abilities to apply health economics knowledge in managerial practices in health care in order to improve performance.</p>
<p>Course structure and content:</p> <p><i>Theoretical instruction:</i></p> <p>The importance of economic knowledge in health management. Economic development and health. Characteristics of the health care sector. Market, demand, and supply of health services. Market structures and models. Spheres of health care market imperfections. Market and competitiveness of health care institutions. Efficient use of resources. Cost functions and dynamics of health care costs. Factors of competitiveness of health care providers. Costs and prices. Pricing health services. Performance improvement of health care institutions. The importance of economic evaluation and the use of methods of economic evaluation in decision-making process in health care. The role of government in the health care sector. Health insurance and health services use. Economics of health care reform. European Union policy in the field of health.</p> <p><i>Practical instruction:</i> Research study.</p>
<p>Literature/Readings:</p> <p>Milićević V., Ilić B., Ekonomika poslovanja (selected chapters), Fakultet organizacionih nauka, Beograd, 2009.</p> <p>Kragulj D., Ekonomija – Osnovi mikroekonomske i makroekonomske analize (selected chapters), izdanje</p>

autora, 2013.

Ilić B., Milićević V., Menadžment troškova – strategijski okvir (selected chapters), Fakultet organizacionih nauka, Beograd, 2009.

Santerre R., Neun S., Health Economics: Theory, Insights, and Industry Studies, South-Western, Cengage Learning, 2010

Folland S., Goodman A., Stano M., The Economics of Health and Health Care, Pearson Education, 2004

McPake B., Normand C., Health Economics: an International Perspective, Routledge, 2008

The number of class hours per week	Lectures: 3	Research study: 4
---	--------------------	--------------------------

Teaching methods:
Lectures, discussion, case studies, exercises, students' research.

Evaluation/Grading (maximum 100 points)
Activity during lectures (10 points), preliminary exam (20 points), seminar paper (30 points), written exam (40 points)

Course:		
Information communication technologies in health management		
Teacher: -		
Course status: elective		
ECTS points: 5		
Prerequisites: None		
Course objective: Training students to critically evaluate existing ones and apply new approaches and techniques of information and communication technologies in health care.		
Learning outcomes: Students will deepen their previously acquired knowledge and skills in the field of application of information and communication technologies in health care.		
Course structure and content:		
Theoretical instruction: P-01: Basics of computer literacy and system theory. P-02: Information Systems. P-03: System and technology framework for the application of ICT. P-04: The Evolution of ICT Applications. P-05: Internet as a Global ICT Infrastructure. P-06: Internet and e-commerce P-07: Privacy on the Internet. P-08: Integration of the Internet and mobile telephony. P-09: Cases of application of ICT in health care. P-10: Health Information Systems. P-11: Conventional outpatient and clinical information systems. P-12: PACS systems. P-13: Decision Support Systems - Diagnostic Information Systems. P-14: Telemedicine Systems. P-15: Virtual Reality (VR) in Medicine. VR in education. VR in diagnosis. VR in surgery.		
Practical instruction: Students have exercises from these teaching units. Practical classes take place at the Laboratory for Multimedia Communications. The paper covers the practical application of selected information and communication technologies in healthcare in laboratory conditions. The student is obliged to defend the exercises and realize the set task in the field of application of information and communication technologies in health care.		
Literature/Readings:		
1. V. Pantović, S. Dinić, D. Starčević, "Savremeno poslovanje i Internet tehnologije", InGraf, 2002.		
2. D. Starcevic, E. Jovanov, V. Radivojevic, Z. Obrenovic, A. Samardzic, "Virtual Medical Devices for Telemedical Applications", chapter in Spasic, P., Milosavljevic, I., Jancic-Zguricas, M., Ed's, Telemedicine, Academy of Medical Sciences of Serbian Medical Association, 2000.		
3. Zeljko Obrenovic, Dusan Starcevic, Emil Jovanov, "Virtual Instrumentation", Chapter in Metin Akay (Ed.) Wiley Encyclopedia of Biomedical Engineering, Wiley, 2006;		
4. Zeljko Obrenovic, Dusan Starcevic, Emil Jovanov, "Multimodal Presentation of Biomedical Data", Chapter in Metin Akay (Ed.) Wiley Encyclopedia of Biomedical Engineering, Wiley, 2006.		
5. E. Jovanov, D. Starcevic, V. Radivojevic, "Perceptualization of Biomedical Data", chapter in Akay, M., Marsh, A., (Eds.); Information technologies in Medicine, Vol. I, John Wiley & Sons, Inc. 2001.		
The number of class hours per week	Lectures: 3	Research study:4
Teaching methods: Lectures. Discussion. Case studies. Exercises. Independent research work of students.		
Evaluation/Grading (maximum 100 points)		
<ul style="list-style-type: none"> • activity during lecture 10 points • Written exam 40 points • colloquium, seminar 20 points • seminars 30 points 		

<p>Course</p> <p>Qualitative methods in management research</p>
<p>Teacher: Matejić Bojana, Jović-Vraneš Aleksandra, Terzić-Šupić Zorica, Šantrić-Milićević Milena, Levi-Jakšić I. Maja, Mihailović M. Dobrivoje, Petrović J. Bratislav</p>
<p>Course status: Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: None</p>
<p>Course objective: The aim of the course is to enable students to adopt a scientific paradigm and research procedures within qualitative methods and to be able to apply them independently in research in the field of health management and public health.</p>
<p>Learning outcomes: Upon completion of this course, students will have met advanced competencies on the comprehensive approach to methods of qualitative research, from determining basic assumptions and theoretical concepts, data collection procedures, qualitative data analysis, ethical issues of the research process, evaluation of the validity of the obtained results, and methods of combining qualitative with quantitative research methods.</p>
<p>Course structure and content: The content of this course includes the basic theoretical approaches and the skills of performing qualitative research. Special attention will be given to the specificities of research in the areas of health management and public health. The importance of qualitative research in these complex and multidisciplinary areas has been confirmed by the increasing interest of researchers, which in many publications thus approached the characteristic research questions. Students will be acquainted with the basic starting points of qualitative research as well as with various types of this research process. Theoretical bases will be studied with a special focus on the differences, characteristics, experiences and applicability of certain research methods for research of issues of relevance to health management as well as public health in general. During the learning process, students will be able to independently pass all the stages in a complex process of qualitative research, from planning strategies and the preparation of research, to the selection of data collection methods, the choice of respondents, data processing, as well as to the conclusion procedure based on the previously carried out qualitative analysis. Students will continuously develop a critical attitude towards the values and limitations of these research procedures, so special attention will be paid to the possibilities and methods of evaluating the quality of qualitative research. By opening up to contextual and cultural differences in understanding important issues for healthcare management and public health, this new perspective will allow researchers to look at old problems in a different way. Also, attention will be paid to the possibility of combining two basic research models (quantitative and qualitative), as complementary methods that enrich the complexity of knowledge, but at the same time taking into account the differences in the general approach, the object and goals of research, sampling and data collection as well as final data analysis.</p>
<p>Literature/Readings:</p>

1. Pope C, Mays N. Qualitative research in health care. 3rd ed. London: Blackwell Publishing; 2006.
2. Mason J. Qualitative researching. 2nd ed. London: Sage Publications; 2002.
3. Patton MQ. Qualitative research & evaluation methods. 3rd ed. Thousand Oaks, CA: Sage Publications; 2001.
4. The SAGE Qualitative Research Kit. London: Sage Publications; 2007.
5. Jones R. Why do qualitative research? BMJ 1995; 311(6996): 42–5.
6. Pope C, Mays N. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. BMJ 1995; 311(6996): 2.
7. Britten N. Qualitative research: qualitative interviews in medical-research. BMJ 1995; 311(6999): 251–3.
8. Kitzinger J. Qualitative research: introducing focus groups. BMJ 1995; 311(7000): 299–302.
9. Mays N, Pope C. Qualitative research: observational methods in health-care settings. BMJ 1995; 311(6998): 182–4.

The number of class hours per week	Lectures: 3	Research study:4
---	--------------------	-------------------------

Teaching methods: Lectures, case studies, seminars and exercises involving group discussions of case studies, demonstration of skills, independent research work

<p>Evaluation/Grading (maximum 100 points)</p> <ul style="list-style-type: none"> • Active participation in teaching during lecture -20 points • Seminar work -50 points • Written exam -30 points
--

Course: Quantitative Methods in Health Management		
Teacher: Martić M. Milan, Suknović M. Milija, Vujošević B. Mirko, Bulajić V. Milica, Radojičić A. Zoran, Petrović J. Bratislav, Šipetić-Grujičić B. Sandra		
Course status: elective course		
ECTS points: 5		
Prerequisites: None		
Course objective: Introduction to different quantitative methods and models and the possibilities of their application in field of medical science. Application of the SPSS statistical package in this area.		
Learning outcomes: The course points to the broad possibilities of applying quantitative methods and models within various fields of medicine and training students for their adequate application in further scientific work.		
Course structure and content: <i>Theoretical instruction:</i> Philosophy of quantitative methods and connections with medical research; Sources of data and description of the basic set; Standardization of data, methods and reasons; Data collection; Types of research studies; Case-controlled studies; Interventional studies; Survival analysis; Meta analysis; Preventive strategy and situation analysis; Distribution probability, hypothesis testing, and the Bayesian method <i>Practical instruction:</i> Formulation of research questions and hypotheses; Displaying, describing and presenting data; Indirect and direct standardization; Sample error, confidence intervals and sample size; Measurement, basic presentation and analysis of results; Key elements of study design; Implementation of controlled case studies; Key elements of intervention studies; Coxe regression and Kaplan Meyer analysis; Meta data analysis and Kohar parameters; Evaluation of Screening Programs and Effects; Data that does not "fit" in probability distribution.		
Literature/Readings: 1. Bruce N., Pope D., Stanistreet D., Quantitative Methods for Health Research, Wiley, New York, 2008. ISBN: 978-0-470-02274-0 2. Greenhalgh T., How to Read a Paper: The Basic of Evidence-Based Medicine, Wiley, BMJ Books, New York, 2010 3. Winkel P., Zhang F. N., Statistical Development of Quality in Medicine, Wiley, New York, 2007, ISBN: 978-0-470-02777-6 4. Lancaster O. H., Quantitative methods in biological and medical sciences, Springer -Verlag, London, 1994. 5. Peat J. Health Science Research: A Handbook of Quantitative Methods, SAGE Publication, London, 2002, ISBN: 978-0761974031		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: Lectures, exercises, laboratory exercises, distance education, case studies.		
Evaluation/Grading (maximum 100 points) · Activity during lectures 10 points · Colloquium 20 points · Seminar work 30 points · Written exam 40 points		

Course:

Marketing and Public Relations in Health Care System

Teacher: Milica Kostić Stanković, Radmila Janičić, Slavica Kostić Cicvarić, Velimir Štavljanin, Vesna Damnjanović, Dejana Vuković, Ana Šijački.

