



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION OF THE STUDY PROGRAMME			
1.1. Name of the study programme	GRADUATE UNIVERSITY STUDY IN GEOGRAPHY; COURSE: RESEARCH		
1.2. Provider(s) of the study programme	Dept. of Geography of the Faculty of Science, University of Zagreb		
1.3. Type of study programme	Vocational study programme <input type="checkbox"/>	University study programme <input checked="" type="checkbox"/>	
1.4. Level of study programme	Undergraduate <input type="checkbox"/>	Graduate <input checked="" type="checkbox"/>	Integrated <input type="checkbox"/> Postgraduate specialist <input type="checkbox"/>
1.5. Manner of implementation of the study programme	Classical <input checked="" type="checkbox"/>	Mixed (Classical + online) <input type="checkbox"/>	Online in entirety <input type="checkbox"/>
1.6. Academic/vocational title earned at completion of study	Master of Geography		

2. INTRODUCTION	
2.1. Reasons for starting the study programme	<p>On the basis of official approval granted in 2005, the Dept. of Geography of the Faculty of Science of the University of Zagreb has been conducting a Graduate Research Study Programme in Geography since the 2008/2009 academic year with the following specialisations: Physical Geography and Geo-ecology, Spatial Planning and Regional Development, Cultural Heritage and Tourism and Geographic Information Systems. By way of the process of self-evaluation of teaching based on procedures that derive from the quality management system at the University of Zagreb (university student surveys, evaluation of study as a whole, questionnaires on study completion), the need has been identified for changes and augmentation of the study programme with the objective of improving the competences demanded on the labour market and in the life-long education of the graduating students. The changes were made with the approval of the Faculty Council, the Quality Management Board and the Senate of the University of Zagreb.</p> <p>As one of the basis developmental resources of Croatia, the spatial aspect is the responsibility of all of its citizens. With the objective of optimal valorisation of spatial resources in keeping with the postulates of sustainable development, the activities of the Croatian academic community are of key importance, particularly in that part in which space is the fundamental object and/or the thematic research framework. Just because of its research object (the geo-spatial system), the appropriate methodology applied (multiplicative interaction between elements of the spatial system, spatial analysis-synthesis) and work technique, geography as the eminent geo-spatial science occupies an inescapably prominent place in planning, managing and evaluating space in keeping with the postulates of sustainable development.</p> <p>The graduate study of Physical Geography with Geo-ecology is orientated towards acquiring cognition of the cause-and-effect connections within and between elements of the natural base and social superstructure, with emphasis on environmental features. Knowledge and understanding of physical-geographical and, particularly, geo-ecological</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

aspects, is very important today in spatial organisation and management from the aspect of sustainable development and from the aspect of natural threat evaluation as a consequence of climate change and anthropogenic activity. Numerous oversights with irreparable consequences have occurred in practice to date in the Republic of Croatia's spatial management at the national, regional and local level, often due to an absence of interdisciplinary approach application in spatial and regional planning. Accountability has also been absent in the treatment of space as a limited resource. Because of its holistic approach to the spatial system that unifies multiplicative interactions between the elements of the spatial system (spatial analysis – synthesis) and the work technique, geography, as the eminent geo-spatial science, occupies a special place in planning, managing and evaluating space in keeping with the principles of sustainable development. For the reasons given, we are educating specialists in our graduate study programme who will be able, with the geographical knowledge and practical skills acquired, to respond in co-operation with specialists from other professions to the contemporary challenges of regional and spatial planning, implementing the spatial-planning experience and practice of the member states of the European Union with the objective of achieving balanced regional development.

Analyses of the situation to date indicate that tourism is not merely one of the key, underpinning branches of the Croatian economy but also an activity that greatly contributes to the positive image of Croatia in Europe and throughout the world. The need constantly imposes itself to enrich the Croatian tourism offer by creating new tourist products, so that the syntagma of Croatia as a tourist country in its entirety could really come alive in practice. Its diversity, beauty and state of environmental preservation together with the exceptionally valuable material and non-material, cultural and historical and ethnographic heritage are among the most important factors of attraction of Croatian tourism. The significance of heritage as an increasingly important basis of Croatia's tourist offer will continue to grow under conditions of globalisation. And the natural and cultural-historical heritages are a deeply entrenched spatial category that the Croatians have inherited from their forebears, recognised as ongoing assets that need to be both protected and evaluated optimally and, finally, passed on as assets, but also as a developmental resource for future generations. Students educated in the Cultural Heritage and Tourism specialisation can carry out assignments connected with functional and sustainable implementation of natural and cultural heritage as a tourist product.

Today, almost all information has its spatial dimension. Many occupations on the Croatian labour market are linked with spatial organisation and management; therefore, there is a need for education of specialists who will, along with the help of contemporary technologies, competently collect, process, interpret and organise spatial information with the aid of their professional know-how and practical skills. GIS specialists trained in the Geographical Information Systems specialisation are able to perform assignments linked with spatial management and spatial resources such as: the use of geo-information systems for application in regional and spatial planning, public administration, traffic, energy, the telecommunications industry, commercial undertakings and particularly in the management of natural resources and environmental protection.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>In the hope that by way of geographical occupations, capabilities and skills we contribute optimally to spatial development as one of the key economic resources of Croatia in the future, we believe that the proposed Graduate University Study in Geography is essential in the network of institutions of advanced learning and study programmes in the Republic of Croatia, in order that our profession, too, make its contribution to a qualitative and quantitative step forward in higher education.</p>
<p>2.2. Assessment of the study programme's usefulness relative to the demand in the labour market in the public and private sectors</p>	<p>Depending on the completed specialisation, Masters of Geography who complete Graduate University Study in Geography shall attain the knowledge and skills for employment in State administration bodies (the Ministry of the Economy, Ministry of Regional Development and European Union Funds, Ministry of Tourism, Ministry of Culture, Ministry of Environmental Protection and Nature, Ministry of Foreign Affairs and European Affairs, Ministry of Maritime Affairs, Traffic and Infrastructure, Ministry of Defence. . .) and local government and self-government entities, companies involved in spatial management (Croatian Water, Croatian Forests, Croatian Roads. . .), institutes of spatial planning and design, cadastral offices, tourism organisations (national, regional and local), tourism subjects (hotels and other accommodation capacities, tour operators, tourist agencies), institutions for cultural and historical heritage protection, cultural institutions, public nature protection institutions (e.g. national parks, nature parks, public institutions engaged in protected natural assets management), companies authorised to draw up tourism development plans and programmes, statistical institutes (State, county, municipal), developmental agencies and enterprises connected with drawing up project documentation for the EU, cartographic and geo-informational institutions, the Croatian Army, scientific and higher-education institutions, particularly those involved in spatial management, lexicography, publishing, the media, etc.</p>
<p>2.3. Compatibility of the study programme with the University mission and the strategy of the proposer, as well as with the strategy statement of the network of higher education institutions.</p>	<p>This study programme expands the possibility of connection through various graduate studies with other integral parts of the University of Zagreb and with other universities in Croatia, but also in the EU. The proposed programme has been coordinated with the development strategy of the University of Zagreb (the ISKORAK 2001 initiative), the Research Strategy of the University of Zagreb 2008-2013, the Act on Advanced Education, the Bologna Declaration, and the Strategic Development Plan of the Faculty of Science [the PMF] of 2008 and with other documents connected with science and higher education. The proposed study programme has been coordinated with the network of institutions of higher learning and study programmes in the Republic of Croatia (the NVVO – the National Council for Higher Education).</p>
<p>2.4. Comparability of the study programme with other accredited programmes in higher education institutions in the Republic of Croatia and EU countries (name two programmes at most, of which one is from an EU country, and compare it with the proposed programme (provide internet</p>	<p>- Graduate University Study of Applied Geography – single subject, University of Zadar, Department of Geography, http://www.unizd.hr/geografija/Studijskiprogrami/tabid/422/Default.aspx</p> <p>-Second-Level University Master's Programme in Geography – with the specialisations: the Environment in Physical</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

<p>addresses of the programmes)</p>	<p>Geography, Regional Planning in Urban-Rural Studies, Political Geography, Geography of Tourism, Applicable Geo-Information Systems, University of Ljubljana, Faculty of Philosophy, Dept. of Geography, http://geo.ff.uni-lj.si/2-stopnja-geografija</p>
<p>2.5. Openness of the study programme to student mobility (horizontal, vertical in the Republic of Croatia, and international)</p>	<p>The proposed programme enables the mobility of students during study with the recommendation and supervision of coordinators and application of the ECTS grading scale.</p> <p>It should be emphasised that even up until now the Faculty of Science has stimulated and facilitated the mobility of students. In 1992, the Faculty of Science achieved <i>de facto</i> equalisation of the graduate level in the former undergraduate study with the Master's level (MSc) in study programmes at various European and non-European countries. On the basis of its own experience (1988), the Faculty of Science accepted the role in 1999 of a pilot-project institution for the university project introducing ECTS grades, and introduced the ECTS grading scale in all its departments. The Faculty of Science was among the first faculties to introduce the Supplemental Diploma (1998) and Appendix according to ERASMUS.</p> <p>In accordance with that, it has achieved mobility in its Geography programmes to date, primarily of non-Croatian students and lecturers. In the entire Faculty of Science, the Dept. of Geography leads the way in the mobility of its students going abroad and students coming from abroad. As part of the ERASMUS and CEEPUS projects, an average of some ten students come to the Department, while some fifteen students from the Department of Geography leave for other universities at the same time.</p> <p>We encourage the mobility of students and lecturers from higher education institutions, with which institutional co-operation already exists:</p> <ul style="list-style-type: none"> • the Dept. of Geography, University of Zadar • the Dept. of Geography of the Faculty of Philosophy, University of Ljubljana • the Faculty of Philosophy, University of Maribor • the Faculty of Science and Educational Sciences, University of Mostar (Bosnia-Herzegovina) • Eotvos Lorand University, Budapest (Hungary) • the Institute of Karst Research, Postojna (Slovenia) • the Technical University of Dortmund, Faculty of Regional and Spatial Planning (Germany) • the Leibniz Institute of Geography, Leipzig (Germany) • the Institute of Geography of the Faculty of Science at Potsdam (Germany) • the University of Natural Resources, Vienna (Austria) • the Institute of Geography and Spatial Planning, St Gallen University (Switzerland) • the Environment Centre, Lancaster University (UK) • the Countryside and Community Research Unit, University of Gloucestershire (UK)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<ul style="list-style-type: none"> • the Physical Geography Laboratory and the Environmental Centre, Blaise Pascal University and Limoges University (France) • the Institute of Geography, Bulgarian Academy of Science, Sofia (Bulgaria) <p>The Dept. of Geography has also successfully implemented the mobility of its lecturers and associates with the aim of research and continuous advanced learning, and the exchange of experience in the preparation of new projects. At least two university lecturers from abroad take part in teaching at the Dept. of Geography every year.</p> <p>The vertical mobility of students is achieved through the openness of degree study to students from other departments of the Faculty of Science, other faculties within the University of Zagreb and from other universities in Croatia and from abroad. In relation to the number of students who continue their studies at the graduate level, and who have finished study at a preceding level at some other faculty, the Dept. of Geography is the leading department at the Faculty of Science. For example, from a total of 1 enrolled student at the entire Faculty of Science, 7 were enrolled in the Dept. of Geography. We expect a further increase in the vertical mobility of students with the newly proposed manner of enrolment in graduate study.</p>
<p>2.6. Relationship with the local community (economy, entrepreneurship, civil society, etc.)</p>	<p>Connection with the local community can be seen in the training of specialists who have contributed with their work and social activity to the overall quality of life of all citizens after completing the programme. Students establish closeness with the local community through their practical work, especially with economic subjects and civil society institutions.</p>
<p>2.7. Compatibility with requirements of professional organizations</p>	<p>The proposed graduate study programme has been coordinated with the Statute of the Croatian Geographical Society – the umbrella professional society of geographers in Croatia.</p>
<p>2.8. Name possible partners outside the higher education system that expressed interest in the study programme</p>	<p>Since 2008 when the Graduate University Study of Geography was initiated, numerous partners have expressed concrete interest in this study programme, for example, through co-operation within the framework of student practical work, joint realisation of field teaching programmes and readiness to co-operate with students when compiling their graduate theses and other research.</p> <p>Public sector partners:</p> <ul style="list-style-type: none"> • scientific and higher education institutions • State education agencies (AZOO, ASOO, NCVVO) • State administration bodies and local government and self-government entities • institutes of spatial planning and design • developmental agencies linked with the drawing up of project documentation for the EU • statistical institutes (municipal, county and State) • Nature protection institutions (national parks, nature parks, public institutions managing protected natural assets) • cultural and historical heritage protection institutes • cadastral offices, cartographic and geo-information institutions



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<ul style="list-style-type: none"> • lexicography • tourist organisations (e.g. city/municipal, county and State tourism communities) • spatial management and economic exploitation companies (Croatian Water, Croatian Forests, Croatian Roads...) • the Croatian Army • the media <p>Private sector partners:</p> <ul style="list-style-type: none"> • private planning companies • cartographic and geo-information companies • publishing • tourist organisations and subjects • companies engaged in the drawing up of project documentation for the EU • companies authorised to draw up plans and programmes of tourism development • scientific and higher education institutions • the media <p>We expect our close co-operation with the above partners to continue to our mutual satisfaction.</p>
2.9. Other (as the proposer wishes to add)	<p>The Dept. of Geography is proud of its long tradition at the Faculty of Science, which it has been developing since its foundation. Particularly prominent in that process has been its bridging role between the natural sciences and the social sciences. The proposal of Graduate Study at the Dept. of Geography has been attuned to that role.</p>

3. GENERAL INFORMATION	
3.1. Scientific/artistic area of the study programme	Interdisciplinary area of science – the field of Geography
3.2. Duration of the study programme (is there an option of distance learning, part-time studying, etc.)	2 years (4 semesters)
3.3. The minimum number of ECTS required for completion of study	120
3.4. Enrolment requirements and admission procedure	<p>Candidates who have completed University Undergraduate Study of Geography, specialising in Physical Geography with Geo-ecology and students who have completed University Undergraduate Study of Ecological Science are entitled to enrolment on the basis of an enrolment competition <u>without additional conditions</u>. Such candidates are entered into a rank-list according to their average grades in all the subjects passed (calculated to the third decimal point).</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Candidates who have completed University Undergraduate Study of similar and other sciences are entitled to submission to the classification procedure if their average grades in all the subjects passed during study was at least 3.5. Prior to enrolment in the appropriate Graduate Study specialisation programme the candidates must sit for and pass differentiation subjects up to total encumbrance of up to 60 ECTS scale grades.</p>
<p>3.5. Learning outcomes of the study programme (name 15-30 learning outcomes)</p>	<p>The outcomes of learning differ in each of the four specialisations in the Graduate Study of Geography:</p> <p><u>Physical Geography with Geo-ecology Specialisation:</u></p> <p>Professional knowledge, capabilities and skills: Familiarity with and the capability to apply the theoretical approaches and the methodology of Physical Geography. Analysis of geographical influences on climate extremes and climate changes Analysis and evaluation of climatic influences in the natural and geographical and socio-geographical environment Analysis of hydrometrical data, the outflow regime and calculation of the water balance Evaluation of water as a key element in sustainable development Application of geomorphological methods in research and mapping Analysis of geomorphological processes and evaluation of relief forms Knowledge and analysis of the geomorphological, hydrographic and micro-climatic specificities of karst Knowledge of environmental history and, particularly, examples of significant modifications Geo-ecological analysis, planning and evaluation of landscape Knowledge of the application of sustainable management principles and nature and environmental protection Knowledge, capabilities and skills in analysis and evaluation of the natural base in the compilation of spatial and regional plans, specialist foundations, studies of environmental influences and other documentation</p> <p>Cognitive capabilities and skills: Identification and solution of highly complex spatial issues Identification and analysis of phenomena and processes that are crucial for the stability of the geo-system Interpretation of relevant and actual geographic phenomena and processes and specialist discussion on the same. Evaluation, interpretation and synthesis of information and data Presentation and argumentation of scientific content Application of appropriate survey procedures in practice</p> <p>Practical capabilities and skills: Skills in preparation and performance of field work</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