Course status: Main

ECTS points: 10

Prerequisites: No.

Course objective: The main goal of course is to develop student's knowledge in fields of marketing and public relations in health care system. This knowledge is important for marketing managers in health care system. Specific goal of course is to improve knowledge and skills of marketing and public relations managers of health care institutions in order to successfully implement marketing and public relations strategies in health care market places. The course gives theoretical and practical approach to marketing and public relations. Students have opportunities to understand elements of marketing research process, marketing strategies implementation and marketing control, as platform for marketing planning. Students have opportunities to improve knowledge about marketing orientation, public relations strategies, defining of target groups of customers and consumers, marketing research of market place, planning of instruments of marketing mix, holistic marketing approach, digital marketing, internal marketing, integrated marketing, performing marketing, social responsibility and relationship marketing. Specific goal of course is that students understand and implement marketing and public relations strategies in their health care institutions, according modern marketing and public relations approach, based on experience marketing and public relations, media planning and storytelling. Customers and consumers are in the focus of marketing planning. The course gives fully understanding of needs and wishes of consumers in health care institutions. The course gives understanding of market place environment and it's impact on marketing planning process in health care institutions. Strategic marketing and public relations goals have to be in focus of health care institutions, according to vision and mission of institutions, as well as, according to needs, wishes and values of consumers of health care services. Health care institutions storytelling have to be in way of values of consumers of health care services. The course has goal to develop knowledge and skills in the field of implementing of public relations strategies, building brand of health care institutions, solving crisis situations in health care institution, recognize of identity and image of health care institution, design of health care services, according to consumers needs, values and wishes. It is emphasize that structure of health care institutions have to follow changes in way to restructuring organisation to be more flexible for changes and to be supportive for marketing and public relations strategies. Students have opportunities to improve knowledge and skills of public relations planning and communications, through traditional and modern instruments of communications.

Learning outcomes: Students will be prepare to implement knowledge and skills of marketing research, marketing analysis, marketing implemetation of strategies and marketing control. Students will have knowledge about holistic marketing approach, internal marketing, integrated marketing, digital marketing, social responsibility marketing and relationship marketing and skills to implement that knowledge in practice of health care institution. Students will be prepare to planning public relations campaign and to improve communications with consumers of health care services. Students will be prepare to realize public relations campaign, social marketing campaign in order to araise awareness about health care preventions. On the base of consurmes experience students have opportunities to change marketing and public relations approach in all level of health care institution. With modern marketing and public relations approach students will improve skills of communications through traditional and modern media.

Social media are especially important for young generations, as consumers of health care services. For that reason, the course will give whole strategies of digital marketing and public relations planning.

Course structure and content:

Theoretical instruction:

Holistic marketing approach. Marketing in health care institutions. Marketing segmentation. Instrument of marketing mix. Marketing research. Marketing environment. Marketing analysis. Analysis of strength, weaknesses, opportunities and threats. Marketing analysis of market place, competitors and environment. Marketing planning process in health care institutions. Implementation of marketing strategies. Control of marketing strategies. Internal marketing. Integrated marketing. Social responsible marketing. Relationship marketing. Digital marketing. Global marketing orientation in health care institutions. Planning of promotions in health care institutions. Experience marketing approach. Storytelling in health care institutions. Public relations planning. Public relations strategies. Planning communications with target audience. Integrated marketing communications through traditional and modern media. Public relations media planning. Social marketing campaign in raise awareness about health care preventions. Organizational support of health care institutions for marketing and public relations strategies implementations.

Practical instruction:

Methodology of marketing research process. Methodology of marketing and public relations planning. Solving practical problems in health care institutions, through case study methodology. Practice of communications with target audiences, through traditional and modern media. Methodology for analysis and control of marketing and public relations strategies.

Literature/Readings:

Berkowitz, B. (2017). Marketing in Health Care. New York: Prentice Hall.

Belch, G., & Belch, M., (2012). Advertising and Promotion - An Integrated Marketing Communications Perspective. New York: McGraw-Hill.

Kotler, Ph., Keller, L. (2017). Marketing Management. New York: Prentice Hall.

Kotler, Ph., & Keller, K., (2008). Marketing Management, 12th Edition. New York: Prentice Hall.

Larry, P., (2008). Strategic Integrated Marketing Communication. Canada: Elsevier Inc.

The number of class hours per week	Lectures: 8	Research study:
---	--------------------	------------------------

Teaching methods: Lectures, exercise with case study methodology, interactive communications in class room, solving real problems, through discussion, writing essays and projects.

Evaluation/Grading (maximum 100 points)

Project work: 60 points.

Exam: 40 points.

Course: Medical law and ethics
Teacher: . Mi . Tanja, Jovanović Milenković Marina, Petrović B. Nataša, -Vraneš Aleksandra, Makajić – Nikolić Dragana
Course status: elective
ECTS points: 5
Prerequisites: None
Course objective: The aim of the course is to develop scientific knowledge, research skills and academic skills in the field of Medical Law and Ethics. Developing analytical thinking by comparing and improving theoretical attitudes and the possibilities of their application in a real legal and medical environment using a historical perspective in understanding international and national legal standards. Mastering the scientific methods in the study of relevant literature and legal sources, in accordance with the development of Medical Law as a scientific discipline. In particular, students will deepen their knowledge of Medical Ethics in order to develop and apply ethical principles.
Learning outcomes: By mastering the program, the student is deprived of theoretical, methodological and practical knowledge in the field of Medical Law and Ethics: 1. Systematically analyzes international standards and national legal sources in the health care system. 2. Critically and analytically compares theoretical attitudes about the functions of Medical Law and Ethics and the possibility of their application in a real social environment. 3. Monitor the future directions of the development of the International Medical Law and the development of international ethical principles of health and biomedical research, human rights, and professional development. 4. Competently investigate and present the results of his scientific work which will contribute to the development of scientific thought and system of development of Medical Law standards and the principle of Medical Ethics in the rule of law. 5. Apply a scientific method in researching selected topics in the field of Medical Law and Ethics.
Course structure and content: Theoretical instruction: International medical law, international sources, international organizations and their role in regulation. National sources of Medical law, health care, management in health (system laws, sui generis regulations). Public health: international and national protection, trade and regulation of trade aspects (products, rights) of medical, pharmaceutical and genetic research, malignant disease registers and procedures and measures for early cancer screening (screening of cancer). Health care: the right to primary protection, a comparative overview of the scope of rights in different national systems and models, jurisdiction. Rights of patients: special categories of patients (prisoners, mentally ill, unborn children, women, persons with special needs, terminally ill persons), types, scope and limitations of rights. Patient's duties: patient cooperation in the treatment process, to minimize the damage. Legal consequences of violating the duties of patients. Rights of medical staff: patient-doctor and medical institution-patient relationship as a contractual relationship. Obligations of medical staff. Responsibilities of medical staff and health institutions: civil liability for professional errors and violation of the obligation to obtain the consent of the informed patient, criminal responsibility, disciplinary responsibility, responsibility of health institutions. Insurance against damage caused by mistake in treatment. Mistakes and responsibilities of medical personnel: courts, judicial protection and case law (in the area of civil and criminal liability). Regulation of healthcare information systems and data. Governing biobanks. Medical waste: definition, problems, regulation, standards. Regulation of medical risks. Medical ethics: origin, principles, application (ethical codes of medical professions in the European Union, Serbia). Biomedical research. Genetic experiments. Ethical committees and their role. Medical chambers and their jurisdiction, disciplinary courts of the medical chamber, practice of disciplinary courts. Safety of procedures in medicine and responsibility (blood transfusions and transplants, hospital infections, safe management of medical waste). Practical instruction: Solving specific problems related to the beginning and end of life, organ and tissue transplantation, patient and medical institutions and staffing, work in creative workshops, case analysis, ethical committee decisions, boards and interactive discussion of ethical issues, principles and solutions. Research results presentation.

Literature/Readings:

1. Drakulić M., *Pravni i etički aspekti moderne medicine – prava pacijenata*, NISPAcee, Fakultet organizacionih nauka, Bratislava, Beograd, 2006.
2. Exter den A., *Human Rights and Biomedicine*, Maklu, Antwerpen, 2010.
3. Backmann G et al. *Health Systems and the Right to Health, The Lancet*, 2008, 372: 2047 – 2085.
4. Hervey T., *EU Law and National Health Policies: Problem or Opportunity?*, Health Economics, Policy and Law, 2:1-6., 2007.
5. Kaye J., MC Gibbons S., Parker M., Smart A., *Governing biobanks*, Hart Publishing, Oxford and Portland, 2012.
6. Tayler M., *Genetic Data and the Law, A Critical Perspective and Privacy Protection*, Cambridge University Press, Cambridge, 2012.
7. Mepham B., *Bioethics - An introduction for the Biosciences*, 2nd Ed, Oxford University Press, Oxford, 2008.
8. Miller R., Hutton R., *Problems in Health Care Law*, Jones and Bartlett Publishers, Boston, 2004.
9. Jovanovic Milenkovic M, Radakovic J. A., Radojicic Z., Vukmirovic D, *Ekološki potencijali telemedicine*, XI Skup privrednika I naučnika, SPIN '17, 2017, pp. 258-263
10. Jovanovic Milenkovic M., Milenkovic D., Vukmirovic D., Radojicic Z., *Telemedicina osnovni principi i performance*, Fakultet organizacionih nauka, Beograd, 2016

The number of class hours per week**Lectures: 3****Research study:4****Teaching methods:**

Lectures with discussions, presentations and case studies. Team and independent research of students in solving problems based on studying and critical analysis of relevant literature, legal and ethical sources or data obtained using research methods. Participatory, interactive cooperative learning.

<p>Course:</p> <p>Diabetes Management</p>
<p>Teachers:</p> <p>Lalic Nebojsa, Sipetic-Grujicic Sandra, Bjegovic-Mikanovic Vesna, Lalic Katarina, Jotic Aleksandra, Ilic Bojan</p>
<p>Course status:</p> <p>Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: None</p>
<p>Course objective:</p> <p>The course objective is for PhD students to adopt modern research approaches in diabetic health care at all levels, based on disease management models, in particular, the application of good clinical practice guides and preventive interventions.</p>
<p>Learning outcomes:</p> <p>The outcome of the course is to acquire knowledge and research competencies to monitor and evaluate preventive programs in order to reduce the risk of diabetes that stem from the lifestyle, especially in people with impaired glucose tolerance. In addition to researching behaviors and physical activity, participants will be trained to evaluate clinical evaluation parameters in monitoring diabetological care at primary, secondary and tertiary level and to review the quality and effectiveness of different services that belong to intervention methods.</p>
<p>Course structure and content:</p> <p>The content of the course includes new knowledge in the field of diabetic health care, disease management and training for the application of multiple research approaches in the conduct of strategic diabetes prevention programs. In addition to researching behavior in the field of nutrition and physical activity, the course includes research into various options in early detection of diabetes through an organized and opportunistic screening, as well as various therapeutic procedures - a diagnostic scheme for controlling diabetes, with key outcomes in the prevention of complications. In the case of numerous studies, focusing on people with impaired glucose tolerance and insulin resistance, the importance of research evidence in creating interventions for reducing diabetes in the population, as well as reducing direct and indirect disease costs, is highlighted.</p>
<p>Literature/Readings:</p> <ol style="list-style-type: none"> 1. NHS-NICE. Type 2 diabetes. The management of type 2 diabetes. London: National Institute for Health and Clinical Excellence 2009. 2. Velasco-Garrido M, Busse R, Hisashige A. Are disease management programme (DPMs) effective in improving quality of care for people with chronic conditions? Copenhagen: WHO Regional Office for Europe 2003.

3. Lalic N and associates. National Good Clinical Practice Guide for Diabetes Melitus Type 2. Belgrade: Ministry of Health 2009.
4. Lalic NM, Maric J, Svetel M, Jotic A, Stefanova E, Lalic K, Dragasevic N, Milicici T, Lukic L, Kostic VS. Glucose homeostasis in Huntigton disease: abnormalities in insulin sensitivity and early-phase insulin secretion. Arch Neurol 2008; 65(4); 476-80.
5. Lalic N, Micic D, Antic S, Bajovic L, Pantelinac P, Jotic A, Kendereski A, Dimid D, Djukic A, Mitrovic M. Effect of biphasic insulin aspart on glucose and lipid control in patients with Type 2 diabetes melitus. Expert Opin Parmacother, 2007; 8(17): 2895-2901

The number of class hours per week

Lectures: 3

Research study: 4

Teaching methods:

Lectures, Seminars, Exercises, Case Studies, Research Study

Evaluation/Grading (maximum 100 points)

Active participation in teaching **10 points**

Colloquium **20 points**

Seminar **30 points**

Written exam **40 points**

Course:		
Management and Organization in Health Care		
Teacher: Petrović Č. Dejan, Vesna M. Bjegović-Mikanović, Jaško O. Ondrej, Filipović S. Vinka, Mihić M. Marko, Obradović Lj. Vladimir, Babić Momčilo, Terzić-Šupić Zorica, Šantrić-Miličević Milena, Čudanov J. Mladen		
Course status: Compulsory		
ECTS points: 10		
Prerequisites: none		
Course objective: The aim of this course is to provide students with the necessary knowledge and skills needed to analyze and apply the theory of management and organization while dealing with the process of development of the health care system. Also, the aim of the course is the acquisition of up to date knowledge in the field of management and organization, as well as mastering the latest methods and techniques used in the management and organization of health care institutions.		
Learning outcomes: Upon completion of the course and the exam, students will be able to critically evaluate management practices that are used in health care organizations as well as to design and implement management approaches to health care organizations. Also, students will improve their ability in applying the theory of management and organization of health care systems, as well as knowledge of organizational and management processes and challenges faced by modern health care organizations.		
Course structure and content: <i>Theoretical instruction:</i> Evolution of the Management of Health Systems. Management and managers in health care organizations. The planning, organizing, leading and control in health care organizations. Goal oriented management in health care organizations. Strategic Management and Change Management in healthcare organizations. Individuals and groups in organizations. Motivation and job satisfaction. Structure and design of organizations. Organizations in their environment. Organizational structure and framework. Basic theory of design work. Organizations in the health system. Processes in organizations. Organizational learning and Knowledge Management. Organizational culture. Communication, problem solving and decision making, negotiation. Leadership and organization. Power and organizations. The conflicts in organization. Innovation and entrepreneurship in healthcare organizations. <i>Practical instruction:</i> The principles, methods and techniques of management and organization of health care institutions. Methods of organizing the delivery service. Performance management in health care organizations. Methods for determining time standards of performance, evaluation activities and design of system of rewards. Decision-making process. Breeding and selection of managers in health care organizations. Group processes and group work in the organization. Establishing and empowering of teams. Conflict resolving process. Mapping and recording of profiles of power in organization. Decentralization and delegation of tasks and responsibilities.		
Literature/Readings: 1. Goodwin N I, R Gruen, Iles V (2006). Managing health services. Berkshire: Open University Press. 2. White RK, Griffith R. (2010) The Well-Managed Healthcare Organization, Health Administration Press, Seventh Edition. 3. Dulanović Ž. Jaško A. (2007). Fundamentals of the business system. Belgrade: Faculty of Organizational Sciences. 4. Dulanović F, Jaško O (2008). Organizational structure and change. Belgrade: Faculty of Organizational Sciences. 5. PS Robbins, Coutler M (2005). Management (selected chapters) - translation. Belgrade: Registration Status. 6. Longest JBB, Rakic JS, Darr K (2004). Managing Health Service Organization and Systems. 4th edition. Baltimore: Health Professions Press.		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: Monologue method, demonstration method, case studies, solving practical problems through team work, self study based on troubleshooting of the tasks.		

Evaluation/Grading (maximum 100 points)

Activities during lectures 10 points

Tests: 20 points

Written Seminar: 30 points

Written exam: 40 points

Course:
Quality Management
Teacher: Filipović V. Jovan, Mijatović S. Ivana, Bumbaširević Vesna
Course status: Elective
ECTS points: 5
Prerequisites: none
Course objective: Acquisition of knowledge of advanced concepts in the field of quality management, understanding of various concepts of quality assurance in healthcare and mastering specific research approaches in quality management.
Learning outcomes: An active participant understands the advanced concepts of quality management. An active participant is introduced into the research methodology, in the field of quality management, and is capable of designing research, effectively realizing and adequately interpreting the results of the research.
Course structure and content:
<p>Theoretical instruction: Theory of stakeholders and interested parties, Common model of a management system, Integrated management systems, Strategic quality management, Earned quality method, Quality management system as a complex adaptive system, TQM and complexity theory, EFQM model, Quality management system standards and Quality of patient.</p> <p>Practical instruction: The specifics of the medical institution. The quality management system according to ISO 9001 requirements. Guidelines for improving healthcare processes according to the International Workshop Agreement IWA 1. Research into the effects of the quality management system in healthcare institutions. Measuring quality of health services. Specificity of health services. Identification of stakeholders and interested parties. Development of performance system and indicators of quality of health services. OECD Health Care Quality Indicators and Picker Institute Quality Indicators Systems. Development of the internal system of performance and quality indicators in a health institution. System performance research for measuring the performance and quality indicators in the health service.</p> <p>Customer's perception of quality. Needs for research and specific research in quality management. Research planning. Designing questionnaires to identify critical user requirements (criteria, structure, and testing). Application of advanced critical incident techniques. The role and importance of previous research. Selection of the sample. Realization of research. Data processing. Data analysis using multivariate analysis. Identify customer requirements and use the Quality Planning Spreadsheet concept.</p>
Literature/Readings:
<ol style="list-style-type: none"> 1. Филиповић, Ј. и Ђурић, М. Основе квалитета, 2009, ФОН, Београд 2. Филиповић, Ј. и Ђурић, М. Систем менаџмента квалитета, 2010, ФОН, Београд 3. Evans J. R., Lindsay W.M., (2009), Managing for Quality and Performance Excellence, South-Western Cengage Learning 4. Gryna F.G., Chua R.C.H., DeFeo J.A., (2010), Juran's Quality Planning and Analysis, McGraw Hill 5. Dettmer H. W., (2007), The Logical Thinking Process: A Systems Approach to Complex Problem Solving, American Society for Quality, Quality Press 6. Mauch P. D., (2009), Quality Management: Theory and Application, CRC Press