Measurement of climatic elements
Measurement and calculation of hydrographic and hydrological elements
Measurement of relief forms and geomorphological processes
Mapping and visualisation of physical geographic content
Application of statistical and graphical methods in results analysis and presentation
Making thematic maps in analogue and digital form
Compiling a geo-spatial data base
Application based on GIS technique
Analysis of physical geographic location factors

Generic capabilities and skills:

Knowledge and planning of research work
Knowledge and application of statistical and graphical methods
Solution of assignments linked with qualitative and quantitative geographical information
Information-technological skills
Efficacious work, both independently and as part of a team
Independent work necessary for professional advancement

Spatial Planning and Regional Development Specialisation:

Specialist knowledge, capabilities and skills:

Knowledge and understanding of:

The process of research work in geography
Theoretical bases of cartographic, statistical and graphic methods in regional and spatial planning
Theoretical bases of regional and spatial planning
Methods and techniques of regional and spatial planning
The role of the natural bases of spatial planning, particularly the climate, water and relief
Social-geographical factors in spatial planning, particularly population, settlement and the form of population density and economic activities
Contemporary processes and urban development issues
Factors and processes of rural restructuring and regional differentiated examples of rural restructuring



DETAILED PROPOSAL OF THE STUDY PROGRAMME

Traffic and spatial organisation at the local, regional and national level
Subjects and factors of regional development
Models of regional development
The role of local and State administration in regional development
The regional development of Croatia
Environmental and nature protection and spatial planning with particular purposes
Identification and evaluation of resources at the local, regional and national level

Cognitive capabilities and skills:
Application of knowledge in establishing, defining and solving highly complex spatial issues
The capability of recognising and singling out phenomena and processes crucial for spatial and regional planning
The capability of interpreting and discussing geographical phenomena and processes
Skills required for evaluation, interpretation and synthesis of information and data
Skills in presentation of scientific content and argumentation, both written and oral

Practical capabilities and skills:
Spatial orientation and the skills required for field work
Mapping geographical content, geo-referencing
Application of the appropriate statistical and graphical methods in analysis and presentation of results; particularly:
quantitative analysis of traffic networks
Application of the appropriate maps and cartographical methods in analysis and presentation of results
Application of the appropriate methods in spatial planning
Application of the appropriate GIS methods and techniques
Design of spatial organisational models

Generic capabilities and skills:
Solution of assignments linked with qualitative and quantitative geographic information
Information-technological skills
Efficacious work, both independently and as a member of a team
Independent work necessary for professional advancement and professional development

Cultural Heritage and Tourism:



DETAILED PROPOSAL OF THE STUDY PROGRAMME

Specialist knowledge, capabilities and skills:

Knowledge and understanding of:

The theoretical and methodological geographical system

The research work process in general and in geography

Specific statistical and graphic methods

Environmental history and large scale environmental modification

Issues of landscape conservation, renewal and design

Tourism evaluation of natural elements and social components and cultural offer

Importance of the climate in tourism, bio-metrological indices, and climate therapy

Importance of manifested forms of water in tourism and water resources as a limiting factor

Geo-ecological evaluation of relief as an aspect of tourism, the possibility of tourism development on the relief basis

Cultural heritage as a general phenomenon and its spatial significance

Tourism forms and their features: developmental trends, their role in spatial transformation and importance on the tourism market

The inter-relation between natural and cultural heritage and tourism, particularly the selective forms of tourism deriving from that inter-relationship: eco-tourism, geo-tourism, rural tourism, cultural tourism and the like

Heritage and tourism in urban centres, the cultural capital of cities, the culture industry and creation of a culture offer

The concept of sustainable development in tourism and recreation.

Cognitive capabilities and skills:

Application of knowledge in establishing, defining and solving highly complex spatial issues

The capability of recognising and singling out phenomena and processes crucial for the stability of the geo-system

The capability of interpreting and discussing relevant and actual geographical phenomena and processes

Skills required for evaluation, interpretation and synthesis of information and data

Skills in presentation of scientific content and argumentation, both written and oral

Practical capabilities and skills:

Spatial orientation with the aid of contemporary technology and skills needed for field work

Mapping geographical content, geo-referencing

Application of the appropriate statistical and graphical methods and techniques in analysis and presentation of results



DETAILED PROPOSAL OF THE STUDY PROGRAMME

Application of the appropriate maps and cartographic methods in analysis and presentation of results
Application of the corresponding GIS methods and techniques
Drawing up design proposals

Generic capabilities and skills:

Solution of assignments linked with qualitative and quantitative geographic information
Information-technological skills
Efficacious work, both independently and as a member of a team
Independent work necessary for professional advancement

Geographical Information Systems:

Specialist knowledge, capabilities and skills:

Knowledge and understanding of:

The theory and methodology of Geography
The process of research work overall and in geography
Appropriate advanced statistical and graphical methods
Creation and the technique of organisation and work with a spatial data base
Real estate cadastral offices, content and purpose, insertion, maintaining and managing data, accountability
Methods and techniques of spatial analysis of vector data
Methods and techniques of spatial analysis of raster data
Digital relief models and digital relief analysis
Spatial interpolation method
Cartographic semiotics
Visualisations of continuous and discontinuous geographical data
Cartographic presentation method
Theories, methodologies and techniques of distance research

Cognitive capabilities and skills:

Capability of recognising spatially relevant issues and the possibilities for their analysis and solution with the



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>application of GIS Application of knowledge in establishing, defining and solution of highly complex spatial issues Capability of recognising and singling out phenomena and processes crucial for the stability of the geo-system Capability of interpreting and discussing relevant and actual geographic phenomena and processes Skills necessary for evaluation, interpretation and synthesis of information and data Skills in presentation of scientific content in argumentation, both written and oral Identification and implementation of sound surveying procedures in practice Selection and interpretation of data collected in distance research</p> <p>Practical capabilities and skills: Spatial orientation with the aid of contemporary technologies and skills necessary for field work Mapping geographic content, geo-referencing. Collection, selection, processing and integration of data in GIS Application of the appropriate statistical and graphical methods and techniques in presentation of results Application of the appropriate GIS methods and techniques Capability of cartographic visualisation and application of the appropriate cartographic methods in presentation of research results Skill in processing and analysis of data collected in distance research</p> <p>Generic capabilities and skills: Solution of assignments connected with qualitative and quantitative geographical information Information-technological skills, work in the ArcGIS computer package, work in the SPSS computer package Processing of graphic data bases Conversions of data formats Coordinating spatial data from several different sources. Making thematic maps as a means of presentation of research outcomes Efficacious work, both independently and as a member of a team Independent work necessary for professional advancement</p>
<p>3.6. Employment possibilities (list of potential employers) and opinion of three organizations associated with the labour market on the adequacy of anticipated learning outcomes (attach)</p>	<p>Depending on the completed specialisation, Masters of Geography who complete Graduate University Study in Geography shall, on the basis of their acquired knowledge and skills, be qualified for employment by State administration bodies (the Ministry of the Economy, Ministry of Regional Development and European Union Funds, Ministry of Tourism, Ministry of Culture, Ministry of Environmental Protection and Nature, Ministry of Foreign Affairs and European Affairs, Ministry of Maritime Affairs, Traffic and Infrastructure, Ministry of Defence. . .) and local</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>government and self-government entities, companies involved in spatial management (Croatian Water, Croatian Forests, Croatian Roads. . .), institutes of spatial planning and design, cadastral offices, tourism organisations (national, regional and local), tourism subjects (hotels and other accommodation capacities, tour operators, tourist agencies), institutions for cultural and historical heritage protection, cultural institutions, public nature protection institutions (e.g. national parks, nature parks, public institutions engaged in protected natural assets management), companies authorised to draw up tourism development plans and programmes, statistical institutes (State, county, municipal), developmental agencies and enterprises connected with drawing up project documentation for the EU, cartographic and geo-informational institutions, the Croatian Army, scientific and higher-education institutions, particularly those involved in spatial management, lexicography, publishing, the media, etc.</p> <p>We are attaching the opinions of three organisations linked with the labour market on the suitability of the foreseen learning outcomes for each specialisation of the Graduate University Study in Geography proposal.</p>
<p>3.7. Possibilities of continuing studies at a higher level</p>	<p>After completion of the Graduate University Study in Geography students may enrol in the Postgraduate Doctoral Study of “The Geographical Bases of Spatial Planning and Design” that represents a continuation of the post-graduate study established as early as 1960/61, which has been expanded since then, augmented with new subjects and innovated. The Postgraduate Doctoral Study Programme of “The Geographical Bases of Spatial Planning and Design” lasts for three years, and on its completion the candidate attains the academic title of Doctor of Science (DSc). Students may also enrol in doctoral study in other doctoral study programmes in Croatia and abroad.</p>
<p>3.8. If submitting proposals for graduate studies, name undergraduate studies of the proposer or other institutions that qualify for admission to the proposed graduate study</p>	<p>Candidates for Graduate University Study of Geography who have completed the following studies may apply for competitive enrolment:</p> <p>Undergraduate Research Study of Geography, Provider of the Study Programme: the Faculty of Science of the University of Zagreb</p> <p>Undergraduate Research Study in Environmental Science, Provider of the Study Programme: the Faculty of Science (Mathematics) of the University of Zagreb</p> <p>Undergraduate Research Study in Geography-Geology/Geology-Geography, Provider of the Study Programme: the Faculty of Science (Mathematics) of the University of Zagreb</p> <p>Any university-level undergraduate study whatsoever, if the students’ average grade in all subjects passed was 3.5 at the least, under the condition that they first sit for and pass differential exams with a total encumbrance of up to a maximum total number of 60 ECTS scale grades, may enrol in the courses of the corresponding specialisation.</p>

<p>4. DESCRIPTION OF THE STUDY PROGRAMME</p>
<p>4.1. List of mandatory and elective courses and/or modules with class hours and ECTS credits (appendix: Table 1)</p>
<p>4.2. Description of each course (appendix: Table 2)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

4.3. Structure of the study (number of semesters, trimesters, class size for lectures, seminars, exercises)	Number of semesters: 4 Size of lecture groups: 20 students Size of seminar/exercise groups: 20 students
4.4. Requirements for enrolment in successive semesters or trimesters	Lectures on all subjects attended and passed shall forego the subjects upon which lectures are given in the following semester.
4.5. List of courses and/or modules that the student can take in other study programmes	Extra-curricula subjects from other study programmes of the Faculty of Science of the University of Zagreb may be enrolled in by students from the Physical Geography with Geo-ecology specialisation, while students of the Geographic Information Systems specialisation may enrol in extra-curricular subjects from other study programmes that are components of the University of Zagreb programmes.
4.6. List of courses and/or modules offered in a foreign language as well (name which language)	-
4.7. Completion of study:	
a. Final requirement for completion of study	Final thesis <input type="checkbox"/> Diploma thesis <input checked="" type="checkbox"/> Final exam <input type="checkbox"/> Diploma exam <input checked="" type="checkbox"/>
b. Requirements for final/diploma thesis or final/diploma/exam	All exams passed and fulfilment of all other foreseen programme obligations and a Graduate/Diploma Thesis certified by the mentor/supervisor.
c. Procedure of evaluation of final/diploma exam and evaluation and defence of final/diploma thesis	The procedure commences with submission of the Graduate/Diploma Thesis theme of the student's own choice (on the appropriate form from the Student Office of the Dept. of Geography) as agreed with the lecturer – supervisor. The student shall be obliged to submit the Diploma Thesis theme to the asst. Head Lecturer, prior to the last sitting of the Dept. of Geography Council (the VGO) at the latest, in the semester prior to the one in which he/she shall be defending his/her Diploma Thesis. In agreement with the supervisor and in keeping with the general guidelines of the Dept. of Geography, the candidate shall commence work on the Diploma Thesis in an optimal scope of 50 pages. The main objective of the Diploma Thesis in the Graduate University Study of Geography shall be the application of the research approach in collecting, processing and interpreting information, by which the level of attained specialist competence of the student shall be demonstrated. On condition that the student has passed all the prescribed examinations and fulfilled all other mandated study obligations, at the approval of the supervisor and subsequent to two revisional perusals at the most of the student's Diploma Thesis, a spiralled bound copy of the student's Diploma Thesis shall be deposited at the Student Office of the Dept. of Geography by 5 working days at the latest prior to the meeting of the Department of Geography Council (the VGO) at which a three-member committee shall be elected to assess the defence of the Diploma Thesis. The Diploma Thesis Committee may request additional changes and approve the compilation of a final version of the thesis and set a date for its defence. The defence date shall be made public over at least one week. Prior to such defence, the student shall be obliged to deposit at least one final copy with the Student Office of the Dept. of Geography, and such version shall be in a hard copy and accompanied by a



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	digital version, for the library archive. Defence of the thesis shall consist of a brief presentation of the paper, lasting no longer than 20 minutes, and oral responses to the question of the Committee's members, which shall relate to the paper, but could also encompass mandatory material from the overall study programme. The defence procedure shall last for 60 minutes at the most. The Committee shall separately assess the Diploma Thesis and the oral part of the examination and shall on that basis (but not necessarily by taking an arithmetic mean of those two grades) issue its final assessment of the Diploma Thesis. The supervisor shall enter the final grade in the student's Index/Graduation Book and in the ISVU [Information System of Higher Education].
--	--

List of required and elective courses and/or modules with class hours and ECTS credits, course: PHYSICAL GEOGRAPHY AND GEOECOLOGY

LIST OF REQUIRED COURSES									
Year of study: 1 st year									
Semester: 1 st (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Introduction to Scientific Research	S. Šterc	1	0	1	0	3	required	
	Applied Geoecology	N. Buzjak	3	1	2	0	9	required	
	Elective 1	<i>See the table</i>					5	required	
	Elective 2	<i>See the table</i>					5	required	
	Elective (from Faculty of Science)	*					8	required	

*Student's choice, one or more courses from undergraduate and graduate study programme at the Faculty of Science in Zagreb, outside the Department of Geography

LIST OF ELECTIVE COURSES FROM STUDY PROGRAMME AT THE FACULTY OF SCIENCE									
Year of study: 1 st year									
Semester: 1 st (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Biogeography	I. Ternjej R. Šoštarić	2	1	1	0	5	elective	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Marine Biology	T. Bakran-Petricoli	2	0	1	0	4	elective
	Marine Geology	M. Juračić	2	0	1	0	4	elective
	Geological Hazards	T. Marjanac	2	1	0	0	4	elective
	Environmental Chemistry	T. Cvitaš	2	1	0	0	3	elective
	National Parks	J. Lajtner, M. Špoljar	2	2	0	0	5	elective
	Fundamentals of Geophysics	S. Markušić	2	1	0	0	3	elective
	Basics of environmental and nature protection	M. Mrakovčić	2	0	0	0	3	elective
	Introduction to Astronomy	K. Pavlovski	2	1	0	0	3	elective
	Protected species and areas in Croatia	V. Hršak, M. Mrakovčić, M. Kučinić	2	1	1	0	6	elective
	Protection of the biological and landscape diversity	S. Gottstein	2	1	1	0	5	elective
	Nature protection	M. Mrakovčić	2	1	0	0	4	elective

LIST OF ELECTIVE COURSES

Year of study: 1st year

Semester: (Winter)

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0	0	5	elective
	Biogeography	R. Šoštarić, I. Ternjej	2	1	1	0	5	elective
	Pedogeography	S. Husnjak	2	0	1	0	5	elective
	Analyses in GIS	A. Toskić	1	0	2	0	5	elective
	Digital Terrain Analysis	M. Pahernik	1	0	2	0	5	elective

LIST OF REQUIRED COURSES

Year of study: 1st year

Semester: 2nd (Summer)

MODULE	COURSE	COURSE TEACHER	L	S	E	e-	ECTS	Required/
--------	--------	----------------	---	---	---	----	------	-----------



DETAILED PROPOSAL OF THE STUDY PROGRAMME

						learning		elective
	Applied Climatology	A. Filipčić	2	2	0	0	5	required
	Applied Hydrogeography	D. Orešić	2	0	2	0	5	required
	Elective 3	<i>See the table</i>					5	required
	Elective 4	<i>See the table</i>					5	required
	Elective 5	<i>See the table</i>					5	required
	Fieldwork in physical geography (60 hours/year)	According to decision of Geography Department Council					5	required

LIST OF ELECTIVE COURSES

Year of study: 1st year

Semester: 2nd (Summer)

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective
	Climate Change	A. Filipčić	2	1	0	0	5	elective
	Geomorphological Mapping	M. Pahernik	1	0	2	0	5	elective
	Speleology	N. Bočić	2	1	0	0	5	elective
	Natural Hazards	D. Orešić	2	1	0	0	5	elective
	Restructuring of Rural Areas	D. Pejnović	2	1	0	0	5	elective
	Coast and Coastal Water Management	D. Orešić	2	1	0	0	5	elective
	Military Geography	M. Pahernik	2	1	0	0	5	elective
	Geography of Karst	D. Pejnović	2	1	0	0	5	elective

LIST OF REQUIRED COURSES

Year of study: 2nd year

Semester: 3rd (Winter)

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective
--------	--------	----------------	---	---	---	------------	------	-------------------



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Environmental History	B. Fuerst-Bjeliš	2	2	0	0	5	required
	Applied Geomorphology	N. Bočić	3	3	0	0	10	required
	Elective 6	<i>See the table</i>					5	required
	Professional student training (90 hours/year)	*					5	required
	Graduate seminar	**	0	5	0		5	required

* Institution of Professional student training is reported to coordinator for Professional student training, who gives the signature according to confirmation about properly done student training.