7. Cyaja R., Blair J., (2005), *Designing Surveys – A Guide to Decisions and Procedures*, Pine Forge Press, Sage, USA

8. Okland S.J., (2008), *Total Quality Management –text with cases*, Elsevier, UK

9. Juran, J. M., Godfrey, A. B. , Hoogstoel, R. E., Schilling, E. G., (Editors), 1999, *Juran’s Quality Handbook*, McGraw-Hill, USA

10. Donabedian A.(Edt. Rashid Bashshur). *An Introduction to Quality Assurance in Health Care*. Oxford University Press Inc. 2003;

11. ISO International Standardization Organisation. *International Workshop Agreement IWA 1:2005 - Quality management systems — Guidelines for process improvements in health service organizations*. 2005;

12. Hesser W, Feilzer A, De Vries H. (Ed.). *Standardization in Companies and Markets*. Helmut Schmidt University. 2007

The number of class hours per week	Lectures: 3	Research study: 4
---	--------------------	--------------------------

Teaching methods: Lectures. Discussion. Case studies. Exercises. Independent research work of students

Evaluation/Grading (maximum 100 points)

- Activity during lecture - 10 points
- Middterm exam - 20 points
- Seminar paper – 30 points
- Final exam - 40 points

Course: Drug management		
Teacher: Bajčetić Milica, Vuksanović Aleksandar, Gojković Bukarica Ljiljana, Dragović Lukić Gordana, Obradović Dragan, Radenković Miroslav, Obradović Vladimir, Jaško Ondrej		
Course status: voluntary		
ECTS points: 5		
Prerequisites: None		
Course objective: The aim of the subject is to gain more knowledge concerning: research procedures which are applied during analysis of drug consumption and drug usage on different levels of management; and law regulations which control drug turnover and drug usage in our country and across the world, as well. Some specific objectives would be to: learn about basic principles of pharmacotherapy; gain knowledge about methods in pharmacoepidemiology and pharmacoeconomics; get acquainted with on line resources, software programs, list of requisite medicines and appropriate literature; perform analysis of drug consumption and find out causes for inadequate consumption; and make a plan and guidelines for therapy rationalization.		
Learning outcomes: The outcome of the subject: upon completion of this subject, students will be capable to use methods for drug consumption analysis (both qualitative and quantitative), to recognize their inappropriate usage and apply measures which will rationalize their consumption.		
Course structure and content: The content of the subject: this subject is focused on basic principles of rational drug consumption, one of the most important drug safety aspects, control and cost reduction in the health system. Students will obtain information regarding medicine usage guidelines on both national and global level. The subject includes basic methods used for assessment and analysis of rational therapy (pharmacoepidemiology and pharmacoeconomics), as well as basic infrastructure which is necessary for this kind of research. Special emphasis will be on children, elderly people, pregnant women, which are groups at risk when it comes to drug safety and drug consumption, and on some special diseases (like AIDS) and medicines (OTC, antibiotics, etc). Additionally, off label and non-registered drug usage will be analyzed particularly. Within this subject, students will be informed about law regulations on manufacturing, registration and drug turnover, as well as about the main principles of ALIMS and RFZO work.		
Literature/Readings: 1. Goodman and Gilman's The pharmacological basis of therapeutics, Twelfth edition. The McGraw- Hill Companies, Inc 2011 2. Strom BL, Kimmel SE, Hennessy S. Pharmacoepidemiology 5th edition. Wiley-Blackwell, 2012. 3. Bootman JL, Townsend RJ, McGhan WF. Principles of pharmacoeconomics.2nd edition. W Harvey Whitney books company.2004. 4. Yaffe SJ, Aranda JV, editors. Neonatal and Pediatric Pharmacology. Therapeutic principles in practice. Fourth Editions. Philadelphia, PA: LWW 2011. 5. Sweetman, SC. (ed.) (2011) Martindale: The Complete Drug Reference, 37th edition, Pharmaceutical Press.		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: lectures, seminars, practicals, case studies, research study		
Evaluation/Grading (maximum 100 points)		
Active participation during lectures 10 points		
• Seminar 50 points		
• Written exam 40 points		

Course: Management of human resource – selected chapter		
Teacher: Mihailović M. Dobrivoje, Milosavljević, Đ. Gordana, Šantrić-Milićević Milena		
Course status: elective		
ECTS points: 5		
Prerequisites: none		
Course objective: The acquisition of theoretical knowledge and practical skills in multidisciplinary scientific area with human resource management as the basic course in specific domain of applying organizational sciences in healthcare system.		
Learning outcomes: Qualifying students for conducting scientific researches independently in subject area and leading work and professional teams and organizations engaged in human resource management positions in healthcare organizations.		
Course structure and content: <i>Theoretical instruction:</i> Scientific perception toward phenomenon of human resource. Position of the subjects of HR in the system of social and humanistic sciences. Emergence, development and perspectives of scientific area of human resource. Strategic approach to human potentials. Characteristics of human resource management. Basics of organizational-operational function of human resource management. Analysing, designing and planning of work. Work systematization and classification of occupations. Employees' recruitment and selection. Employees' placement and socialization. Material stimulation and developmental motivation of employees. Education and professional training of employees. Guiding employees' career. Organization of function of human resource management. Professional profile of employees in human resource department in healthcare organizations. Basic problems in human resource management in healthcare: conflicts, communication, satisfaction...Human resource management in healthcare system. Future of human resource management in the healthcare system. <i>Practical instruction:</i> Research is conducted in the Centre of human resource management and in the business systems with developed services for human resource management in organizations. Seminar paper consists from the study of selected problem and formulated in the form of proceeding at scientific conference.		
Literature/Readings: 1. Orlić, R., Menadžment ljudskih reursa, FON, Beograd, 2007. 2. Vujić, D., Menadžment ljudskih resursa, DPS, Beograd, 2010. 3. Mihailović, D., Menadžment – ljudska strana, FTN, Novi Sad, 2005. 4. De Cenzo/Robins., Human Resource Management, Yon Wiley, 1999. 5. Burgard Horst, Handbuch Personal marketing, Gebler, Wisbaden, 1998.		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods:		
Evaluation/Grading (maximum 100 points)		
<input type="checkbox"/> class activities – 10 points <input type="checkbox"/> colloquium – 20 points <input type="checkbox"/> essays and seminar papers 30 points <input type="checkbox"/> written test 40 points		

<p>Course:</p> <p>Management of Sustainable Technology Development in Health Care</p>
<p>Teacher: Levi-Jakšić I. Maja, Petrović B. Nataša, Mihić M. Marko, Marinković P. Sanja, Milovanović Aleksandar</p>
<p>Course status: Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: None</p>
<p>Course objective: Presentation and transfer of knowledge and research methods in the field Management of Sustainable Development in the health care sector based on new technologies, introducing the considerations related to the general economic and social environment focusing national policy and sustainable development strategies especially oriented at the healthcare sector with regional and health care organizations focus. The special topic of waste management and relevant practice of its treatment is considered from different angles and aspects based on the differentiation made in waste characteristics in relation to management issues and solutions, and integrated with the legal and regulatory considerations especially focused at waste management, treatment of unsafe and dangerous waste, medicinal waste and its recycling potentials.</p>
<p>Learning outcomes:</p> <p>The students acquire knowledge and skills and are prepared for monitoring the latest results in both theory and practice, with a critical approach and enabled to apply the sustainable development results at different levels of the economy and society and in different health care organizations, institutions, associations, chambers, etc within the sector. They will gain competence in creating, implementing and controlling sustainable development strategies based on safe, sustainable technologies and innovation. Integrated waste management considerations are a part of the knowledge and approaches the students will master with special emphasis on dangerous, medical waste with a general strategic overview of the paths to reduce and recycle in accordance with National waste management strategies.</p>
<p>Course structure and content:</p> <p><i>Theoretical instruction:</i></p> <p>Theoretical approaches, models and factors of growth and development; The development of the Society, Economy and Competitiveness based on knowledge, technologies, innovation and competencies; Science, technology and development; Sustainable development metrics and indicators; Sustainable development, sustainable business and technology development principles; Sustainable development dual character and conflicting goals; Extended concept of LCA, Value chain and competency models in the health care sector; Horizontal and vertical integration as development strategy; R&D management and product, service and process development in health care; Strategic analysis based on LCA; New technology and innovation strategy in healthcare, focusing pharmaceuticals and medicine; Waste distinction and categories; Pollution, storage and minimisation of solid waste; Liquid waste management; Reusage and recycling; Special dangerous medical waste; Legal aspects in the field of waste management.</p> <p><i>Practical instruction:</i></p> <p>Approaches and methods in assessing technology and organization life cycles. Extended technology LCA for</p>

sustainable development; Value chain models and techniques and competence based models on cases and examples from the healthcare sector; Implementation of sustainable development programmes in healthcare; Case study: National strategy for waste management

Literature/Readings:

1. Rainey, D. L., Sustainable Business development, Cambridge University Press, 2006.
2. Levi Jakšić, M., Menadžment tehnologije I razvoja, FON, Beograd, 2009 (odabrana poglavlja)
3. . Levi Jakšić, M, Strateški menadžment tehnologije, FON, Beograd, 2001.
4. . Levi Jakšić, M., Marinković, S, Petković, J., Menadžment inovacija I tehnološkog razvoja, FON, Beograd, 2015. (odabrana poglavlja)
5. Levi Jakšić, M., Marinković, S, Menadžment održivog razvoja, FON, Beograd, 2012
6. Petrović, N.,Ekološki menadžment, FON, Beograd, 2010..
7. Petrović, N., Integrisano upravljanje otpadom, skripta, Beograd, 2012.
8. Petrović, N, Dizajn za životnu sredinu, skripta, FON, Beograd, 2009.
9. Swayne, L. E., Duncan, W. J., Ginter, P. M., Strategic Management of Health Care Organizations, Wiley, 2008.
10. Gilsing, V., The Dynamics of Innovation and Interfirm Networks, Edward Elgar, 2005.
- 11.Heizer, Dž, Render, B., Operacioni menadžment, redaktori izdanja na srpskom jeziku Levi Jakšić, M. I Backović, M., Ekonomski fakultet, Beograd, 2011. (predvod Operations Management, Prentice Hall, 8th edition)
12. Porteous, A., *Dictionary of environmental science and technology*, third edition. West Sussex, John Wiley&Sons, LTD, 2000.