**In the third semestre student choose a menthor, consults with the menthor about the subject of Master thesis, makes a concept of Master thesis and is obligatory to report the theme of Master thesis.

LIST OF ELECTIVE COURSES									
Year of study: 2 nd year									
Semester: (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0	0	5	elective	
	Biogeography	R. Šoštarić, I. Ternjej	2	1	1	0	5	elective	
	Pedogeography	S. Husnjak	2	0	1	0	5	elective	
	Analyses in GIS	A. Toskić	1	0	2	0	5	elective	
	Digital Terrain Analysis	M. Pahernik	1	0	2	0	5	elective	

LIST OF REQUIRED COURSES									
Year of study: 2 nd year									
Semester: 4 th (Summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Master Thesis with defence	Mentor according to student's choice					30	required	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

REQUIRED COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st
1.2. Name of the course	Introduction to Scientific Research	1.7. Credits (ECTS)	3
1.3. Associate teachers		1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+15+0 (1+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Enable students for independant scientific-research work. Introduce students with the structure and stages of the scientific-research proceeding. Train students for the appliance of standard and special research methods and techniques. Explain students the specificities of geographical methodology in research process. Teach students how to define main research aims, tasks, hypothesis, spatial laws, models, projections and conclusions. Capacitate students with the particularities of the geographical research approach.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>This course contribution to the programme is held in the definition of outer and inner research frame, in directioning the inquiry towards crucial processes in space and in the comprehension of spatial laws and objective spatial reality. Very complex context, relationship and link conditionality in geographical space, unique methodology and theoretical concept, research task definitions, individual practice in the research steps, and the recognition of spatial complexity have been validated. Also, the spatial allocate and function determination, spatial typization and regionalization, spatial modeling, projections of future changes, applicability of pertinent methodology, research epistemology comprehension etc., have been appointed.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Outcomes expected on the level of this course are linked with the high-level education in which the concerned knowledge points out the folowing abilities.</p> <ol style="list-style-type: none"> 1. The ability of spatial content observing, defining, categorizing, mapping and clarifying. 2. The research ability of spatial law consideration, discussion, detection, definition, projection and direction. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<ol style="list-style-type: none"> 3. Extended epistemology and coverage of the special approach. 4. Cognitive and cognition ability of revealing conditioned spatial links among complex contexts in geographical space, its causal clarification and resolvment. 5. The ability of complex methodological system appliance in interdisciplinary approach and in logically settled fundamental spatial relations. 6. Individual approach in spatial disproportion perceivment and in research task definition. 7. The ability of the empiric research which can be applicable in basic spatial plans. 8. Spatial functional organization ability in accordance with the phylosophy and logics of space. 				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Scientific systems. 2. Sistematizations and approaches within scientific system. 3. Example of geographical research subject-matter. 4. Work definitions and atributions. 5. Approach to the research and to the paper writing. 6. Research methods and techniques. 7. Data analysis. 8. Geographical approach to the research. 9. Field work inquiries. 10. Research task definition. 11. Scientific knowledge presentation and popularising. 12. The role of research in educational system. 13. Process of scientific work publication. 14. The meaning of geographical cognitions for objective geographical reality comprehension. 15. Theme elaboration through the research proceeding. 				
<p>2.6. Format of instruction:</p>	<input checked="" type="checkbox"/> lecture <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p>This course aims to learn students how to independently enter in the research proceeding.</p>		
<p>2.8. Student responsibilities</p>	<p>Regular class attendance, passed preliminary exam, reserach discussion and independent research issue elaboration.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>	<p>1</p>	<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

credits is equal to the ECTS value of the course)	Tests	0.5	Oral exam		(other)	
	Written exam	0.5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Montello, D. R., Sutton, P. C., 2006: <i>An Introduction to Scientific Research Methods in Geography</i> , SAGE Publications, London.			10		yes
	Zelenika, R., 2000: <i>Metodologija i tehnologija izrade znanstvenog i stručnog djela</i> , Ekonomski fakultet Sveučilišta u Rijeci, Rijeka.			10		yes
	Milas, G., 2009: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i> , Naklada Slap, Zagreb.			10		yes
	Mejovšek, M., 2008: <i>Metode znanstvenog istraživanja u društvenim i humanističkim znanostima</i> , Naklada Slap, Zagreb.			10		yes
2.12. Optional literature (at the time of submission of study programme proposal)	Robinson, G. M., 1998: <i>Methods and Techniques in Human Geography</i> , John Wiley & Sons, Chichester					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.					
2.14. Other (as the proposer wishes to add)	Research tasks have been assigned by students individual choice (associated with their course).					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Nenad Buzjak	1.6. Year of the study programme	1 st
1.2. Name of the course	Applied Geoecology	1.7. Credits (ECTS)	9
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+15+30+0 (3+1+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Get to know the concept and issues of geoheritage, geodiversity and geomorphological sites, methods of their research, visualization and presentation. Get to know issues of relief, as a resource in the economy and elements of spatial and regional planning, the use of landscape and environmental management. Learn to use the methods and techniques of sustainable management and protection of karst geoecosystems. Get to know the principles and methods of geomonitoring. Master the planning and execution of geoecological research, development and use of geospatial databases with applications in Geoecology and environmental protection, application of method of geoecological evaluation on selected examples. Become familiar with the types and effects of anthropogenic influences in the environment with an emphasis on practical problem-solving. Students will be introduced to interdisciplinary approaches and basic planning methods that will enable them to actively work in existing and future planning cells, military and security institutions, government agencies and private businesses.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Understanding and analysis of geomorphologic, hydrographic and microclimate specifics in karst. Geoecologic analysis, planning and landscape evaluation.</p> <p>Knowledge and application of nature and environment sustainable management and protection.</p> <p>Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Recognition and analysis of objects and processes crucial for the stability of geosystems.</p> <p>Evaluation, interpretation and synthesis of relevant information.</p> <p>Implementation of appropriate measurement practice.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Measurement of climatic elements. Location factors analysis in physical geography.</p>					
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding the role of major physical geography (abiotic) elements in geoecosystems. Get to know objects, aims and methodology of the geoeological research, evaluation, management and protection of the landscape. Get to know types and methods of measurement instruments for research in Geoecology. Knowing the distribution and features of geoheritage, geodiversity and geomorphological sites. Get to know types and features of educational paths and methods of their planning. To understand and apply the methods of self of geomonitoring and geoeological evaluation of relief. Knowledge and understanding of geomorphological problems in urban areas. Adoption of craftsmanship and interpretation of thematic maps in geoeological research. Practical application of knowledge in identifying and solving spatial problems.</p>					
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Geodiversity and Geoheritage - concepts and characteristics 2. Mapping and evaluation of geoheritage and geodiversity 3. Relief as an economic resource 4. Relief and landscape in regional and spatial planning 5. Evaluation and protection of landscape 6. Presentation and interpretation of the natural values 7. Sustainable management of karst geoecosystems 8. Microclimate of Karst geoecosystems 9. Principles and methods of geomonitoring 10. Principles of the geoeological evaluation of geospace 11. Methods for geoeological evaluating of the geospace 12. Anthropogenic Geomorphology and Geoecology I. 13. Anthropogenic Geomorphology and Geoecology II. 14. Geoeological Research - cabinet and laboratory methods 15. Geoeological research - field methods 					
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work</p>	<table border="1" style="width: 100%;"> <tr> <td> <p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p> </td> <td> <p>2.7. Comments:</p> </td> </tr> <tr> <td colspan="2"> </td> </tr> </table>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p>		
<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p>					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.8. Student responsibilities	Attendance to class, completed exercises, independent assignments and field work					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training	2
	Experimental work		Report		Field work	2
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1,5	(other)	
	Written exam	1,5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	It is valued regularly attending the lectures and tutorials and active participation in class, the performance of practical work, participation in field work, written and oral exam.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Bognar, A., Bognar, H., 2010: Geokološko vrednovanje reljefa R. Hrvatske. <i>Geokologija XXI vijeka, Zbornik referata</i> , 44-55, Filozofski fakultet Nikšić.				10	pdf
	Buzjak, N., 2008: Geokološko vrednovanje speleoloških pojava Žumberačke gore (Geocological evaluation of the speleological features of Žumberačka gora Mt. - Croatia). <i>Hrv. geografski glasnik</i> , 70/2, 73-89.				10	pdf, web
	Buzjak, N., 2008: Mikroklima kao komponenta geokološkog vrjednovanja spilja - primjer Spilje u Belejskoj komunadi, Belej, otok Cres. <i>Geoadria</i> , Vol. 12, No. 2, 97-110.				10	pdf, web
	Fleury, S., 2009: <i>Land Use Policy and Practice on Karst Terrains</i> . Springer, New York.				1	pdf
	Reynard, E., Coratza, P., Regolini-Bissig, G., 2009: <i>Geomorphosites</i> . Verlag Dr. F. Pfeil, München.				1	pdf
	Szabo, J., David, L., Loczy, D., 2010: <i>Anthropogenic Geomorphology: A Guide to Man-Made Landforms</i> . Springer, New York.				1	pdf
	Van Beynen, P., Townsend, K., 2005: A disturbance index for karst environments. <i>Environmenatal management</i> , vol. 36, no. 1, 101-116.				1	pdf, web
2.12. Optional literature (at the time of submission of study programme proposal)	Bathrellos, G. D., 2007: An overview in urban geology and urban geomorphology. <i>Bulletin of the Geological society of Greece</i> , vol. XXXX, 1354-1364.					
	Buzjak, N., Buzjak, S., Orešić, D., 2011: Florističke, mikroklimatske i geomorfološke značajke ponikve Japage na Žumberku (Hrvatska). <i>Šumarski list</i> , 3-4, 127-137.					
	Farina, A., 2007: <i>Principles and methods in landscape ecology</i> . Springer, New York.					
Grupa autora, 2012: <i>Karstology and development challenges on karst II, Construction, tourism, ecology, protection</i> . Založba						



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>ZRC, Postojna-Ljubljana</p> <p>Grupa autora 1999: <i>Krajolik. Sadržajna i methodska podloga krajobrazne osnove Hrvatske</i>. Min. prostornog uređenja, graditeljstva i stanovanja i Agronomski fakultet Sveuč. u Zagrebu.</p> <p>Grupa autora 2012: <i>Stručni skup o zaštiti špilja i podzemne faune</i> (Ogulin 30.-31. siječnja 2010). <i>Zbornik radova</i>, Samobor.</p>
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.</p> <ul style="list-style-type: none">- University and college student survey- Self-evaluation of teaching: updating and revising the objectives and subject content, teaching and learning strategies, assessment of learning outcomes by analyzing student performance based on the data from the Student Administration Office and own records- Exit polls: evaluation of graduate studies
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Anita Filipčić	1.6. Year of the study programme	1 st
1.2. Name of the course	Applied Climatology	1.7. Credits (ECTS)	5
1.3. Associate teachers	Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	One of the most important objectives is to determine the way the climate influence on the development and relationships between physical and social elements. One must determine the predictable changes in geographical systems influenced by climatic changes as well as the climatic consequences of anthropogenic influences and influences of natural hazards.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><u>Knowledge and understanding of:</u> The research process in geography. The integrity of geographical area. Climate influence on other geographical elements. Climate influence on human and human activities. The role of natural elements in spatial planning, especially of climate. Protection of environment and nature, and spatial planning of protected areas.</p> <p>Cognitive, practical and generic abilities and skills: Applying knowledge of climatology in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss climate changes and climatic consequences of antropogenic influences and climatic</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>hazards.</p> <p>The skills needed for evaluation, interpretation, and synthesis of climate data and climate changes.</p> <p>The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p>Mapping of climatic data and climate change consequences..</p> <p>Applying appropriate statistical and graphic methods in analysis and in the presentation of climate research.</p> <p>Applying appropriate maps and cartographic methods in analysis and in the presentation of the climate research.</p> <p>Applying appropriate methods of spatial planning.</p> <p>Functioning effectively as an individual and as a team member.</p> <p>Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowing, understanding and independent realization of statistical analyses of climatic data.</p> <p>Knowing, understanding and independent explanation of climate influence on hidrological processes.</p> <p>Knowing, understanding and independent explanation of climate influence on geomorphological processes.</p> <p>Knowing, understanding and independent explanation of climate influence on vegetation.</p> <p>Knowing, understanding and independent explanation of climate influence on fauna.</p> <p>Knowing, understanding and independent explanation of climate influence on human.</p> <p>Knowing, understanding and independent interpretation of climate influence on human activities.</p> <p>Knowing, understanding and independent interpretation of urban climate.</p> <p>Knowing, understanding and independent explanation of climate extremes, differing them from climate change.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Applied climatology: definition and development 2. The research methods in applied climatology. The measurements of climatic elements 3. The statistical analyse of climatic data. Climatic models 4. Climate changes and hidrological processes 5. The climate influence on geomorphological processes 6. Climate and vegetation 7. Climate and fauna 8. Climate and human 9. The climate influence on urban planning and architecture 10. The climate influences on agriculture 11. The climate influence on industrial activities 12. The climate influence on transport services 13. Climatic changes 14. The urban climate 15. Climatic extremes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:																															
2.8. Student responsibilities	Attendance to lectures and seminar presentations. Seminar paper and presentation.																																	
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td>0.25</td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>4.0</td></tr> </table>	Class attendance	0.25	Experimental work		Essay		Tests		Written exam	4.0	<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td>0.75</td></tr> <tr><td>Oral exam</td><td></td></tr> <tr><td>Project</td><td></td></tr> </table>	Research		Report		Seminar essay	0.75	Oral exam		Project		<table border="1"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)		
Class attendance	0.25																																	
Experimental work																																		
Essay																																		
Tests																																		
Written exam	4.0																																	
Research																																		
Report																																		
Seminar essay	0.75																																	
Oral exam																																		
Project																																		
Practical training																																		
(other)																																		
(other)																																		
(other)																																		
(other)																																		
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar writing and presentation, written exam.																																	
2.11. Required literature (available in the library and via other media)	<table border="1"> <thead> <tr> <th colspan="2">Title</th> <th>Number of copies in the library</th> <th>Availability via other media</th> </tr> </thead> <tbody> <tr> <td colspan="2">R. D. Thompson, A. Perry (ed.), 1997: <i>Applied Climatology</i>. Routledge. London. 352 pp.</td> <td>5</td> <td>yes</td> </tr> <tr> <td colspan="2">McLeman, R. A., 2013: <i>Climate and Human Migration: Past Experiences, Future Challenges</i>. Cambridge University Press, Cambridge.</td> <td>5</td> <td></td> </tr> <tr> <td colspan="2">Dahl, T., 2009: <i>Climate and Architecture</i>. Routledge, New York.</td> <td>5</td> <td></td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> </tr> </tbody> </table>		Title		Number of copies in the library	Availability via other media	R. D. Thompson, A. Perry (ed.), 1997: <i>Applied Climatology</i> . Routledge. London. 352 pp.		5	yes	McLeman, R. A., 2013: <i>Climate and Human Migration: Past Experiences, Future Challenges</i> . Cambridge University Press, Cambridge.		5		Dahl, T., 2009: <i>Climate and Architecture</i> . Routledge, New York.		5																	
Title		Number of copies in the library	Availability via other media																															
R. D. Thompson, A. Perry (ed.), 1997: <i>Applied Climatology</i> . Routledge. London. 352 pp.		5	yes																															
McLeman, R. A., 2013: <i>Climate and Human Migration: Past Experiences, Future Challenges</i> . Cambridge University Press, Cambridge.		5																																
Dahl, T., 2009: <i>Climate and Architecture</i> . Routledge, New York.		5																																
2.12. Optional literature (at the time of submission of study programme proposal)	Articels from relevant publications.																																	
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.																																	
2.14. Other (as the proposer wishes to add)	-																																	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Danijel Orešić	1.6. Year of the study programme	1 st
1.2. Name of the course	Applied Hydrogeography	1.7. Credits (ECTS)	5
1.3. Associate teachers	Ivan Čanjevac	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+30+0 (2+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding of the role of the water resources in spatial systems, especially as a key element of a sustainable development. Philosophically, the aim is to deepen the awareness about water as a strategic good in 21th century. Practical goal is to train students in independent hydrogeographic analysis of a given area.		
2.2. Course enrolment requirements and entry competences required for the course			
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of theories and methodology in physical geography. Hydrometric data analysis, river regimes analysis and catchment's water balancing. Water resources evaluation as a key element of sustainable development. Knowledge of environmental history and large-scale environmental modifications. Knowledge and application of nature and environment sustainable management and protection. Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Presentation and elaboration of scientific contents Implementation of appropriate measurement practice.</p> <p>Practical abilities and skills: Measurement and calculation of river and catchment's elements. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Location factors analysis in physical geography.</p> <p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding the position and role of applied hydrogeography. Advanced understanding of water as a natural element and of its role in geosystems. Knowing main causal links between waters and societies. Abilities and skills needed for independent processing of hydrologic data and for presenting results in relevant graphic and cartographic ways. Ability to interpret and discuss the need of the preservation of the public rights to water resources and the need to observe the principles of just distribution of water resources. Understanding of the principles of sustainable development and of the key role of water resources in sustainable development.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Applied hydrogeography – definitions, terms, goals. 2 Historical geographic outline on the role of water resources in human development. 3 The usage of water, disposition, withdrawal, consumption. 4 Water supply; needs, consumption structure, planning. 5 Fresh-water sources, protection, potable water treatment. 6 Case studies of problems and solutions in water supply of settlements. 7 Irrigation; needs, systems and agricultural consumption. 8 Case studies of problems and solutions in irrigation.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>9 Hydroelectric power water use. 10 Hydropower and the environment. 11 and 12 Water pollution; types, sources, protection, reclamation. 13 Valley as a living space; hydrotechnic works and objects. 14 Ecoremediation in river basins. Wetlands conservation. 15. Water resources management as a key element of sustainable development. Exercises: 1 Hydrologic data series, interpolation, homogeneity 2 Analyses of river discharge trends. 3 Analyses of river discharge variations. 4 Hydrograph analyses. 5 River regimes. 6 Cluster analysis in river regime typology – example of Croatia. 7 Thematic maps in hydrogeography.</p> <p>Seminar project: Written seminar paper on a given theme with consultations.</p>																																			
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:																																	
2.8. Student responsibilities	Attendance to class, completed exercises.																																			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td>0.5</td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td></td></tr> </table>	Class attendance	0.5	Experimental work		Essay		Tests		Written exam		<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td></td></tr> <tr><td>Oral exam</td><td>1.25</td></tr> <tr><td>Project</td><td>3.25</td></tr> </table>	Research		Report		Seminar essay		Oral exam	1.25	Project	3.25	<table border="1"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)				
Class attendance	0.5																																			
Experimental work																																				
Essay																																				
Tests																																				
Written exam																																				
Research																																				
Report																																				
Seminar essay																																				
Oral exam	1.25																																			
Project	3.25																																			
Practical training																																				
(other)																																				
(other)																																				
(other)																																				
(other)																																				
2.10. Grading and evaluating student work in class and at the final exam	Seminar paper evaluation, oral examination. Attendance to class 10 % + seminar project 65 % + oral examination 25 %.																																			
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media																															



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Žugaj, R., 2000: <i>Hidrologija</i> . Sveučilište u Zagrebu, RGN, Zagreb, 407 pp, selected parts.	10	yes
	Dukić, D., 1984: <i>Hidrologija kopna</i> . Naučna knjiga, Beograd, 498 pp.	10	yes
	Bonacci, O., 2003: <i>Ekohidrologija vodnih resursa i otvorenih vodotoka</i> . Građevinsko-arhitektonski fakultet Sveučilišta u Splitu, IGH, Zagreb, 492 pp. - selected parts.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles in scientific journals and on internet.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Borna Fuerst-Bjeliš	1.6. Year of the study programme	2 nd
1.2. Name of the course	Environmental History	1.7. Credits (ECTS)	5
1.3. Associate teachers	Marin Cvitanović	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Man – environment relations in holocene. Changes in material world as well as in the world of ideas and worldviews. Worldview as a base of man's relation towards the nature: actions, politics and consequences. Main phases of availability, access, quantities and types of used energy. Size and types of environmental change.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills:</p> <p>Knowledge of environmental history and large-scale environmental modifications. Knowledge and application of nature and environment sustainable management and protection.</p> <p>Cognitive, practical and generic abilities and skills:</p> <p>Defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes in environmental history Presentation and elaboration of scientific contents Skills needed in fieldwork planning and realisation. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Making of geospatial databases.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding of causal relations of man –environment relations. Understanding of relation between rising energy use and environmental impact through main phases of technological evolution of mankind. Understanding of connection between worldviews with concrete actions and politics towards nature/ environment, and their consequences. Knowing the research field of environmental history, main themes, its position in science fields and knowing the basic environmental historical bibliography and periodics. Fundamentals of remote sensing in the analysis of environmental change.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Mustering the marks: states of change – ways of life / economies. Population and degradation? Availability and access to energy/energy consumption. 2. Access to energy/phases of technological evolution of humankind (hunters/gatherers; preindustrial agriculture; industrial era;post-industrial economies). 3. Development of the scientific field and research; history of human – nature worldviews. Differencies with regard to the time, space, culture and religions. 4. Research themes and approaches. Environmental history in Croatia. 5. Environmental regionalization of Europe. Basic presumptions: opportunities; constraints; environmental change types; hazards. Characteristic relic landscapes according to main phases od development (hunter-gatherers, traditional-agricultural, industrial), and post-industrial. 6. Environmental management: protection, restoration, reconstruction. 7. Environmental restoration, green urbanism and post-modern landscapes. 8. Urban environmental restoration project in Seoul (restoration-reconstruction?). 9. Hundertwasser and ecological programme of urban re-afforestation. 10. Main environmental history phases: Hunthers/gatherers. 11. Pre-industrial agriculture. 12. Industrial era. 13. Post-industrial era. 14. Globally important issues.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

				15. Contemporary problems and questions: media analysis (degradation narratives, advocacy, professionalism, determinism)							
2.6. Format of instruction:		<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:					
2.8. Student responsibilities		Preparation and presentation of selected chapters from the bibliography. Active contribution in discussion. Writing short essays on selected topics. Taking part in the field trip (area of Zagreb city; museums). Completion of the project on the environmental change of the chosen location – textual and cartographic analysis, including bitemporal presentation.									
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)		Class attendance		1		Research		Practical training			
		Experimental work				Report		(other)			
		Essay				Seminar essay		1		(other)	
		Tests				Oral exam				(other)	
		Written exam		2		Project		1		(other)	
2.10. Grading and evaluating student work in class and at the final exam		Active discussion 10%, seminar attendance, completed project and written essays 35%, written exam 55%.									
2.11. Required literature (available in the library and via other media)		Title				Number of copies in the library		Availability via other media			
		Fuerst-Bjeliš, B., Cvitanović, M., Petrić, H., 2011: Što je povijest okoliša u Hrvatskoj?, u: Hughes, J. D.,: <i>Što je povijest okoliša</i> , 175-198, Disput, Zagreb.				10		yes			
		Hughes, J. D., 2011: <i>Što je povijest okoliša</i> , Disput, Zagreb, 198				10		yes			
		Simmons, I. G., 2010: <i>Globalna povijest okoliša</i> , Disput, Zagreb, 306.				10		yes			
2.12. Optional literature (at the time of submission of study programme proposal)		Atkins, P., Simmons, I., Roberts, B., 2003: <i>People, Land & Time</i> , Arnold. Diamond, J., 2007: <i>Sva naša oružja</i> , Algoritam. Diamond, J., 2008: <i>Slom</i> , Algoritam. Higgs, E., 2003: <i>Nature by Design</i> , The MIT Press, Cambridge, Mass., London. Hughes, Donald J., 2009: <i>An Environmental History of the World</i> , Routledge.									



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Lovelock, J., 2005: <i>Geja – novi pogled na život Zemlje</i> , Izvori. Pyne, Stephen J., 2010: <i>Vatra – sažeta povijest</i> , Prosvjeta. Uekotter, F. (ur.), 2010: <i>Turning Points of Environmental History</i> , University of Pittsburgh Press, Pittsburgh.
2.13. Quality assurance methods that ensure the acquisition of exit competences	University and faculty student questionnaire, self-evaluation, continued revision and other University documents.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	2 nd
1.2. Name of the course	Applied Geomorphology	1.7. Credits (ECTS)	10
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+0+45+0 (3+0+3+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of the course are to provide students with knowledge and skills related to the application of geomorphological research. The emphasis is on exploring and evaluating features and principles of action of recent geomorphological processes and landforms, their mapping and graphical presentation.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> - Be familiar with the sources and methods applied geomorphological research - Understanding of the earth's surface systems including features, terms, processes, and changes - Ability to conduct fundamental research morphostructural and exogenously-morphological features of the relief - Ability to plan, organize and implement applied geomorphological research, engineering - geomorphological mapping and making geomorphological studies - The ability to evaluate lanscape, particularly with regard to the protection of geodiversity and tourist exploitation - An understanding of the fundamental principles of geomorphological regionalization 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills:</p> <p>Knowledge and application of theories and methodology in physical geography. Knowledge and application of geomorphologic research methods and mapping. Geomorphologic processes analysis and landforms evaluation. Geoecologic analysis, planning and landscape evaluation. Knowledge and application of nature and environment sustainable management and protection.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive, practical and generic abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents Implementation of appropriate measurement practice. Skills needed in fieldwork planning and realisation. Measurement of relief forms and geomorphologic processes. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Applying GIS methods and techniques. Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the purpose, tasks and the division of applied geomorphology Independently apply the approaches and methods of the applied geomorphology used in the preparation of geomorphic studies To explain the characteristics of recent geomorphological processes and their impact on the types and forms of relief To explain the distribution and characteristics of slope, fluvial, coastal and karst processes in engineering geomorphology Evaluate the relief forms and processes from various aspects, especially in terms of environmental protection and tourism Apply appropriate mapping and measurement procedures in practice Organize and implement field work and geomorphological mapping Make a geomorphological regionalization of the area on several levels Make an example geomorphological studies</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Applied Geomorphology - definition, objectives, tasks and division, Fundamentals of geomorphology of Croatia 2 Introduction into making of geomorphological studies 3 Sources of data in applied geomorphological research</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	4 Field work in geomorphology 5 Landscape as system (ESS) - features, factors, changes 6 Basic knowledge of geology for geomorphological research 7 Morphometric and morphographic methods in applied geomorphological research 8 Structural-geomorphological research 9 Slopes and slope processes 10 Fluvial processes 11 Coasts and coastal processes 12 Karst and karst processes 13 Evaluation methods of landscape and landforms, Geoheritage and geotourism 14 Engineering-geomorphological mapping and applied geomorphological map 15 Geomorphological regionalization					
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:			
2.8. Student responsibilities	Attendance to class, completed exercises and field work.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	3	(other)	
	Tests		Oral exam	3	(other)	
	Written exam	3	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 10 %; Written exam 30 %; Essay 30 %; Oral exam 30 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Marković, M., 1983, <i>Osnovi primijenjene geomorfologije</i> , Geoinstitut, posebno izdanje, Knjiga 8, Beograd.			10	yes	
	<i>Uputstva za izradu detaljne geomorfološke karte 1:100.000 (Grupa autora)</i>			5	CD	
	Fookese, P. G.; Lee, E. M.; Griffiths, J. S., 2007: <i>Engineering Geomorphology – theory and practice</i> . Whittles publishing, Dunbeath, 281 str. (selected chapters)			5	yes	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Regolini-Bissig G., Reynard, E. (Eds), 2010: <i>Mapping Geoheritage</i> . Institut de géographie, Université de Lausanne (selected chapters)	1	CD
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Fookese, P. G, Lee, E. M., Griffiths, J. S., 2007: <i>Engineering Geomorphology –theory and practice</i>. Whittles publishing, Dunbeath, 281 pp.</p> <p>Allison, R. J. (ed.), 2003: <i>Applied Geomorphology</i>. John Wiley&Sons LTD.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>University students survey</p> <p>Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes</p> <p>Interview with companies, institutes and institutions in which students perform their work practices</p> <p>Other procedures required by the University and the Faculty about the internal quality assurance</p>		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

ELECTIVE COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Karst Geomorphology and Hydrology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of this course are that students learn basic knowledge on karst geomorphology and hydrography with application to the significant karst areas of the world and focus on the Dinaric karst that is part of Croatia.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> Understanding of the conditions and processes of karstification Understanding the specifics of karst hydrography Recognition of surface and underground karst landforms, and an understanding of their origin Knowledge about geomorphologic - hydrographical features of Croatian karst and important karst areas in the world Understanding the importance of karst areas, identifying specific problems and the ability of their solutions The ability to evaluate karst areas Understanding the threats and protection of karst areas and the ability to find solutions in line with sustainable development 		
2.2. Course enrolment requirements and entry competences required for the course			
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills:</p> <ul style="list-style-type: none"> Knowledge and application of theories and methodology in physical geography. Knowledge and application of geomorphologic research methods and mapping. Geomorphologic processes analysis and landforms evaluation. Understanding and analysis of geomorphologic, hydrographic and microclimate specifics in karst. Knowledge and application of nature and environment sustainable management and protection. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive, practical and generic abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Skills needed in fieldwork planning and realisation. Application and planning of the research process. Problem solving, relating to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the concept, history, research and distribution of karst in Croatia and the world In selected cases to extract and interpret the factors that affect the karst process Explain the specificity of karst hydrography and its relation to the geomorphology of karst Field work and cabinetmaking determine surface and underground karst relief forms Distinguish types of karst in Croatia and abroad, and their special values Evaluate the significance of karst areas Provide effective measures for the protection and management of karst areas with the concept of sustainable development Apply basic geomorphological research methods and protection of karst</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction, history of study of karst 2 Terms and geomorphological processes in karst 3 Karst hydrography (Part 1) 4 Karst hydrography (Part 2) 5 Karst Geomorphology - grikes 6 Karst Geomorphology - dolines 7 Karst Geomorphology - large depressions and poljes 8 Karst Geomorphology - karst plateau 9 Speleological objects - the origin and typology 10 Karst sediments and residual hills 11 Fluviokarst, glaciokarst and coastal karst 12 Morphogenesis and typology of karst 13 Threats and protection of karst