The number of class hours per week

Lectures: 3

Research study: 4

Teaching methods:

Lectures, multimedial presentations, interactive sessions in creative workshops, duscussion on given and elaborated topics, case study analysis, solving practical problems, students individual research and presentation of results.

Evaluation/Grading (maximum 100 points)

Presence during lectures 10 points

Colloqium 20 points

Seminar 30 points

Written exam 40 points

<p>Course:</p> <p>Performance Management</p>
<p>Teacher: Martić M. Milan, Žarkić Joksimović A. Nevenka, Filipović S. Vinka, Levi Jakšić I. Maja, Jaško O. Ondrej, Petrović B. Nataša, Damnjanović Ž. Vesna, Vasiljević Nađa, Jevtić V. Miloš</p>
<p>Course status: Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: None</p>
<p>Course objective: The objective is to understand the importance and present theoretical and practical knowledge in the field of performance management. The presented knowledge is related to the approaches, methods, models for measuring and monitoring performance as part of a unified system that connects activities of continuous improvement of operations with fulfillment of strategic goals.</p>
<p>Learning outcomes:</p> <p>Students will be trained to understand methods and models for developing consistent performance management systems in practice, taking into account the specifics of a particular organization. Students will be introduced to different approaches and performance management models of the organization, concrete quantitative and qualitative methods and techniques for measuring performance at different levels.</p>
<p>Course structure and content:</p> <p><i>Theoretical instruction:</i></p> <p>Systemic and holistic approaches to the organization's performance; Strategic and operational goals and performance setting; Approaches to historical/strategic/external/absolute performance measurement; Balanced score-card; Strategy goal maps; Selecting key performance indicators; Generic operational performance indicators and developing of a consistent model; Performance measurement model, Performance assessment on strategic/operational level; Performance based business process management; External/internal, long-term/short-term, quantitative/qualitative approaches to performance measurement; Control and priority setting for performance improvement; Business development based on performance management; Benchmarking.</p> <p><i>Practical instruction:</i></p> <p>Quantitative and qualitative impact indicators: economic, financial, technological, organizational; Balanced Scorecard; Profitability improvement method (PIA); Technology performance indicators: forecasting methods, objectives matrix, strategic technological diagnosis and responsivity; DEA method;</p>
<p>Literature/Readings:</p> <ol style="list-style-type: none"> 1. Meyer, M. W., Rethinking Performance Measurement, Cambridge University press, UK, 2002. 2. Levi Jakšić, M., Strateški menadžment tehnologije, FOS, Belgrade, 2001.(In Serbian) 3. Slack, N., Chambers, S., Johnston, R., Operations Management, Pearson, Prentice Hall, England, 2010. 4. Pervez, G., Gronhaug, K., Research Methods in Business Studies, Prentice Hall, 2010. 5. Kaplan, R. S., Norton, D. P. Strategy maps: Converting intangible assets into tangible outcomes. Boston: Harvard Business School Press, 2004.

6. Bogetoft P, Performance Benchmarking -Measuring and Managing Performance, Springer, 2012
7. www.performance-measurement.net

The number of class hours per week

Lectures: 3

Research study:4

Teaching methods: Lectures, exercises, case studies, team work, various forms participation of students in the teaching process, presentation of student research results on a particular topic, consultation and mentoring.

Evaluation/Grading (maximum 100 points)

activity during lectures: 10 points

practical work: 10 points

seminal work:20 points

written exam: 30 points

oral exam: 30 points

<p>Course:</p> <p>Management of pulmonary diseases</p>
<p>Professors: Ljudmila Nagorni-Obradovic, coordinator, Dragica Pesut, Aleksandra Dudvarski-Ilic, Dejana Vukovic, Vesna Skodric-Trifunovic, Branislava Milenkovic, Dejan Petrovic, Marko Mihic</p>
<p>Status: core course</p>
<p>ESPB:</p>
<p>Prerequisites: none</p>
<p>Aim of the course is to introduce students with different types of chronic pulmonary diseases. Through understanding the importance of early detection and treatment of chronic pulmonary diseases, students will improve their knowledge of enhancing health of population and improving health services. The objective is to introduce students with definitions, ethiology, symptoms and possibilities for prevention, early diagnostics and treatment of chronic pulmonary diseases.</p>
<p>Outcomes: Students will be enabled to recognize different types of chronic pulmonary diseases, to organize appropriate measures of primary prevention of pulmonary diseases, detection of cases in early stage, undertaking diagnostic procedures and treatment. Students will be enabled to assess populations' burden of disease due to pulmonary diseases. They will understand methods of calculating medical costs for treatment of chronic pulmonary diseases as well as indirect costs which can impose significant economic and social burden for society.</p>
<p>Content of the course: The course is focused on measurement of mortality and morbidity indicators related to chronic pulmonary diseases. Students will discuss possibilities for prevention of chronic pulmonary diseases such as: chronic obstructive pulmonary disease, asthma, tuberculosis, interstitialis lung diseases etc. They will be educated about diagnostic tests which are used in practice in order to detect disease effectively. They will learn about contemporary guidelines for patient treatment, for symptomatic and causal alike, in outpatient and inpatient care. Students will be introduced with modes of treatment in stable stage of disease as well as in exacerbation. They will learn about patient education related to chronic pulmonary diseases. They will learn about possibilities of elimination or reduction of risks for occurrence of these diseases.</p>
<p>Literature</p> <ul style="list-style-type: none"> • Global Initiative for Chronic Obstructive Lung Disease (GOLD) guideline. Global Strategy for Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease (update 2011) http://www.goldcopd.com • King PT, Daviskas E. Management of bronchiectasis. <i>Breathe</i> 2010, 6(4):353-360. • Migliori GB et al. Towards the development of EU/EEA Standards for Tuberculosis Care (ESTC). <i>Eur Respir J</i> 2011, 38:493-495. • Marcellis RGJ et al. Exercise capacity, muscle strength and fatigue in sarcoidosis. <i>Eur Respir J</i> 2001, 38: 628-634. • Janssen L J. Asthma therapy: how far have we come, why did we fail and where should we go

<p>next? Eur Respir J 2009, 33: 11-20.</p> <ul style="list-style-type: none"> Roche n et al. Beyond corticosteroids: future prospects in the management of inflammation in COPD. Eur Respir Rev 2011, 20, 121: 175-182. 		
Број часова активне наставе:	Предавања: 3	Студијски истраживачки рад: 4
Methods: lectures, seminars, exercises, case studies, desk research		
Evaluation/Grading (maximum 100 points)		

<p>Course:</p> <p>Management of hypertension</p>
<p>Teacher:</p> <p>Stefanović Branislav, Ristić Arsen, Šipetić-Grujičić B. Sandra, Mihailović M. Dobrivoje</p>
<p>Course status: Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: none</p>
<p>Course objective:</p> <p>Hypertension is one of the most important causes of death in developed countries. Accordingly, the object of the subject is a comprehensive introduction to this disease, starting from the definition of hypertension, the cause of the disease, epidemiological research, through clinical trials and treatment, to familiarization with the numerous complications of this disease such as heart attack, stroke, heart failure, disease peripheral arteries, renal failure and eye retinal disease. The important objective of the subject is to familiarize with the previous organization of testing and treatment of hypertension and the degree of general awareness of the importance of early detection and real Treatment of hypertension in all age groups.</p>
<p>Learning outcomes:</p> <p>The outcome of the course would be training for a comprehensive understanding of the importance of hypertension in the general population, familiarity with the complexity of hypertensive disease and numerous complications affecting all age groups, and especially the working age population. The outcome of the course would be to include PhD students as professionals in the organizational profile in teams that would constantly deal with the examination of the causes of disease in the community, the possibilities of preventing hypertensive disease and its complications, and developing models that could be checked in practice and which would have practical benefits for society in terms of reducing the incidence of hypertension and reducing treatment costs.</p>
<p>Course structure and content:</p> <p>Through an epidemiological survey and the determination of epidemiological parameters, the examination of risk factors for the occurrence of primary and secondary hypertension, the development of risk ratios for hypertension in relation to the lifespan and the presence of other significant diseases (diabetes, hyperlipidaemia) and habit (smoking, insufficient physical activity, inadequate nutrition , obesity, stress, etc.), students would master techniques to independently assess the degree of vulnerability of the population to hypertension and its complications. Students would be familiar with the current guidelines for the treatment of hypertension, pharmacological and non-pharmacological measures and diagnostic agents (ECG, X-ray, ultrasound diagnostics, computerized tomography, magnetic resonance, contrast</p>

angiography, etc.). Based on all of the above, they could contribute to changing the habits of the population, better acceptability and acceptance of therapeutic principles by patients, and thus reducing the most serious complications of hypertension (heart attack, stroke, heart failure, peripheral arterial disease, renal failure, retinal eye disease) .