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	14 Croatian karst – an overview 15 Significant karst areas in the world			
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:	
2.8. Student responsibilities	Attendance to class, completed seminars, independent assignments and field work			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	2 (other)
	Written exam	1	Project	1 (other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 20 %; Written exam 20 %; Oral exam 40 %; Project 20 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Ford, D., Williams, P., 2007: <i>Karst Hydrogeology and Geomorphology</i> . 562 pp, John Wiley i Sons, Chichester, West Sussex, England.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	White, W. B., 1988: <i>Geomorphology and Hydrology of Karst Terrains</i> . Oxford university press, New York-Oxford. Herak, M. i Stringfield, V. T., 1972: <i>Karst – Important Karst Regions of the Northern Hemisphere</i> . Elsevier publishing company, Amsterdam-London-New York. Gines, A., Knez, M., Slabe, T., Dreybrodt, W., 2009: Karst rock features – karren sculpturing. <i>Carsologica</i> 9, Založba ZRC SAZU, Postojna.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.14. Other (as the proposer wishes to
add)

-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Husnjak	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Pedogeography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+15+0 (2+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of this course is gaining active knowledge on soil as one of the most important natural resources both in Croatia and in the world, that is knowledge on soil fomation, its morphological, physical and chemical properties, knowledge on soil classification and characteristics of main soil types in Croatia.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills:</p> <p>Knowledge and application of theories and methodology in physical geography. Analysis and evaluation of climatic influences on physical and social environment. Geomorphologic processes analysis and landforms evaluation. Knowledge and application of nature and environment sustainable management and protection. Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive abilities and skills:</p> <p>Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Implementation of appropriate measurement practice.</p> <p>Practical abilities and skills: Skills needed in fieldwork planning and realisation. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Making of geospatial databases.</p> <p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understand and critically evaluate the importance of land as a resource in the economic development of the country Understand the role and importance of the pedosphere formation in the geosphere Understand the effect of physical, chemical and biological processes in the genesis and the development of the pedosphere Gain knowledge on soil geography ie on spatial distribution of soil in Croatia in terms of typology and assignment</p>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>Introduction (2) Soil genesis – Soil forming factors (3) Soil genesis – Pedogenesis process (2) Composition and properties of soils (6) Morphological characteristics of soil (2) Soil clasification (8) The laws of spatial distribution of soil (2) Pedoregions in Croatia (2) World Reference Base for Soil Resources (3) Field and laboratory exercises (9) Seminar (6)</p>		
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops X exercises <input type="checkbox"/> on line in entirety</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet X laboratory <input type="checkbox"/> work with mentor</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> (other)		
2.8. Student responsibilities	Attending lectures and exercises, and making seminars.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	0.5 (other)
	Tests	0.5	Oral exam	2 (other)
	Written exam	1	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar and exercises, written and oral exam.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Husnjak, S., 2008: <i>Pedogeografija</i> , Internal course materials, Zavod za pedologiju Agronomskog fakulteta Sveučilišta u Zagrebu.		10	yes
	Husnjak, S., 2014: <i>Sistematika tala Hrvatske</i> . Sveučilišni udžbenik. Hrvatska sveučilišna naklada, Zagreb.		10	yes
	Škorić, A., 1991: <i>Sastav i svojstva tla</i> . Udžbenik, Fakultet poljoprivrednih znanosti, Zagreb.		10	yes
	Škorić, A., 1986: <i>Postanak, razvoj i sistematika tla</i> . Udžbenik, Fakultet poljoprivrednih znanosti, Zagreb.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Spargaren, O. C., Deckers, J. A., 2009: <i>Soil Geograpy and Classification. Land use, Land Cover and Soil Science</i> . Vol. VI.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interviews with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Toskić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Analyses in GIS	1.7. Credits (ECTS)	5
1.3. Associate teachers	Luka Valožić	1.8. Type of instruction (number of hours L + S + E + e-learning)	1+0+2+0 (15+0+30+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Capability for conducting analyses in GIS for practical purposes.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of theories and methodology in physical geography.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents Implementation of appropriate measurement practice.</p> <p>Practical abilities and skills: Making of geospatial databases. Applying GIS techniques. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Location factors analysis in physical geography.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - knowledge of user - spatial data interaction - independently conduct spatial analysis on given examples - differentiate and analyse vector and raster data - know and apply the methods of transformation and overlay, display and analysis of relief - overlay error correction - know and apply methods of spatial interpolation 		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Interaction between user and spatial data. Spatial analysis. 2. Selections and data mining. 3. Reclassification of vector and raster data. 4. Measurements: length, area. Polygon complexity. Slope and aspect. 5. Transformations: Buffering (vector) 6. Polygon overlay. Overlay methods. Overlay errors and their correction 7. Analysis of raster data. Methods for spatial interpolation 8. Map algebra, local operations, neighborhood operations, zonal operations 9. Overlaying, Weighted overlaying. (raster) 10. Buffering (raster) 11. Cost distance analysis 12. Digital elevation model. Display and analysis of the relief. Triangular irregular network (TIN) 13. Methods of spatial statistics. Centroid. Weighted mean center. 14. Standard deviational ellipse. 15. Point pattern analysis. Moran's index. 		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p><input type="checkbox"/> independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)			
2.8. Student responsibilities	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam, oral exam results and quality of seminar essay.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.2	Research	Practical training	
	Experimental work		Report	(other)	
	Essay		Seminar essay	(other)	
	Tests	2.4	Oral exam	2.4	(other)
	Written exam		Project	(other)	
2.10. Grading and evaluating student work in class and at the final exam	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam and oral exam results.				
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media	
	Longley, P. A., Goodchild, M. F., Maguire, D. J., Rhind, D. W., 2005; 2010: <i>Geographic Information Systems and Science</i> , John Wiley & Sons., Chichester.		10	yes	
	Maguire, D. J., Batty, M., Goodchild, M. (ed.), 2005: <i>GIS, Spatial analysis and Modeling</i> , ESRI Press, Redlands.		5	yes	
	Maantanay, J., Ziegler, J., 2006: <i>GIS for the Urban Environment</i> , ESRI Press, Redlands.		5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				
2.14. Other (as the proposer wishes to add)	-				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Mladen Pahernik	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Digital Terrain Analysis	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+30+0 (1+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge about the application of GIS spatial analysis in geomorphological research; define the concept of digital terrain analysis; acquire knowledge about the application of methods of geomorphological research in the GIS environment; define the concept of a digital elevation model and interpolation elevation data; define methods of morphometric analysis of relief on the basis of a digital elevation model.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills Knowledge and application of theories and methodology in physical geography. Geomorphologic processes analysis and landforms evaluation.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents</p> <p>Practical abilities and skills: Measurement of relief forms and geomorphologic processes.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Making of geospatial databases. Applying GIS methods and techniques.</p> <p>Generic abilities and skills: Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>				
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - explain the purpose and tasks of digital terrain analysis - individually apply the methods of digital terrain analysis - evaluate the results of digital terrain analysis within a spatial analysis - produce digital elevation model by interpolation elevation data - perform morphometric analysis of the area based on a digital elevation model 				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction to digital relief analysis 2 Overview of the development of digital terrain analysis 3 Digital analysis of the relief and Geoinformatics 4 Digital data on relief (geospatial concepts and data structures) 5 Digital terrain models DMR (realization of digital terrain models, methods of interpolation surfaces, precision and accuracy DEM) 6 - 8 Digital analysis of landforms - vector analysis (distance, direction, connectivity, neighborhood, distribution) 9 - 11 Spatial analysis of relief - raster analysis (local Functions neighborhood, zonal functions, global functions) 12 - 15 Modeling geomorphological data - geomorphometry (geomorphological models, hydrological models, climatological models, pedological models, etc.) 				
<p>2.6. Format of instruction:</p>	<p>X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p>		
<p>2.8. Student responsibilities</p>	<p>Attendance to class, completed exercises and assignments.</p>				
<p>2.9. Screening student work (<i>name the</i></p>	<p>Class attendance</p>		<p>Research</p>	<p>Practical training</p>	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Experimental work		Report		(other)	
	Essay		Seminar essay		(other)	
	Tests		Oral exam	2	(other)	
	Written exam	2	Project	1	(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written exam 38 % + Oral exam 38 % + Project 24 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Wilson, J. P., Gallant, J. C., 2000: <i>Terrain analysis, principles and applications</i> , John Wiley & Sons.			10	yes	
	Bonham-Carter, G. F., 2002: <i>Geographic Information Systems for Geoscientists</i> , Pergamon.			10	yes	
	O'Sullivan, D. Unwin, D. J., 2003: <i>Geographic Information Analysis</i> , John Wiley & Sons.			10	yes	
	Pahernik, M., 2007: Digitalna analiza padina otoka Raba, <i>Geoadria</i> 12, 1; 3-22.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles from journals Croatian Geographical Bulletin, Geoadria, Polemos.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Anita Filipčić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Climate Change	1.7. Credits (ECTS)	5
1.3. Associate teachers	Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	One of the most important objectives considers the potential causes and effects of climate change on Earth. The students are supposed to get all the needed informations in order to take an attitude about climate change.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	Developing of cognitive, practical and generic abilities and skills: knowing and understanding interactions between climate, relief and waters, knowing and understanding interactions between climate and other elements, knowing and understanding the human influence on climate, developing competencies for research work.		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Knowing, understanding and independent performing of statistical analyses of climatic data. Knowing, understanding and independent explanation of climate change theories. Knowing, understanding and independent explanation the climate changes during the geological time. Knowing, understanding and independent interpreting the evidences of climate change. Knowing, understanding and critical thinking about the causes of climatic change		
2.5. Course content broken down in detail by weekly class schedule (syllabus)	1. Terminology of climate changes 2. Teories of climate changes 3. The methodology of climate change research 4. Climate in the past 5. The Cenozoic glaciation		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	6. The climate change in historic and holocene time 7. The climate change in instrumental period 8. From global cooling to global warming 9. IPCC 10. Time series analyses 11. The natural causes of climatic change 12. The anthropogenic causes of climatic change 13. Evidence of climate change 14. Effects of climate change 15. Climate change prediction				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:		
2.8. Student responsibilities	Attendance to class and presentations, writing and presentation of a seminar paper.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.25	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	0.75	(other)
	Tests		Oral exam		(other)
	Written exam	4.0	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar writing and presentation, written exam.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Archer, D., Rahmstorf, S., 2010: <i>The Climate Crisis</i> . Cambridge University Press, New York.			5	yes
	Dow, K., Downing, T. E., 2011: <i>The Atlas of Climate Change: Mapping the World's Greatest Challenge</i> . University of California Press, Berkely and Los Angeles.			5	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	Horner, C. C., 2007: <i>The Politically Incorrect Guide to Global Warming</i> . Regnery Publishing, Inc.
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Mladen Pahernik	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Geomorphological Mapping	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+30+0 (1+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge and skills for the observation of individual landforms with a view to their identification, analysis, and problem solving of cartographic representation. Define methodology of geomorphological mapping, and the content and presentation of information on the geomorphological map. Acquiring knowledge about the methods of field geomorphological mapping		
2.2. Course enrolment requirements and entry competences required for the course			
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills Knowledge and application of theories and methodology in physical geography. Knowledge and application of geomorphologic research methods and mapping. Geomorphologic processes analysis and landforms evaluation.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents Implementation of appropriate measurement practice.</p> <p>Practical abilities and skills:</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Skills needed in fieldwork planning and realisation. Measurement of relief forms and geomorphologic processes. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Making of geospatial databases. Applying GIS methods and techniques.</p> <p>Generic abilities and skills: Application and planning of the research process. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - explain the goals and tasks of geomorphological mapping - apply appropriate mapping and measurement procedures in practice - organize and implement field work and geomorphologic mapping in selected area - prepare a geomorphological map of the selected area 	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction to geomorphological mapping. 2-3 Methodology geomorphological mapping. 4 Phase of geomorphological research 5 Phase of preparatory work 6 Phase of field research 7 Final Phase of works 8-9 Contents of geomorphological map 10-11 Display data 12-13 Field geomorphological research 14-15 Making geomorphological map</p>	
<p>2.6. Format of instruction:</p>	<p>X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>
		<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	X field work		
2.8. Student responsibilities	Attending lectures and field work and preparation of geomorphological map of range.		
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	Research	Practical training
	Experimental work	Report	(other)
	Essay	Seminar essay	(other)
	Tests	Oral exam	2 (other)
	Written exam	Project	3 (other)
2.10. Grading and evaluating student work in class and at the final exam	Project 60 % + oral exam 40 %.		
2.11. Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Easterbrook, D., Kovanen, D., 1999: <i>Interpretation of Landforms from Topographic Maps and Air Photographs</i> , Laboratory Manuel, Prentice Hall.	10	yes
	Blume, H., 1992: <i>Colour atlas of surface forms of the Earth</i> , Harvard University Press.	10	yes
	Grupa autora (1985) <i>Upute za izradu detaljne geomorfološke karte u mjerilu 1: 100 000.</i>	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles from journals Croatian Geographical Bulletin, Geoadria, Polemos.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Speleology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Learning objectives of the course are that students gain basic knowledge about the goals and methods of speleology, on the position of speleology in science, the physical speleology, on other scientific aspects of speleology, regional speleology of Croatia and the world, on the socio-economic importance of the caves and their threaten, evaluation and protection in accordance with sustainable development.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of geomorphologic research methods and mapping. Geomorphologic processes analysis and landforms evaluation. Understanding and analysis of geomorphologic, hydrographic and microclimate specifics in karst. Geoecologic analysis, planning and landscape evaluation. Knowledge and application of nature and environment sustainable management and protection. Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive, practical and generic abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. Presentation and elaboration of scientific contents</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Skills needed in fieldwork planning and realisation. Measurement of relief forms and geomorphologic processes. Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Continuous professional development.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the development of speleology Interpret the factors that influence the process and development of karst caves in selected cases Apply skills in the use and interpretation of caving survey maps Apply the concepts and methodology of the geospeleology To compare the specifics of caves in Croatia and the world Evaluate the significance of caves Evaluate and compare the level of protection of caves in Croatia Separate and explain the specific threat caves Provide effective measures to protect caves and karst</p>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction to speleology 2 Karst- conditions for development, karst hydrography 3 Karst geomorphology 4 Methods of measurement and graphical representation of caves, speleomorphometry 5 Caves - concepts and classification, macromorphology 6 Mesomorphology of caves 7 Micromorphology caves 8 Sediments in caves 9 Speleogenesis 10 Biospeleology and speleoclimatology 11 Archaeology and paleontology in caves 12 Regional speleology of Croatia 13 Regional speleology of the world 14 Significance and evaluation of caves 15 Threats and protection of caves</p>		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p>X independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)		
2.8. Student responsibilities	Attendance to class, completed exercises and independent assignments.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	3 (other)
	Written exam		Project	1 (other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 20 %; Oral exam 60 %; Project 20 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Palmer, A., 2006: <i>Cave geology</i> . Cave books, Dayton, 454 pp.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Klimchouk, A., Ford, D., Palmer, A. i Dreybrodt, W. (urednici), 2000: <i>Speleogenesis – Evolution of Karst Aquifers</i> . National Speleological Society, Huntsville. Ford, D. i Williams, P., 2007: <i>Karst Hydrogeology and Geomorphology</i> . 562 str., John Wiley i Sons, Chichester, West Sussex, England. White, W. B., 1988: <i>Geomorphology and Hydrology of Karst Terrains</i> . Oxford university press, New York-Oxford.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Danijel Orešić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Natural Hazards	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding of main types of natural hazards, of the probability of their occurrence, expected and real damage. Understanding of prevention possibilities and of management possibilities after disasters.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of theories and methodology in physical geography. Knowledge of environmental history and large-scale environmental modifications. Knowledge and application of nature and environment sustainable management and protection. Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents Implementation of appropriate measurement practice.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Practical abilities and skills: Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making. Location factors analysis in physical geography.</p> <p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding of the definitions and the terminology in the field of natural hazards. Recognising of types of natural hazards, understanding of their occurrence. Knowledge and ability of accessing the probability of main types of natural hazards. Understanding and interpreting of natural hazards probability maps. Knowledge of prevention methods. Ability to cooperate in planning and proposing risk management measurements and measurements of reducing effects of natural catastrophes. Ability to cooperate in planning of spatial management immediately after catastrophes. Ability of simple damage assessments. Ability of independent browsing and consulting of relevant literature.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Natural hazards – definitions, terminology. 2 Classifications according to origin, location, size and time scales. 3 Trends in natural catastrophes. 4 Paradigms in natural hazards. 5 Natural exposition and vulnerability to natural hazards. 6 Risk assessments and risk management. 7 Reduction of effects of catastrophes. 8 – 15 Types of hazards, causes, historic records, examples, consequences, reactions, possibilities of prediction and prevention: <ol style="list-style-type: none"> 8 Geologic hazards. 9 Geomorphologic hazards.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	10 - 12 Hydrometeorologic hazards. 13 Marine hazards. 14 Biologic hazards. 15 Chronic and rare global hazards. Seminar: written seminar paper on a specific hazard, case study.				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
2.8. Student responsibilities	Attendance to class, seminar paper.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1,25	(other)
	Tests		Oral exam		(other)
	Written exam	3,25	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar evaluation, written examination, oral examination optional. Attendance to class 10 % + seminar paper 25 % + written examination 40 - 65 %, oral examination 0 - 25 %.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Smith, K., Petley, D. N., 2009: <i>Environmental Hazards, Assessing Risk and Reducing Disaster</i> . Routledge, 5th edition.			5	yes
	Bryant, E., 2006: <i>Natural Hazards</i> . Cambridge Univ. Press, 2nd edition.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles in scientific literature and on internet.				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				
2.14. Other (as the proposer wishes to add)	-				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Restructuring of rural areas	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljčak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring advanced knowledge on rural areas, the process of its transformation and the current problems of sustainable development. Understanding the structural and dynamic problems in rural areas, training for integrated planning of their development.		
2.2. Course enrolment requirements and entry competences required for the course	Demogeography (pass the exam) and rural geography (completed course).		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><u>Knowledge and understanding of:</u> The research process in geography. The role of natural elements in spatial planning. Human geographic factors in spatial planning. Contemporary processes and problems in urban development. Factors and processes of rural restructuring and regionally differentiated cases of rural restructuring. Subjects and factors of regional development. The role of local and state government in regional development. Regional development of Croatia. Protection of environment. Identification and evaluation of resources on local, regional and national level.</p> <p>Practical abilities and skills:</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Orientation in space and other skills needed in fieldwork. Mapping of geographic data, georeferencing. Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning.</p> <p>Cognitive abilities and skills: Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Ability to: Apply geographic methodology in the study and research of rural areas Differentiate discourses in defining rural areas as well as models, criteria and functions of rural areas Compare features of rural areas at the local, regional, national, continental and global levels Analyze the factors of transformation of rural areas in conditions of modernization and globalization Evaluate demographic resources and social capital in rural areas Recognize socio-geographic features and explain the lifestyle and identity of rural areas Distinguish between types of rural areas and apply the typology to given space Explain the causes of the problem of sustainable development of rural areas Create plan for revitalization and integrated development of rural areas on the basis of the analysis of their resources</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction 2 Restructuring of the population in rural areas 3 Restructuring of settlements in rural areas 4 Re-evaluation of resources and functional changes in the rural areas 5 Changes in the rural economy 6 Changes in the environment and landscape of rural areas



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	7 Rural areas and functional organization 8 Rural areas in regional development 9 Typology and its importance for the development of rural areas 10 Rural Development and Planning (change management in rural areas) 11 Rural policy or policies for rural areas? 12 Models of rural development - Case studies: The World, Europe 13 LEADER's approach to rural development 14 Project teaching: projects for integrated rural development 15 Models and revitalization projects of Croatian rural areas																																	
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:																															
2.8. Student responsibilities	Regular attendance of classes and seminars. Active participation in the classroom. Seminars. Application of geographic graphical, statistical and mapping methods in field research in rural areas. Oral and written reports on the results of field studies over other students.																																	
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td>1</td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>1</td></tr> </table>	Class attendance	1	Experimental work		Essay		Tests		Written exam	1	<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td>1</td></tr> <tr><td>Oral exam</td><td>2</td></tr> <tr><td>Project</td><td></td></tr> </table>	Research		Report		Seminar essay	1	Oral exam	2	Project		<table border="1"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)		
Class attendance	1																																	
Experimental work																																		
Essay																																		
Tests																																		
Written exam	1																																	
Research																																		
Report																																		
Seminar essay	1																																	
Oral exam	2																																	
Project																																		
Practical training																																		
(other)																																		
(other)																																		
(other)																																		
(other)																																		
2.10. Grading and evaluating student work in class and at the final exam	The final score is determined by the total scores in written and oral examinations and evaluation seminar.																																	
2.11. Required literature (available in the library and via other media)	<table border="1"> <thead> <tr> <th>Title</th> <th>Number of copies in the library</th> <th>Availability via other media</th> </tr> </thead> </table>		Title	Number of copies in the library	Availability via other media																													
Title	Number of copies in the library	Availability via other media																																
Lukić, A., 2012: <i>Mozaik izvan grada: tipologija ruralnih i urbaniziranih naselja Hrvatske</i> , Meridijani, Samobor, 256 pp.		15	yes																															
Lukić, A., Pejnović, D., 2010: <i>Metodološke osnove izrade tipologije ruralnih područja Hrvatske, Zbornik znanstvenog skupa Ruralni prostori Jugoistočne Europe između lokalizacije i globalizacije</i> (ed. Snježana Musa), Geografsko društvo Hercegovine, Mostar, 95-121.		10	yes																															



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Pejnović, D., Lukić, A., 2010: Dinamički i strukturni problem ruralnih područja u tranzicijskim zemljama: primjer Hrvatske, <i>Zbornik znanstvenog skupa Ruralni prostori Jugoistočne Europe između lokalizacije i globalizacije</i> (ed. Snježana Musa), Geografsko društvo Hercegovine, Mostar, 73-93.	10	yes
	<i>LEADER – od inicijative do metode: vodič za poduku o LEADER-ovu pristupu</i> (ed. I. Laginja), ZOE – Centar za održivi razvoj ruralnih krajeva, Zagreb, 2004.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Woods, M., 2005: <i>Rural Geography: Processes, Responses and Experiences in Rural Restructuring</i>, University of Wales, Aberystwyth</p> <p>Robinson, M. G., 1990: <i>Conflict and change in the countryside, Rural society, economy and planning in the developed world</i>, Chichester.</p> <p>Hoggart, K., Buller, H., Black, R., 1995: <i>Rural Europe, Identity and Change</i>, London.</p> <p>Haan, de H., Kasimis, B., Redelift, M., 1997: <i>Sustainable Rural Development</i>, Aldershot.</p> <p>Butler R., Hall C. M., Jenkins J. (ur.), 1998: <i>Tourism and Recreation Rural Areas</i>, John Wiley & Sons, Chicheste</p> <p>Other sources and databases:</p> <p>1) Scientific journals</p> <p> a) Croatian scientific and professional journals (Croatian Geographical Bulletin, Geoadria, Acta Geographica Croatica, The geographical Horizon, Rural Sociology, Journal for General Social Issues)</p> <p> b) Foreign scientific journals (Journal of Rural Studies, Sociologia Ruralis)</p> <p>2) Relevant articles from the portal http://www.geografija.hr/ and http://hrcak.srce.hr/</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Danijel Orešić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Coast and Coastal Water Management	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding coastland as a geographic space where different processes, activities and functions occur, intertwine, support each other or come into conflict. Developing of critical thought aimed at coordination of activities and planning and possibilities of coastal management.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of theories and methodology in physical geography. Water resources evaluation as a key element of sustainable development. Geoecologic analysis, planning and landscape evaluation. Knowledge and application of nature and environment sustainable management and protection. Knowledge, abilities and skills of physical environment analysis and evaluation in spatial and regional planning and environmental expertise documentation.</p> <p>Cognitive abilities and skills: Defining and solving spatial problems of high complexity. Recognition and analysis of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Practical abilities and skills: Mapping and visualization of physical environment. Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Location factors analysis in physical geography.</p> <p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge of the properties and dynamics of coastal waters and understanding of the oceans geocologic role. Knowledge of coast types and basic coastal natural processes. Knowledge of the maritime law basics and the regimes of exploitation on the sea. Understanding of the litoralisation processes. Ability to interpret and discuss the historic and geographic role of the world ocean, especially in relation to globalisation processes. Ability to interpret and discuss the need of ocean protection. Ability of independent browsing and consulting of relevant literature. Abilities and skills related to recognising of potential and actual conflicts of interest in coastland area and management possibilities.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction, terminology. 2 The properties and dynamics of coastal waters. 3 Coast types. 4 and 5 Litoralization, coast as a living areas. Ecological aspects of litoralization. 6 and 7 Coast as a touristic resource. 8 Fishery and mariculture. 9 Off-shore mining. 10 and 11 Maritime affairs, world harbours, shipping. 12 Sea boundaries. Exclusive economic zones. 13 Strategic aspects of the world ocean.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	14 and 15 Management of coast and coastal waters, examples from the World and from Croatia. Seminar: written seminar paper on a given theme.			
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:	
2.8. Student responsibilities	Attendance to class, seminar paper.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	2
	Tests		Oral exam	(other)
	Written exam	2,5	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar evaluation, written examination. Attendance to class 10 % + seminar paper 40 % + written examination 50 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Beatley T., Brower, D. J., Schwab, A. K., 2002: <i>An Introduction to Coastal Zone Management</i> . 2nd edit. Island Press, Washington, 342 pp.		10	yes
	Barnabe, G., Barnabe-Quet, R., 2000: <i>Ecology and Management of Coastal Waters</i> . Engl. izdanje: Springer Praxis Publishing Ltd., Chichester, 396 pp.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles in scientific journals and on internet.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.			
2.14. Other (as the proposer wishes to add)	Passive knowledge of English language needed.			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Mladen Pahernik	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Military Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquire basic knowledge about the military-geographical analysis of space. Emphasize interdependence analysis function of the various geographic factors for military-geographical analysis of space and the analysis of the impact of military operations in space (militarism). Analyze the significance of the idea of global geostrategy. Develop an interest in the continuous monitoring of military geographic problems in the world.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and application of theories and methodology in physical geography. Defining and solving spatial problems of high complexity.</p> <p>Cognitive abilities and skills: The ability to interpret and discuss actual geography-related problems and processes. Evaluation, interpretation and synthesis of relevant information. Presentation and elaboration of scientific contents</p> <p>Practical abilities and skills: Applying statistic and visualisation methods and techniques in analysis and presentation of the research results. Analogue and digital thematic maps making.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Generic abilities and skills: Application and planning of the research process. Knowledge and application of statistic and visualisation techniques. Problem solving, relating to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional development.</p>					
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - explain the goals and tasks of military geography - independently apply the methods of the military-geographical terrain analysis - evaluate the results of analysis of the impact space on modern military action - make requests for information about geographic space needed for military geographic analysis 					
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction to Military Geography: Concept, development and distribution of military geography. 2 Military meaning study area. 3 Military geographic area categories. 4-5 Definition of basic military geographic categories; battlefield, battlefield, military geographic focus, geographic orientation of the military and others. 6-7 Evaluation of military geographic elements and factors. 8-9 Military geographic judgment impact natural geographic factors in military operations. 10-11 Military geographic judgment the influence of socio-economic factors on military operations. 12 The interaction of geographical and military factors in space. 13-15 Military geographical analysis of particular historical battles and military operations.</p>					
<p>2.6. Format of instruction:</p>	<p><input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p>			
<p>2.8. Student responsibilities</p>	<p>Attendance to class, completed seminars.</p>					
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>		<p>Practical training</p>	
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>	
	<p>Essay</p>		<p>Seminar essay</p>	<p>2</p>	<p>(other)</p>	
	<p>Tests</p>		<p>Oral exam</p>	<p>2</p>	<p>(other)</p>	
	<p>Written exam</p>		<p>Project</p>		<p>(other)</p>	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.10. Grading and evaluating student work in class and at the final exam	Class attendance 20 % + seminar essay 40 % + oral exam 40 %.		
2.11. Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Collins J. M., 1998: <i>Military Geography: For Professionals and the Public</i> , Potomac Books	10	yes
	Glassner, M., 1993: <i>Political Geography</i> , John Wiley. New York.	10	yes
	Pahernik, M. Kereša, D., 2007: Primjena geomorfoloških istraživanja u vojnoj analizi terena - indeks zaštitnog potencijala zemljišta, <i>Hrvatski geografski glasnik</i> . 69(1); 41-56.	10	yes
	Atlas Europe, Leksikografski Zavod "Miroslav Krleža", Zagreb, 1997.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles from journals Croatian Geographical Bulletin, Geoadria, Polemos.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Geography of Karst	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljčak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Physical Geography and Geoecology	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Acquiring knowledge and developing skills on the structures, processes, and problems and opportunities for sustainable development of karst areas in Croatia and abroad.</p> <p>Understanding the principles of sustainable development and problems of the development of karst areas, and their place and role in regional development and spatial planning. Adoption of research methods and techniques for sustainable development of karst areas.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge and skills</p> <p><u>Knowledge and understanding:</u></p> <p>Process of research work in the study of karst areas.</p> <p>Special features of karst areas in regional planning.</p> <p>Environmental protection and management of karst areas.</p> <p>Cognitive, practical and generic skills and abilities:</p> <p>Application of knowledge in determining, identifying and solving the problem of high spatial complexity in karst areas.</p> <p>Ability to identify and separation phenomena and processes in the Croatian karst areas important for spatial and regional planning.</p> <p>Ability to interpret and discuss the evolution of landscape, environmental degradation and sustainable development issues of Croatian karst areas.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Skills in presenting scientific content and arguments in writing and orally. The skills needed for field work. Application mapping geographic content. Choosing appropriate prediction methods of changes in the karst areas of Croatia. Application of the model and creating sustainable development projects karst areas. Work effectively, independently and in a team. Independent work required for professional advancement and professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Ability to:</p> <ul style="list-style-type: none"> - Define and explain the objects, approaches, methods, and research purposes karst geography - Explain the elements, characteristics and distribution of karst - Identify and evaluate the role of relief and visual elements as well as the factors of karst areas - Explain the particularities of karst ecosystem - Interpret the evolution of the landscape and environmental degradation in karst regions - Recognize the problems of sustainable development of karst areas - Identify and implement models for sustainable development of karst areas - Create a project for sustainable development of karst areas - Explain the benefits and management of protected areas in Dinaric karst in Croatia - Evaluate the educational potential of karst and karst areas
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction: The scientific basis of the subject 2. Geospatial System of Karst 3. Relief as an element and factor in karst areas 4. Water as an element and a factor in karst areas 5. Environment and ecosystems in karst areas 6. Population and social functions as factors in karst areas 7. Role of historical and spatial development in environmental degradation and the evolution of the landscape of karst areas 8. Problems of sustainable development in karst areas in modern conditions 9. Geographical features of karst areas in Europe 10. Geographical features of karst areas in non-European continents 11. Croatian karst area 12. Croatian Dinaric karst: case studies of sustainable development issues 13. Protected areas of the Dinaric Karst: meaning and problems of sustainable management 14. Models and projects for sustainable development in karst areas 15. Didactic potential of karst and karst areas