Literature/Readings:

1. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) <http://www.nhlbi.nih.gov/guidelines/hypertension/> 2. 2007 Guidelines for the management of arterial hypertension. EHJ 2007;28:1462-1536 3. Kannel WB. Blood pressure as a cardiovascular risk factor: prevention and treatment. JAMA 1996; 275: 1571-1576 4. Hypertension: Clinical management of primary hypertension in adults. Issued: 2011 <http://guidance.nice.org.uk/CG127> 5. Joint statement of the European Association for the Study of Obesity and the European Society of hypertension: obesity and difficult to treat arterial hypertension. Journal of hypertension 2012;30:1047-1055

The number of class hours per week	Lectures: 3	Research study: 4
---	-----------------------	-----------------------------

Teaching methods: Lectures, seminars, exercises, case studies, study research work

Evaluation/Grading (maximum 100 points)

Activity in course of lectures	10	Written exam	40
Practical classes		Oral exam	
Colloquium-s	20	Practical exam.....	
Seminar-s	30		100

<p>Course:</p> <p>Management of cerebrovascular diseases</p>
<p>Teacher:</p> <p>Jovanović Dejana, Pekmezović Tatjana, Stošić Tanja, Čovičković Šternić Nadežda, Pavlović Jovanović R. Aleksandra, Čudanov J. Mladen</p>
<p>Course status:</p> <p>Elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: none</p>
<p>Course objective:</p> <p>The aim of the course is to introduce students of the doctoral studies to various types of cerebrovascular diseases, from acute stroke (ischemic or haemorrhagic genesis) to multiinfarct brain and vascular dementia. Special attention will be paid to the risk factors for cerebrovascular disease. Also, students will be introduced to the new approaches in the organization of the treatment of these diseases, which include primary prevention measures, treatment of acute stroke in the Stroke Units and measures of secondary prevention and monitoring of chronic cerebrovascular patients. Therefore, the objective of the subject would be to provide conditions in the health system through the acquisition of knowledge on all of these issues, which would reduce the incidence of cerebrovascular disease, but also improve the treatment that would reduce mortality and morbidity, which would significantly contribute to the improvement of the health of the population.</p>
<p>Learning outcomes:</p> <p>The outcome of the course should be the education of specialists who would be able to realize the objective of the subject and to contribute with their knowledge to reduce the incidence of stroke, dying and disability that accompany this disease, as well as the accompanying complications such as depression and vascular dementia. This implies the creation of an organizational scheme that would be most effective for the society as a whole, bearing in mind personnel, technological and economic opportunities.</p>
<p>Course structure and content:</p> <p>Students should learn how to determine epidemiological parameters that relate to all elements of different types of cerebrovascular disease (morbidity, mortality of ischemic, hemorrhagic strokes, lumbar conditions, frequency of risk factors ...), as well as those that are important for determining quality of life of these patients. Through the introduction of risk factors in general as well as those specific to our environment, the possibilities of determining measures of both primary and secondary prevention would be considered. Also, by learning about the characteristics of patients in our environment, specific</p>

strategies for prevention and treatment of diseases could be identified, which would be useful both for the patients and for the society as a whole. Students should also learn how to apply the modern concept of treatment which implies the application of modern diagnostic procedures.

Literature/Readings:

1. Louis Lebrun et al.: Improving stroke care: A French health-care organiser’s perspective. International Journal of Stroke 2011, 6; 123–124
 2. Lynn Reid: Stroke training and education for health and social care staff: a partnership between the NHS and the voluntary sector. International Journal of Stroke 2010, 5; 2010, 412–413
 3. H. Adams et al.: Guidelines for the Early Management of Patients With Ischemic Stroke (AHA). Stroke 2005, 36:916-923
 4. Guidelines for Management of Ischaemic Stroke and Transient Ischaemic Attack 2008: The European Stroke Organization (ESO) Executive Committee and the ESO Writing Committee. www.esostroke.org/recommendations.
 5. David Tanne et al. A National Survey of Acute Cerebrovascular Disease in Israel: Burden, Management, Outcome and Adherence to Guidelines. IMAJ 2006;8:3–7

The number of class hours per week	Lectures: 3	Research study: 4
---	----------------------------------	---------------------------------

Teaching methods: Lectures, seminars, exercises, case studies, study research work

Evaluation/Grading (maximum 100 points)

Activity in course of lectures	10	Written exam	40
Practical classes		Oral exam	
Colloquium-s	20	Practical exam....	
Seminar-s	30		100

Course: Methodology of scientific research		
Teacher: Mihailović M. Dobrivoje, Špetić-Grujičić B. Sandra, Bumbaširević Vladimir, Lalić Nebojša, Pekmezović Tatjana, Todorović Zoran, Vukmirović B Dragan, Radojičić A. Zoran, Devjak Srećko		
Course status: mandatory		
ECTS points: 10		
Prerequisites: Completed undergraduated-master studies at one of the faculties for medical, pharmaceutical, social or humanitarian studies.		
Course objective: Acquiring theoretical knowledge and practical skills in designing and realization of scientific research process. Application of scientific and research methods, induction and deduction, techniques for statistical analysing and procedures in scientific work with the aim to prepare students to conduct their own research.		
Learning outcomes: Developed capacity for conducting scientific researches independently in subject area and leading project teams. Competency for application of basic and more sophisticated scientific research methods, statistical techniques and procedures. Capability for designing, realization and presentation of scientific research paper, as well as producing autonomously scientific papers and publishing in journals from SCI list.		
Course structure and content: Theoretical instruction: Content of the course includes considering the contemporary definitions, goals, basic principles, areas and methods in epidemiological, clinical and public health researches. Goals are considered through creating new knowledge and technology for solving unsolved health problems and through organizing the existing knowledge and their focusing on interventions. Nature of scientific knowledge of scientific reality. Relation between science and methodology of scientific research. Scientific activities and their role in scientific development. Scientific projects. Phases of scientific researches; designing and realization of scientific research. Structure of research project, operational plans and research procedures. Usage of statistics and informatics in scientific researches. Biostatistics, methods and techniques of data analysis. Basic and sophisticated scientific methods: observation, experiment, case study, content analysis. Univariate and multivariate statistical methods in function of data analysis, interpretation and presentation of results. Practical instruction: Thesis introductory paper has to be structured in the manner that shows recognition and understanding of chosen topic of particular area that belongs to the scientific domain of doctoral studies. With this aim, author should give comprehensive and original overview of scientifically valid problem based on relevant references and literature. Along with educational, Thesis introductory paper has verifying and heuristic scientific function.		
Literature/Readings: 1. Mihailović, D. (2012). Metodologija naučnih istraživanja, FON, Beograd. 2. Mihailović, D. (2004). Metodologija naučnoistraživačkih projekata, SP, Beograd. 3. Neigel, E. (1991). Struktura nauke, Naučna knjiga, Beograd. 4. Capitain, H. (2007). Doktorska disertacija, Naučna knjiga, Beograd. 5. Rajnberg, S. (1997). Metode i tehnike naučnog rada, Naučna knjiga, Beograd. 6. Sullivan L., Essentials of Biostatistics for Public Health, Jones & Bartlett Learning, London, 2011, ISBN: 978-1449623944 7. G. Belle, P. J. Heagerty, L. D. Fisher, T. S. Lumley, Biostatistics: A Methodology For the Health Sciences, Wiley-Interscience, London, 2004, ISBN: 978-0471031857		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods:		
Evaluation/Grading (maximum 100 points)		
<input type="checkbox"/> class activities – 20 points <input type="checkbox"/> project task 40 points <input type="checkbox"/> oral exam 40 points		

<p>Course:</p> <p>Basics of health policy research</p>
<p>Teacher:</p> <p>Bjegović-Mikanović M. Vesna , Bulat Petar, Lalić Nebojša, Bumbaširević Vladimir, Jović-Vraneš Aleksandra, Đikanović Bosiljka, Šipetić-Grujičić B. Sandra, Levi-Jakšić I. Maja, Milićević K. Vesna, Ilić J. Bojan</p>
<p>Course status: Obligatory</p>
<p>ECTS points: 10 ECTS</p>
<p>Prerequisites: None</p>
<p>Course objective:</p> <p>The objective of the course is to enable students to perform the research procedures applied in the processes of analysis, health policy formulation, implementation and evaluation, with the acceptance of knowledge and skills for identifying priorities including strategies to reduce risk; research into interactions within the health policy process and the role of international organizations; exploring the changing role of the state from a European and international perspective.</p>
<p>Learning outcomes:</p> <p>Expected knowledge and research skills: the ability to analyze the external and internal environment of health policy, the application of normative analysis and prioritization of research goals based on analyzing burden of diseases and injuries, health determinants, cost-effectiveness of health interventions, the influence of political thinking and political movements with the ability to compare international, European and national policies based on research evidence.</p>
<p>Course structure and content: The content of this course includes the basic approaches in health policy research as a process that takes place through formal procedures and series of actions oriented towards the goal undertaken by participants with authority.</p> <p>Theoretical instruction: Students study theories and possibilities of researching individual and group political thinking, behavior, legislative organization and formation of interest groups.</p> <p>Practical instruction: In parallel students master methods of public opinion research, stakeholders' analysis, and analysis of institutions that influence the outcomes of health policy. The course begins with the introduction of the historical perspective of health policy development and consideration of historical and current content, such as Millennium Development Goals versus Sustainable Development Goals, health determinants, including strategies to reduce risk. During the learning process, a framework for policy analysis and policy impact research is identified through the main actors and policy determinants, and in particular the role of the medical profession and its dominance in policy setting. Students study theories of planning and research approaches in setting priorities in health care. The changing role of the state and the role of international organizations determining approaches in national health policy programs is analyzed. In addition to considering international approaches within the United Nations agencies and the Bretton Woods system, special attention is paid to European policies. The importance of comparing international health policies with the application of public health indicators and research evidence is emphasized, pointing to the significance of health policy and intervention research.</p>
<p>Literature/Readings:</p> <ol style="list-style-type: none"> 1. Gilson L, ed. Health Policy and System research. A Methodology Reader. Geneva: World Health Organization and Alliance for Health Policy and Systems Research, 2012. 2. Bodenheimer TS, Grumbach K (2004). Understanding Health Policy. A Clinical Approach. Third Edition. New York: McGraw-Hill Companies 2004. 3. Bjegović V, Donev D, ed. Health Systems and Their Evidence Based Development. A handbook for Teachers, Researchers and Health Professionals. Lage, Germany: Hans Jacobs Publishing Company, 2005. 578 pages 4. Lin V, Gibson B. Evidence-based Health Policy. Problems and Possibilities. Oxford: Oxford University

Press 2003. 5. Green A. An Introduction to Health Planning for Developing Health Systems. Oxford-New York: OUP 2007. 6. Buse K, Mays & Walt G. The Making Health Policy. Oxford-New York: OUP 2005. 7. WHO, Marmot M. Report of the Commission on Social Determinants of Health. Geneva: WHO Publication Office 2009.		
The number of class hours per week	Lectures: 3	Research study: 4
Teaching methods: Lectures, case studies, seminars and exercises including group discussions of case studies, demonstration of skills in creating policy research instruments (selection of appropriate indicators, questionnaires, decision-making matrices), writing publications in the field of research priorities, processes, effects and in general evaluation of health politics.		
Evaluation/Grading (maximum 100 points)		
<ul style="list-style-type: none"> • Active participation in teaching during lecture 10 points • Colloquium 20 points • Seminar work 30 points • Written exam 40 points 		

<p>Course:</p> <p>Basics of Health Systems Research</p>
<p>Teacher: Vuković Dejana, Bjegović Mikanović Vesna, Jović Vraneš Aleksandra, Matejić Bojana, Artiko Vera, Babić Momčilo, Šantrić Milićević Milena, Levi Jakšić Maja, Simić Snežana, Marinković P. Sanja , Damnjanović Vesna, Štavljanin Velimir</p>
<p>Course status: core</p>
<p>ECTS points: 10</p>
<p>Prerequisites: none</p>
<p>Course objective:</p> <p>The aim of the course is to educate students of doctoral studies about the importance and goals of researching the health care system for improving the health of the population and improving the provision of health services. The objective is to train students to use different quantitative and qualitative methods as well as their combinations in analyzing the functions and outcomes of the health care system. The skills to search and generate data as well as create tools for gathering data relevant to the research of the health care system and critically assessing their scope and limitations.</p>
<p>Learning outcomes:</p> <p>Students will be trained in the use of various data collection tools as well as quantitative and qualitative methods of research particularly focusing on functions and outcomes of the health care system. In addition to this, they will acquire skills to analyze the correlation of certain functions with the outcomes of the health care system. Students will be trained to design a study to analyze the functions and outcomes of the health care system.</p>
<p>Course structure and content: The course is aimed at introducing research into the components of the health care system, the factors that influence the components, and the interconnection of certain components and outcomes of the health care system.</p> <p><i>Theoretical instruction: The main topics are: Research on the provision of health care, accessibility and equity in providing health services; Resources in the health care system, research planning and personnel development; Management and concept of accountability in the health care system; Analysis of health care financing and payment mechanisms for service providers, the impact of financing on health outcomes, equity in financial contribution for health care, impact on financial risk protection; comparative research of the health care systems;</i></p> <p><i>Practical instruction: Measuring outcomes of health systems, endpoints and intermediate ones</i></p>
<p>Literature/Readings:</p> <ol style="list-style-type: none"> 1. De Savigny D, Adam T, eds (2009) Systems thinking for health systems strengthening. Geneva, World Health Organization 2. Schneider H, Palmer N (2002). Getting to the truth? Researching user views of primary health care. Health Policy and Planning, 17(1):32–41. 3. Hyder A et al. (2010). Stakeholder analysis for healthresearch: case studies from low- and

middleincomecountries. Public Health 124:159–166.

4. English M et al. (2008). Health systems research in a low-income country: easier said than done. Archives of Diseases in Childhood, 93:540-544.

The number of class hours per week

Lectures: 3

Research study: 4

Teaching methods:

Lectures, seminars, exercises, case studies, study research work

Evaluation/Grading (maximum 100 points)

Active participation in teaching during lectures 10 points •

Colloquium 20 points •

Seminar work 30 points •

Written exam 40 points

<p>Course:</p> <p>Health Technology Assessment</p>
<p>Teacher: Vuković Dejana, Bjegović Mikanović Vesna, Jović Vraneš Aleksandra, Matejić Bojana, Artiko Vera, Babić Momčilo, Levi Jakšić Maja, Simić Dejan, Marinković Sanja.</p>
<p>Course status: elective</p>
<p>ECTS points: 5</p>
<p>Prerequisites: none</p>
<p>Course objective:</p> <p>The goal of the course is to provide students with critical understanding of the comprehensive process of assessment of health technologies, including the assessment of health, economics and ethical implications of the application of technology. The aim is for students to acquire knowledge and skills to use quantitative and qualitative methods for assessing health technologies as well as the skills of synthesizing evidence from research. The aim is for students to acquire competencies in designing and critically evaluating health technology, considering an assessment from various aspects (health care system, organization, patient)</p>
<p>Learning outcomes:</p> <p>Students will be trained to critically evaluate the elements of the health technology assessment process, identify and evaluate evidence from the literature on all the consequences of applying health technology, to apply a quantitative and qualitative methods of synthesizing evidence from literature. In addition, they will acquire skills to identify and analyze possible bias in primary research and synthesis of evidence. Students will be trained to independently design a project of a comprehensive health technology assessment.</p>
<p>Course structure and content:</p> <p><i>Theoretical instruction:</i></p> <p><i>The subject is focused on the application of methods of comprehensive assessment of health technologies, the collection and generation of evidence, the synthesis of evidence, and the critical examination of the findings obtained. The main topics are: Systematic review of literature; Hierarchy of evidence; Internal and external validity of studies; Macro and microeconomic assessment of the impact of health technology; Methods of evaluating the ethical and wider consequences of the application of health technology; Quantitative and qualitative methods of collecting primary data and their critical analysis; .</i></p> <p><i>Practical instruction: Methods for the synthesis of evidence; Designing a study for the assessment of state-of-the-art technology.</i></p>
<p>Literature/Readings:</p> <p>1. Kristensen FB, Lampe K, Chase DL, Lee-Robin SH, Wild C, Moharra M, Garrido MV, Nielsen CP, Røttingen JA, Neikter SA, et al Practical tools and methods for health technology assessment in Europe: structures, methodologies, and tools developed by the European Network for Health Technology</p>

Assessment, EUnetHTA. . Int J Technol Assess Health Care. 2009; 25 Suppl 2:1-8.

2. Schwarzer R, Siebert U. Methods, procedures, and contextual characteristics of health technology assessment and health policy decision making: comparison of health technology assessment agencies in Germany, United Kingdom, France, and Sweden. Int J Technol Assess Health Care. 2009; 25(3):305-14.

3. Ridyard CH, Hughes DA. Methods for the collection of resource use data within clinical trials: a systematic review of studies funded by the UK Health Technology Assessment program. Value Health. 2010;13(8):867-72

4. Ormstad SS, Isojärvi J. Information retrieval for health technology assessment: standardization of search methods. Int J Technol Assess Health Care. 2010;26(4):359-61.

The number of class hours per week	Lectures: 3	Research study: 4
---	--------------------	--------------------------

Teaching methods:

Lectures, seminars, exercises, case studies, study research work

Evaluation/Grading (maximum 100 points)

Active participation in teaching during lectures 10 points •

Colloquium 20 points •

Seminar work 30 points •

Written exam 40 points

Course:		
Health promotion strategies		
Course lecturers (last name, middle initial, first name): Aleksandra S.Jovic-Vranes, Bojana Matejic, Zorica Supic Terzic, Santric Milicevic Milena, Dejana Vukovic, Aleksandar Milosavljevic, Vinka Filipovic, Milica Kostic Stankovic		
Status of course: compulsory		
Course credits: ECTS		
Course Requirements:		
Aim of the course is to provide knowledge about the theories and concepts in the field of management and health promotion, and acceptance of knowledge and research procedures in determining the efficiency of health care management at the systemic, institutional and individual level. Also, to acquire the skills needed to design and conduct research in the field of health promotion.		
Course outcomes		
The expected knowledge and skills: in the field of management-oriented research, as well as acceptance of the basic principles of health promotion, analysis, and application of health behavior theories in health promotion and health education, the application of theoretical concepts and research findings in planning, implementation and evaluation of health promotion programs in different environments.		
Course Description		
Course focuses on the guiding principles and theories in management and health promotion strategies and methods used in health promotion and program evaluation. Classes will include research questions important for assessing the health promotion needs and priorities, and design and implementation principles of health promotion programs. Special attention will be devoted to research evaluation (formative, process and outcome evaluation) in health promotion. Classes will include planning, implementation and evaluation of health promotion in a variety of environments for health (schools, hospitals, workplaces).		
Recommended Readings:		
<ul style="list-style-type: none"> • Longest JBB, Rakich JS, Darr K (2004). Managing Health Service Organization and Systems. 4th edition. Baltimore: Health professions Press. • Elwyn G, Greenhalgh T, Macfarlane (2001). Groups – a guide to small group work in healthcare, management, education and research. Abingdon, Oxon: Radcliffe Medical Press Ltd. • Detels R, McEwen J, Beaglehole R, Tanaka H, eds. Oxford Textbook of Public Health, 4th ed., Vol. 1. New York: Oxford University Press 2002. • Koelen MA, van den Ban AW. Health education and health promotion. Den Haag: Wageningen Academic Publishers 2004. • Valente, T. W . (2002). Evaluating Health Promotion Programs. Oxford University Press. • Valente, T. W. (1995). Network models of the diffusion of innovations . Cresskill , NJ: Hampton Press. 		
Number of contact hours: 60	Lectures: 10	Research study: 20
Tteaching methods:		
Interactive presentations, student participation, visual aids and printed materials.		