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:			
2.8. Student responsibilities	Regular class attendance. Homework and seminar work. Leaving the seminar before the study group and to participate in thematic discussions.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	0,5	(other)	
	Tests		Oral exam	2	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Regularity of attendance and class participation to 10 % + seminar 20 % + written exam 30 % + oral exam 40 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Roglić, J., 2004: <i>Krš i njegovo značenje</i> , sabrana djela, 360 pp.			10	yes	
	Matas, M., 2009: <i>Krš Hrvatske: geografski pregled i značenje</i> , Hrvatsko geografsko društvo – Split, Split, 264 pp.			10	yes	
	Pravdić, V., 2003: Održivi razvoj: značenje, poimanje i primjena, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 285-309.			10	yes	
	Pejnović, D., 2005: <i>Održivi razvoj naseljenosti na krškom području Hrvatske, Zbornik prvog savjetovanja Hrvatski krš i gospodarski razvoj</i> (ur. B. Biondić i J. Božičević), Centar za krš, Gospić/Zagreb, Zagreb, 19-31.			10	yes	
	Butula, S., 2003: Planiranje za održivi razvoj: značenje različitosti društvenog interesa za krajobraz, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 427-441.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Brinkmann, R., 2010: Karst and sustainability in Florida, U.S.A., u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i> , International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 25-32. Dörflinger, N., Plagnes, V., Kavouri, K., 2010: PaPRIKa a multicriteria vulnerability method as a tool for sustainable management of karst aquifers – Example of application on a test site in SW France, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i> , International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 49-56.</p> <p>Guo Fang, J. G., 2010: The resources, environment and development in Fengshan Geopark karst area, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 75-82.</p> <p>Maleković, S., Tišma, S., Farkaš, A., 2010: Capacity for managing local development in karst areas, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 129-136.</p>
<p>2.13. Quality assurance methods that ensure the acquisition of exit competences</p>	<p>The procedures set forth in the Rules and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - University and college student survey - Self-evaluation of teaching: updating and revising the objectives and subject content and teaching and learning strategies, assessment of learning outcomes analysis of the student's success in the tasks they perform, the colloquia, seminars, written and oral exams - Exit polls for graduates - Telephone and mail surveys after the first year of service (tracking employment after graduation and success in the profession) - Interview with companies, institutes and institutions in which students perform internships
<p>2.14. Other (as the proposer wishes to add)</p>	<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

List of required and elective courses and/or modules with class hours and ECTS credits, course: SPATIAL PLANNING AND REGIONAL DEVELOPMENT

LIST OF REQUIRED COURSES									
Year of study: 1 st year									
Semester: 1 st (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Introduction to Scientific Research	S. Šterc	1	0	1		3	required	
	Physical Geography in Spatial Planning	N. Buzjak, A. Filipčić, D. Orešić	3	3	0		7	required	
	Fundamentals of Regional and Spatial Planning	A. Lukić	2	2	0		5	required	
	Elective 1	<i>See the table</i>					5	required	
	Elective 2	<i>See the table</i>					5	required	
	Elective 3	<i>See the table</i>					5	required	

LIST OF ELECTIVE COURSES									
Year of study: 1 st year									
Semester: 1 st (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Applied Geomorphology	N. Bočić	2	1	0		5	elective	
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0		5	elective	
	Geographic Analysis of Small-Area Population	K. Bašić	2	1	0		5	elective	
	Tourism and Recreation in Spatial Planning	Z. Curić	2	1	0		5	elective	
	Factors of industry and management location	Z. Stiperski	2	1	0		5	elective	
	International Organizations	Z. Stiperski	2	1	0		5	elective	
	Analyses in GIS	A. Toskić	1	0	2		5	elective	
	Population of Croatia	S. Šterc	2	1	0		5	elective	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

LIST OF REQUIRED COURSES

LIST OF REQUIRED COURSES									
Year of study: 1 st year									
Semester: 2 nd (Summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Methods and techniques in regional and spatial planning	D. Pejnović	2	2	0		5	required	
	Restructuring of rural areas	D. Pejnović	2	2	0		5	required	
	City in the regional planning	D. Njegač	3	1	0		5	required	
	Elective 4	<i>See the table</i>					5	required	
	Elective 5	<i>See the table</i>					5	required	
	Fieldwork in geography IV (60 hours/year)	According to decision of Geography Department Council					5	required	

LIST OF ELECTIVE COURSES

LIST OF ELECTIVE COURSES									
Year of study: 1 st year									
Semester: 2 nd (Summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Urban-social Geography	V. Prelogović	2	1	0		5	elective	
	Contemporary Themes in Social Geography	S. Klempić Bogadi	2	1	0		5	elective	
	Real Estate Cadastre	M. Roić	3	0	1		5	elective	
	Applied Climatology	A. Filipčić	2	1	0		5	elective	
	Natural Hazards	D. Orešić	2	1	0		5	elective	
	Urban Regions	V. Prelogović	2	1	0		5	elective	
	Heritage and Tourism in Rural Areas	A. Lukić	2	1	0		5	elective	
	Geography of Trade	M. Jakovčić	2	1	0		5	elective	
	Cross-border cooperation and regional policy EU	Z. Stiperski, D. Stilinović	2	1	0		5	elective	
	Geography of Karst	D. Pejnović	2	1	0		5	elective	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

LIST OF REQUIRED COURSES

Year of study: 2nd year

Semester: 3rd (Winter)

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective
	Transport and spatial organization	M. Jakovčić	2	2	0		5	required
	Regional Development	Z. Stiperski	2	2	0		5	required
	Elective 6	<i>See the table</i>					5	required
	Elective 7	<i>See the table</i>					5	required
	Professional student training (90 hours/year)	*					5	required
	Graduate seminar	**	0	5	0		5	required

* Institution of Professional student training is reported to coordinator for Professional student training, who gives the signature according to confirmation about properly done student training.

**In the third semestre student choose a mentor, consults with the mentor about the subject of Master thesis, makes a concept of Master thesis and is obligatory to report the theme of Master thesis.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

LIST OF ELECTIVE COURSES

Year of study: 2 nd year									
Semester: 3rd (Winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective	
	Applied Geomorphology	N. Bočić	2	1	0		5	elective	
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0		5	elective	
	Geographic Analysis of Small-Area Population	K. Bašić	2	1	0		5	elective	
	Tourism and Recreation in Spatial Planning	Z. Curić	2	1	0		5	elective	
	Factors of industry and management location	Z. Stiperski	2	1	0		5	elective	
	International Organizations	Z. Stiperski	2	1	0		5	elective	
	Analyses in GIS	A. Toskić	1	0	2		5	elective	
	Population of Croatia	S. Šterc	2	1	0		5	elective	

LIST OF REQUIRED COURSES

Year of study: 2 nd year									
Semester: 4 th (Summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective	
	Master Thesis with defence						30	required	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

REQUIRED COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st
1.2. Name of the course	Introduction to Scientific Research	1.7. Credits (ECTS)	3
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+15+0 (1+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Enable students for independant scientific-research work. Introduce students with the structure and stages of the scientific-research proceeding. Train students for the appliance of standard and special research methods and techniques. Explain students the specificities of geographical methodology in research process. Teach students how to define main research aims, tasks, hypothesis, spatial laws, models, projections and conclusions. Capacitate students with the particularities of the geographical research approach.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>This course contribution to the programme is held in the definition of outer and inner research frame, in directioning the inquiry towards crucial processes in space and in the comprehension of spatial laws and objective spatial reality. Very complex context, relationship and link conditionality in geographical space, unique methodology and theoretical concept, research task definitions, individual practice in the research steps, and the recognition of spatial complexity have been validated. Also, the spatial allocate and function determination, spatial typization and regionalization, spatial modeling, projections of future changes, applicability of pertinent methodology, research epistemology comprehension etc., have been appointed.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Outcomes expected on the level of this course are linked with the high-level education in which the concerned knowledge points out the folowing abilities.</p> <ol style="list-style-type: none"> 1. The ability of spatial content observing, defining, categorizing, mapping and clarifying. 2. The research ability of spatial law consideration, discussion, detection, definition, projection and direction. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>3. Extended epistemology and coverage of the special approach. 4. Cognitive and cognition ability of revealing conditioned spatial links among complex contexts in geographical space, its causal clarification and resolvment. 5. The ability of complex methodological system appliance in interdisciplinary approach and in logically settled fundamental spatial relations. 6. Individual approach in spatial disproportion perceivment and in research task definition. 7. The ability of the empiric research which can be applicable in basic spatial plans. 8. Spatial functional organization ability in accordance with the phylosophy and logics of space.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1. Scientific systems. 2. Sistematizations and approaches within scientific system. 3. Example of geographical research subject-matter. 4. Work definitions and atributions. 5. Approach to the research and to the paper writing. 6. Research methods and techniques. 7. Data analysis. 8. Geographical approach to the research. 9. Field work inquiries. 10. Research task definition. 11. Scientific knowledge presentation and popularising. 12. The role of research in educational system. 13. Process of scientific work publication. 14. The meaning of geographical cognitions for objective geographical reality comprehension. 15. Theme elaboration through the research proceeding.</p>				
<p>2.6. Format of instruction:</p>	<p><input checked="" type="checkbox"/> lecture <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work</p>	<p><input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: This course aims to learn students how to independently enter in the research proceeding.</p>		
<p>2.8. Student responsibilities</p>	<p>Regular class attendance, passed preliminary exam, reserach discussion and independent research issue elaboration.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>	<p>1</p>	<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

credits is equal to the ECTS value of the course)	Tests	0.5	Oral exam		(other)	
	Written exam	0.5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Montello, D. R., Sutton, P. C., 2006: <i>An Introduction to Scientific Research Methods in Geography</i> , SAGE Publications, London.			10	yes	
	Zelenika, R., 2000: <i>Metodologija i tehnologija izrade znanstvenog i stručnog djela</i> , Ekonomski fakultet Sveučilišta u Rijeci, Rijeka.			10	yes	
	Milas, G., 2009: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i> , Naklada Slap, Zagreb.			10	yes	
	Mejovšek, M., 2008: <i>Metode znanstvenog istraživanja u društvenim i humanističkim znanostima</i> , Naklada Slap, Zagreb.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Robinson, G. M., 1998: <i>Methods and Techniques in Human Geography</i> , John Wiley & Sons, Chichester.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.					
2.14. Other (as the proposer wishes to add)	Research tasks have been assigned by students individual choice (associated with their course).					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Nenad Buzjak Anita Filipčić, Danijel Orešić	1.6. Year of the study programme	1 st
1.2. Name of the course	Physical Geography in Spatial Planning	1.7. Credits (ECTS)	7
1.3. Associate teachers	Ivan Čanjevac Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+45+0+0 (3+3+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To accuire knowlede about tight causality and interaction between physical environmnet and spatial planning and about the role of physical geographic elements in regional development.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities, and skills:</u> <i>Knowledge and understanding of:</i> The research process in geography. Theoretical basis in regional and spatial planning. Methods and techniques in regional and spatial planning The role of natural elements in spatial planning, especially of climate, water and relief. Protection of environment and nature, and spatial planning of protected areas. Identification and evaluation of resources on local, regional and national level.</p> <p><u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p><u>Practical abilities and skills:</u></p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Orientation in space and other skills needed in fieldwork. Applying appropriate statistical and graphic methods in analysis and in the presentation of the results; especially quantitative analysis of transport networks. Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. <u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding and interpreting the role of physical geography elements in geosystems. Knowing, understanding and interpreting of climatic and hydrologic extremes and connected geomorphologic hazards. Knowing and understanding water supply issues. Knowing, understanding and interpreting the specifics of urban climate. Knowing and understanding of geomorphologic issues in urban and economically active areas. Understanding of the need for water resources preservation and of waters a strategic good in 21st Century. Ability to interpret and discuss the need of the preservation of the public rights to water resources and the need to observe the principles of just distribution of water resources. Knowing, understanding and interpreting of interdependence relations between climatic, hydrologic and geomorphologic objects and processes. Knowing issues concerning research, evaluation, protection and presentation of geoheritage and geodiversity. Knowing and interpreting of the causal links between physical environment and social environment; especially understanding the relations between natural elements and agriculture, ore mining and energy production, industry and transportation. Understanding of the principles of sustainable development in planning.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Importance of climate elements in spatial planning 2 Alternative energy sources (solar energy, wind energy) 3 Climate and architecture. Climate and urban planning. 4 Planning of agricultural production 5 Climate-industry interaction. Climatic elements and transport systems. 6 Water resources in the world and in Croatia – water as economic and strategic resource. 7 Water withdrawal. 8 Spatial and economic problems in water allocation. Conflicts and/or agreements about water resources. 9 Water pollution. 10 Ecohydrologic management – holistic management of basins. Wetlands preservation. 11 Relief as an element of spatial planning and regional development. 12 Geodiversity and Geoheritage 13 Visualization and presentation of geoheritage and geodiversity 14 Anthropogenic geomorphology in spatial planning