Small group discussions in which students will share ideas, thoughts, questions and answers with the presence of teachers that promotes discussion. Independent work on the design and analysis of results.

Knowledge score (maximum points 100)

The final score is based on active participation in the classroom (10%), test performance (20%), presentation and submission of seminar paper(30%) and written exam performance (40%).

<p>Course:</p> <p>Strategic financial management</p>
<p>Teacher: Zarkic – Joksimovic A. Nevenka, Benkovic S. Sladjana, Barjaktarovic Rakocevic M. Sladjana, Terzic Supic Zorica, Babic Momcilo</p>
<p>Course status: Mandatory</p>
<p>ECTS points: 10</p>
<p>Prerequisites: None</p>
<p>Course objective:</p> <p>The objective of this course is to provide:</p> <ul style="list-style-type: none"> ➤ students with the necessary knowledge and skills that needed to be adopted and to applied as elements of financial management in the healthcare systems, as well professional and managerial practice, ➤ this subject allows the adoption of new and extension previously acquired knowledge and skills in the field of financial management in the health care system, ➤ this subject empowering students to critically evaluate existing theories, approaches, and methods in the field financial management in the health care system, and especially in the organizations in the field of health.
<p>Learning outcomes:</p> <p>Learning outcomes are relying on the understanding the impact of business performance on adoption of operational and strategic financial decisions in the health care system. Additionally, the learning outcome is mastering the method of simulations for the needs of strategic financial management in the health care system. Understanding specific operational and strategic management of finances in different organizational forms according to the criteria of ownership, size, activity, etc. Managing innovative finances in the system health care.</p>
<p>Course structure and content:</p> <p><i>Theoretical instruction:</i> Financial Management System, Improving Financial Processes in Health institutions through a system of better strategic financial management, a system of strategic management accounting, financial reporting in health organizations, analysis financial reports in the health care system, management of working capital in health care system, sources of financing providers in the health care system, use of data on costs for the purpose of cost management, and for the needs of making business decisions in health care organizations, Capital budgeting in the health care system, Simulation in strategic financial decision-making in the health care system, business performance and the adoption of operational ones and strategic financial decisions in the health care system, Continuity and changes in the system healthcare, Examples: Making strategic financial decisions; Making and interpretation of financial statements.</p> <p>Study research work: The student is obliged to investigate the problem a) in the form of seminar paper b) in the form of a suitable article for presentation at a scientific-expert meeting c) in the form of work that will be published in the journal with SCI or SSCi lists.</p>
<p>Literature/Readings:</p> <ul style="list-style-type: none"> ➤ Baker J. J, Baker W. R: Health care finance: Basic tools for non-financial managers, Jones and Barlett Publishers LLT, USA, 2011. ➤ Cleverley O., Cleverley O. J, Song H. P: Essentials of Health Care Finance, Seventh Edition, Jones and

Course:
Research proposal
Teacher: All teachers involved in the study program
Course status: Mandatory
ECTS points: 30
Prerequisites: /
<p>Course objective:</p> <p>The main objective is to prepare students for independent research work on his doctoral dissertation, and the case study can be viewed as the first phase of doctoral thesis. With the help of mentors, students will be prepared that, with the conquest necessary scientific research methods and instruments, and with the application during the study gained extensive and deep scientific-professional and professional application of knowledge, on the eve of a specific current problem, set a plan and expose its resolution. Defence accession, the student acquires 30 ECTS.</p>
<p>Learning outcomes:</p> <p>The outcome of the course the student is qualified for independent research work in the electoral area. Who is able to find an available and accessible scientific literature that analyzes and to prepare a comparative review of existing approaches and solutions. Student is able to set its own criteria for critical evaluation of existing solutions and that in this sense the eve of the advantages and disadvantages of such solutions. Is capable on the basis of the previous analysis on the eve of a current problem for the studied scientific field it believes may be over independent research to provide significant scientific contributions. Student is able to describe the form of the expected scientific contributions, exposed to initial hypotheses and the expected scientific results. Also, is able to specify the basic research methods that will be used in solving the problem and to explain their choice, indicating the research plan with the planned implementation schedule, indicating the outline of the content of work as presenting the research results and the literature indicate that you will use in the study.</p>
<p>Course structure and content:</p> <p>After passing all exams and gaining 90 ECTS, the student chooses a mentor and with the active support of SIR conducted in the laboratory or research centre of the Faculty. Student explores the problem which is the subject of his interest. The specific content of the work depends on the chosen electoral areas. Access work on doctoral studies should be structured so that the student demonstrate extensive knowledge and deep understanding of the problem in the part of the study area that is studied in doctoral studies, so it will spread based on a comprehensive literature review of the identified problems in a given scientific field, as well as known ways of solving these problems; provide their own critical review of the presentation described the problems and solutions; identify the actual problem, or problems in the scientific field that would conduct independent research and the goals you would like to accomplish these studies; exposed form of the expected scientific contribution (new model, new equipment, new approach, ...); exposed initial hypotheses and the expected scientific results, indicate the basic research methods that will be used in solving the problem and to explain their choice; specify the research plan (research phase, the use of research methods in individual aspects of research) with the proposed implementation schedule, indicating the outline of the content of work as presenting the research results (at least to the level of the sections in the chapters, preferably up to the third level of the hierarchy), indicating the literature that will be used in the study.</p>

Literature/Readings:		
The number of class hours per week	Lectures: 2	Research study: 18
<p>Teaching methods:</p> <p>Rules on doctoral studies of the Faculty contains detailed application process, workflow and defense of the access operation. After consultation with the prospective mentor candidate submits a wider research topic Chamber of the faculty. Larger evaluates and determines the suitability of topics mentor. Once approved topic, a student in the laboratory or research center explores the theme with the help of mentors, where is mandatory to use the literature indicated that his mentor. Periodically in consultation with the supervisor checks the student's progress and if necessary further directs. Student if necessary perform certain measurements, tests or statistical data. Access work is defended before a panel that determines the evening after reports of mentors that work zabršen. Defended the access operation is a requirement for applying for a doctoral dissertation.</p>		
Evaluation/Grading (maximum 100 points)		
Research proposal (50 points)		
Defense research proposal (50 points)		

Course:	
Independent research work on the preparation of the doctoral dissertation	
Teacher: All teachers involved in the study program	
Course status: Mandatory	
ECTS points: : /	
Prerequisites: /	
Course objective:	
<p>Within this part of the doctoral dissertation, the student explores the given problem by the set plan of research. The aim of the research is to obtain the results on the basis of which it will confirm or deny the hypotheses set. By the conducted research students should write a doctoral dissertation. Doctoral dissertation should represent original and independent scientific work, which contributes to the development of scientific thought, which according to the methodology of treatment and the degree of scientific contribution is suitable for determining the candidate's ability to act as an independent researcher in a selected scientific field.</p>	
Learning outcomes:	
<p>The student should perform independent research work in the electoral area. The result of the research is a scientific contribution to solving the current problem (new model, new technique, new approach, ...). By the set criteria, the student compares the performance of his solution with the known existing ones. The student should critically consider the obtained research results and display them in a form suitable for publication. An integral part of the research is a list of available and used scientific literature.</p>	
Course structure and content:	
<p>The student explores the problem that is the subject of his interest, processes the results obtained during the research and exposes them in a form suitable for publication. The specific content of the doctoral dissertation depends on the problem, the method of research, the processing of the obtained results and the manner of interpretation and the presentation of the conclusions.</p>	
Literature/Readings:	
The number of class hours per week	Research study: 20
Teaching methods:	
Evaluation/Grading (maximum 100 points)	

Course:	
Final exam	
Teacher: All teachers involved in the study program	
Course status: Mandatory	
ECTS points: 60	
Prerequisites: /	
Course objective:	
<p>Doctoral dissertation should be an original and independent scientific work, which contributes to the development of scientific thought, and that the methodology of treatment and the degree of contribution to science is suitable for determining a candidate's ability to act as an independent researcher in the selected field of science.</p>	
Learning outcomes:	
<p>The student is qualified for independent scientific research in order to solve the problem. Student is able to find an available and accessible scientific literature that analyzes and to prepare a comparative review of existing approaches and solutions. Student is able to set its own criteria for critical evaluation of existing solutions and that in this sense the eve of the advantages and disadvantages of such solutions. Student is able to identify and formally put the problem in the domain of the attached. Student is able to describe the shape of the expected scientific contributions, exposed to initial hypotheses and the expected scientific results. Capable of using different research methods in solving the problem, to explain their choice, set research plan and determine the implementation schedule.</p>	
Course structure and content:	
<p>Student explores the problem which is the subject of his interest, addresses the results obtained during the research and presents them in a format suitable for publication. The specific content of the doctoral thesis depends on depends on the considered problem, research methods, processing of results and ways of interpretation and presentation of findings.</p>	
Literature/Readings:	
The number of classes	Research paper: 20
Teaching methods:	
Evaluation/Grading (maximum 100 points)	
<p>Working on thesis: 50 points Thesis defense: 50 points</p>	