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	15 Geocological evaluation of space				
	Seminar: written paper and presentation on a chosen theme, discussion.				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
2.8. Student responsibilities	Attendance to class, seminar paper and presentation.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,7	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	2,1	(other)
	Tests		Oral exam	4,2	(other)
	Written exam		Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar paper, presentation and activity evaluation, written examination. Attendance to class 10 % + seminar 30 % + written examination 60 %				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Bognar, A., Bognar, H., 2010: Geokološko vrednovanje reljefa R. Hrvatske. <i>Geokologija XXI vijeka</i> , Zbornik referata, 44-55, Filozofski fakultet Nikšić.			10	pdf
	Cech, T. V., 2002: <i>Principles of Water Resources: History, Development, Management and Policy</i> . 2. edit., John Wiley & Sons, 480 pp.			1	yes
	Cooke, R. U., Brunsden, D., Doornkamp, J. C., Jones, D. K. C., 1982: <i>Urban geomorphology in drylands</i> . Oxford University Press.			1	pdf
	Pacione, M., 1999: <i>Applied Geography: Principles and Practice</i> , Routledge, 672 pp.			1	yes
	Reynard, E., Coratza, P., Regolini-Bissig, G., 2009: <i>Geomorphosites</i> . Verlag Dr. F. Pfeil, München.			1	pdf
	Thompson, R. D., Perry, A. (ed.), 1997: <i>Applied Climatology</i> . Routledge. London. 352 pp.			1	yes
	Dahl, T., 2009: <i>Climate and Architecture</i> . Routledge, New York.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Allison R. (ed.), 2002: <i>Applied Geomorphology: Theory and Practice</i> , Wiley and Sons, 568 p. Relevant scientific articles and other relevant information in literature, on internet and in other sources.				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	Passive knowledge of English language needed.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Lukić	1.6. Year of the study programme	1 st
1.2. Name of the course	Fundamentals of Regional and Spatial Planning	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Knowledge and understanding of: Theoretical foundations of regional and spatial planning. Process and system of regional and spatial planning in Croatia and in the EU. Theoretical aspects of methods in planning and management of space.</p> <p>Acquiring key competences for active participation in creating spatial and regional development plans and strategies on national, regional and local level.</p> <p>Developing skills for critical thinking and applying knowledge in: 1. Defining aims and objectives in regional and spatial planning. 2. Analyzing spatial development trends. 3. Decision-making process in planning. 4. Defining politics and measures in planning.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities, and skills:</u></p> <p><u>Knowledge and understanding of:</u> Theoretical basis in regional and spatial planning. Methods and techniques in regional and spatial planning. Human geographic factors in spatial planning, especially population, settlements, form of population distribution, and economic factors.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Models of regional development. The role of local and state government in regional development. Regional development of Croatia. Protection of environment and nature, and spatial planning of protected areas. Identification and evaluation of resources on local, regional and national level.</p> <p><u>Practical abilities and skills:</u> Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning.</p> <p><u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p><u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding of theoretical foundations of regional and spatial planning. Understanding the role of regional and spatial planners and other actors within different theoretical approaches. Knowledge of regional and spatial planning systems on different spatial levels (international, national, regional, local), with the special focus on Croatia and the EU. Understanding and ability to explain advantages and disadvantages of different planning methods (typologies, regionalization, central settlement system). Ability to evaluate spatial developmental resources and define aims and objectives of spatial planning. Ability to participate in teamwork on preparing spatial plans and developmental strategies.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>INTRODUCTION. Terminology. Space and places as development resources. Regional and spatial planning - terms, definitions and goals. Interdisciplinarity in regional and spatial planning. SPATIAL IDENTITY AND ITS ROLE IN REGIONAL DEVELOPMENT. Space and place: theoretical foundations. Place identity.</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Geographical marketing, commodification of space and their role in regional and spatial planning.</p> <p>HISTORICAL DEVELOPMENT OF REGIONAL AND SPATIAL PLANNING. Urbanization and industrialization and their role in institutionalization of planning. Pioneers of spatial planning. Evolution of theories and paradigms in regional development and planning: classical theories (central settlements, development poles, centre - periphery et al.) and new paradigms (cohesion, territorial cohesion...).</p> <p>INTERNATIONAL AND EUROPEAN REGIONAL AND SPATIAL PLANNING. Definition, historical development, aspects of planning, programs and projects: ESDP, ESPON, INTERREG, LEADER.</p> <p>NATIONAL PLANNING. Definition and historical development of spatial and regional planning in Croatia.</p> <p>NATIONAL PLANNING – PLANNING SYSTEM. Contemporary legal framework of spatial, regional and rural planning in Croatia. Types and hierarchy of plans. Vertical and horizontal integration of plans.</p> <p>REGIONAL AND LOCAL PLANNING – CITY OF ZAGREB IN DOCUMENTS OF SPATIAL AND REGIONAL PLANNING. Historical and geographical development of Zagreb (analysis of planning documents, 1850-2011). First documents. Planning in the first half on 20th century. Socialist planning. Planning in the transition and recent period.</p> <p>PHASES OF REGIONAL AND SPATIAL PLANNING (analysis, planning, implementation, evaluation). Evaluation of spatial resources. Defining aims and objectives of planning. Spatial analysis. Implementation and evaluation.</p> <p>CENTRAL SETTLEMENTS SYSTEM. Central settlement theory, Euclidian and relational concepts in applicative geography and planning. Methodological and analytical framework. Central settlement system of Croatia.</p> <p>REGIONS AND REGIONALIZATION IN PLANNING. Planning region – definition, methods of regionalization. Regional analysis.</p> <p>TYPOLOGIES IN REGIONAL AND SPATIAL PLANNING. Aims and objectives of typological approach. Aggregative and disaggregative approaches. Factor and cluster analysis. Advantages and disadvantages of typological approach in planning.</p> <p>THEORIES OF REGIONAL AND SPATIAL PLANNING I. System and rational theories. Marxist and critical theories. Neoliberal theories. Pragmatic theories. Collaborative and participative theories. Aims of planning. Roles of planners.</p> <p>THEORIES OF REGIONAL AND SPATIAL PLANNING II. System and rational theories. Marxist and critical theories. Neoliberal theories. Pragmatic theories. Collaborative and participative theories. Aims of planning. Roles of planners.</p> <p>PRACTICE OF REGIONAL AND SPATIAL PLANNING I – SELECTED EXAMPLES. Planning in nature protected areas. Rural planning. Planning in transborder regions.</p> <p>PRACTICE OF REGIONAL AND SPATIAL PLANNING II – SELECTED EXAMPLES. Planning in nature protected areas. Rural planning. Planning in transborder regions.</p>		
<p>2.6. Format of instruction:</p>	<p>x lectures x seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety</p>	<p>x independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory x work with mentor</p>	<p>2.7. Comments: -</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> (other)				
2.8. Student responsibilities	Attendance to class completed and presented seminar and independent assignments. Participation in classroom and online discussions.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance		Research		Practical training	
	Experimental work		Report		E-learning discussions	1
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar and exercises, written and oral exam.					
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library		Availability via other media	
	Allmendinger, P., 2009: <i>Planning Theory</i> , Palgrave Macmillan, Basingstoke (selected chapters).		10		yes	
	Dühr, S., Colomb, C., Nadin, V., 2010: <i>European Spatial Planning and Territorial Cooperation</i> , Routledge, Oxon (selected chapters).		10		yes	
	European Spatial Planning and Observation Network (ESPON), http://www.espon.eu/		-		yes	
	Friedmann, J., 2011: <i>Insurgencies: Essays in Planning Theory</i> , Routledge, Oxon (selected chapters).		10		yes	
	Hall, P., 2004: <i>Urban and Regional Planning</i> (4. izdanje), Routledge, London (selected chapters).		10		yes	
	Lukić, A., 2012: <i>Mozaik izvan grada – tipologija ruralnih i urbaniziranih naselja Hrvatske</i> , Meridijani, Samobor (selected chapters).		15		yes	
	Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i> , Školska knjiga, Zagreb (selected chapters).		10		yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Fürst, D., Scholles, F., (ur.), 2008: <i>Handbuch Theorien und Methoden der Raum- und Umweltplanung</i> , Rohn, Dortmund. Healey, P. 2006: <i>Collaborative Planning: Shaping Places in Fragmented Societies</i> , Palgrave Macmillan, Basingstoke. Hillier, J., Healey, P. (ur.), 2008: <i>Critical Essays in Planning Theory</i> , Ashgate. Perdicoúlis, A., 2011: <i>Building Competences for Spatial Planners, Methods and techniques for performing tasks with efficiency</i> , Routledge, London i New York.					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Selected regional and spatial planning documents Selected papers from relevant journals and publications
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st
1.2. Name of the course	Methods and techniques in regional and spatial planning	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljčak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Introducing students to basic methods and techniques in regional and spatial planning, emphasising knowledge applicable to plan making on state, regional, and local levels. Qualifying students for participation in the defining of regional and spatial planning goals, predicting spatial change, evaluation and decision-making in the planning process, and defining development measures. Students will be able to understand different approaches and roles of planners, and critically choose appropriate planning methods and techniques.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p>Knowledge and understanding of: The research process in geography. Theoretical basis of cartographic, statistical and graphic techniques in regional and spatial planning. Theoretical basis in regional and spatial planning. Methods and techniques in regional and spatial planning Subjects and factors of regional development. Models of regional development. The role of local and state government in regional development.</p> <p>Cognitive, practical, and generic abilities and skills: Applying knowledge in determining, defining, and solving spatial problems of high complexity.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Skills needed in fieldwork. Mapping of geographic data. Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning. Designing of organisational models in space. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - differentiating and applying different approaches in planning and decision-making; - understanding of basic legal articles for spatial planning and regional development in Croatia; - explaining spatial planning and regional development systems in Croatia; - differentiating and explaining plan making phases; - clarifying advantages and disadvantages of specific methods and techniques in regional and spatial planning; - offering solutions to planning problems; - evaluating development resources and defining spatial planning goals and development measures; - applying and clarifying, in written and oral form, steps in the application of chosen planning methods and techniques.
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. INTRODUCTION – Basic concepts; Principles of spatial planning and regional development; Spatial planning systems; Actors; Types of planning documents. 2. APPROACHES IN PLANNING AND DECISION-MAKING (1) – Instrumental rationality – planning goals; planner’s roles and tasks; advantages and disadvantages of this approach. 3. APPROACHES IN PLANNING AND DECISION-MAKING (2) – Communicative and substantive rationality – planning goals; planner’s roles and tasks; advantages and disadvantages of this approach. 4. PLANNING DOCUMENTS – Planning documents on the state, regional, and local levels; Components of plans. 5. METHODS AND TECHNIQUES IN PLANNING (1) – Methods of analyses, forecasting and evaluation; Qualitative and quantitative forecasting methods; Explorative and normative forecasting methods; Trend analysis; Analogies; Delphi method; Steps in application, advantages and disadvantages of specific methods; Selected examples. 6. METHODS AND TECHNIQUES IN PLANNING (2) – Scenarios in planning; Types and elements of scenarios; Steps in developing scenarios; Advantages and disadvantages; Modelling; Simulation in planning; Selected examples. 7. METHODS AND TECHNIQUES IN PLANNING (3) – Evaluation methods; Cost-benefit analysis; SWOT analysis; Steps in



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>application, advantages and disadvantages of specific methods; Selected examples. 8. PLAN MAKING (1) – Defining ground problems; Defining planning tasks; Analysis of existing conditions; The planning list. 9. PLAN MAKING (2) – Defining expected outcomes; Realising planned outcomes; Evaluation and implementation. 10. PROCEDURE OF ISSUING SPATIAL PLANS IN CROATIA – Plan making; Previous and public debates; Plan adoption. 11. PROJECT PLANNING – Project definition; Project goals; Project planning and management; Conclusion phase. 12. LAND-USE PLANNING – Land-use; Functional zoning. 13. APPLICATION OF GIS IN REGIONAL AND SPATIAL PLANNING – Data management; Analyses in GIS. 14. METHODOLOGY OF SPATIAL PLANNING AND MANAGEMENT IN PROTECTED AREAS – Concepts of protected area management; Elements of plans; Implementation; Selected examples. 15. EVALUATION OF SPATIAL RESOURCES – Social, economic, and environmental resources in spatial development; Integral development; Cooperation with stakeholders; Sustainable development measures.</p>					
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:			
2.8. Student responsibilities	Regular attendance, independent assignments, a seminar paper which will be presented in class, and participation in discussions.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance		Research		Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	The exam consists of written and oral parts. The final grade combines points achieved on assignments, and writing and presenting the seminar paper.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Perdicoúlis, A., 2011: <i>Building Competences for Spatial Planners, Methods and techniques for performing tasks with efficiency</i> , Routledge, London i New York.			5	yes	
	Hillier, J., Healey, P. (Ed.), 2008: <i>Critical Essays in Planning Theory</i> , Ashgate. (selected chapters)			5	yes	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Marinović-Uzelac, A., 2001: <i>Prostorno planiranje</i> , Dom i svijet, Zagreb.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Allmendinger, P., 2009: <i>Planning Theory</i>, Palgrave Macmillan, Basingstoke.</p> <p>Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i>, Školska knjiga, Zagreb.</p> <p>Fürst, D., Scholles, F. (Ed.), 2008: <i>Handbuch Theorien und Methoden der Raum - und Umweltplanung</i>, Rohn, Dortmund.</p> <p>Akademie für Raumforschung und Landesplanung, 2005: <i>Handwörterbuch der Raumordnung</i>, ARL, Hannover.</p> <p>Selected planning documentation.</p> <p>Selected articles from scientific and professional journals.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	<ul style="list-style-type: none"> - University student questionnaire survey; - Self-evaluation of the class: updating and revising class goals and content and strategies of teaching, learning, and evaluating learning outcomes; - Questionnaire survey for graduated students; - Other procedures prescribed by the University and Faculty acts on internal quality assurance. 		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st
1.2. Name of the course	Restructuring of rural areas	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate Study - Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring advanced knowledge on rural areas, the process of its transformation and the current problems of sustainable development. Understanding the structural and dynamic problems in rural areas, training for integrated planning of their development.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><i>Knowledge and understanding of:</i></p> <ul style="list-style-type: none"> The research process in geography. The role of natural elements in spatial planning. Human geographic factors in spatial planning. Contemporary processes and problems in urban development. Factors and processes of rural restructuring and regionally differentiated cases of rural restructuring. Subjects and factors of regional development. The role of local and state government in regional development. Regional development of Croatia. Protection of environment. Identification and evaluation of resources on local, regional and national level. <p>Practical abilities and skills:</p> <ul style="list-style-type: none"> Orientation in space and other skills needed in fieldwork. Mapping of geographic data, georeferencing. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning.</p> <p>Cognitive abilities and skills: Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Ability to:</p> <ul style="list-style-type: none"> Apply geographic methodology in the study and research of rural areas Differentiate discourses in defining rural areas as well as models, criteria and functions of rural areas Compare features of rural areas at the local, regional, national, continental and global levels Analyze the factors of transformation of rural areas in conditions of modernization and globalization Evaluate demographic resources and social capital in rural areas Recognize socio-geographic features and explain the lifestyle and identity of rural areas Distinguish between types of rural areas and apply the typology to given space Explain the causes of the problem of sustainable development of rural areas Create plan for revitalization and integrated development of rural areas on the basis of the analysis of their resources
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction 2 Restructuring of the population in rural areas 3 Restructuring of settlements in rural areas 4 Re-evaluation of resources and functional changes in the rural areas 5 Changes in the rural economy 6 Changes in the environment and landscape of rural areas 7 Rural areas and functional organization 8 Rural areas in regional development 9 Typology and its importance for the development of rural areas 10 Rural Development and Planning (change management in rural areas)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	11 Rural policy or policies for rural areas? 12 Models of rural development - Case studies: The World, Europe 13 LEADER's approach to rural development 14 Project teaching: projects for integrated rural development 15 Models and revitalization projects of Croatian rural areas																																		
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -																																
2.8. Student responsibilities	Regular attendance of classes and seminars. Active participation in the classroom. Seminars. Application of geographic graphical, statistical and mapping methods in field research in rural areas. Oral and written reports on the results of field studies over other students.																																		
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td>1</td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>1</td></tr> </table>	Class attendance	1	Experimental work		Essay		Tests		Written exam	1	<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td>1</td></tr> <tr><td>Oral exam</td><td>2</td></tr> <tr><td>Project</td><td></td></tr> </table>	Research		Report		Seminar essay	1	Oral exam	2	Project		<table border="1"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)			
Class attendance	1																																		
Experimental work																																			
Essay																																			
Tests																																			
Written exam	1																																		
Research																																			
Report																																			
Seminar essay	1																																		
Oral exam	2																																		
Project																																			
Practical training																																			
(other)																																			
(other)																																			
(other)																																			
(other)																																			
2.10. Grading and evaluating student work in class and at the final exam	The final score is determined by the total scores in written and oral examinations and evaluation seminar.																																		
2.11. Required literature (available in the library and via other media)	<table border="1"> <thead> <tr> <th>Title</th> <th>Number of copies in the library</th> <th>Availability via other media</th> </tr> </thead> </table>			Title	Number of copies in the library	Availability via other media	<table border="1"> <thead> <tr> <th>Number of copies in the library</th> <th>Availability via other media</th> </tr> </thead> </table>	Number of copies in the library	Availability via other media	<table border="1"> <thead> <tr> <th>Availability via other media</th> </tr> </thead> </table>	Availability via other media																								
Title	Number of copies in the library	Availability via other media																																	
Number of copies in the library	Availability via other media																																		
Availability via other media																																			
Lukić, A. (2012): <i>Mozaik izvan grada: tipologija ruralnih i urbaniziranih naselja Hrvatske</i> , Meridijani, Samobor, 256 p.			15	yes																															
Lukić, A., Pejnović, D. (2010): Metodološke osnove izrade tipologije ruralnih područja Hrvatske, Zbornik znanstvenog skupa Ruralni prostori Jugoistočne Europe između lokalizacije i globalizacije (ed. Snježana Musa), Geografsko društvo Hercegovine, Mostar, 95-121.			10	yes																															
Pejnović, D., Lukić, A. (2010): Dinamički i strukturni problem ruralnih područja u tranzicijskim zemljama: primjer Hrvatske, Zbornik znanstvenog skupa Ruralni prostori Jugoistočne Europe između lokalizacije i globalizacije (ed. Snježana Musa), Geografsko			10	yes																															



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	društvo Hercegovine, Mostar, 73-93.		
	LEADER – od inicijative do metode: vodič za poduku o LEADER-ovu pristupu (ed. I. Laginja), ZOE – Centar za održivi razvoj ruralnih krajeva, Zagreb, 2004.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Woods, M., 2005: <i>Rural Geography: Processes, Responses and Experiences in Rural Restructuring</i>, University of Wales, Aberystwyth</p> <p>Robinson, M. G., 1990: <i>Conflict and change in the countryside, Rural society, economy and planning in the developed world</i>, Chichester.</p> <p>Hoggart, K., Buller, H., Black, R., 1995: <i>Rural Europe, Identity and Change</i>, London.</p> <p>Haan, de H., Kasimis, B., Redelift, M., 1997: <i>Sustainable Rural Development</i>, Aldershot.</p> <p>Butler R., Hall C. M., Jenkins J. (ur.), 1998: <i>Tourism and Recreation Rural Areas</i>, John Wiley & Sons, Chicheste</p> <p>Other sources and databases:</p> <p>1) Scientific journals</p> <p> a) Croatian scientific and professional journals (Croatian Geographical Bulletin, Geoadria, Acta Geographica Croatica, The geographical Horizon, Rural Sociology, Journal for General Social Issues)</p> <p> b) Foreign scientific journals (Journal of Rural Studies, Sociologia Ruralis)</p> <p>2) Relevant articles from the portal http://www.geografija.hr/ and http://hrcak.srce.hr/</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dražen Njegač	1.6. Year of the study programme	1 st
1.2. Name of the course	City in the regional planning	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Knowledge of the regional planning in general and the meaning of city as an instrument of the regional planning and focus of the spatial transformation. Students have to learn about the development of the regional planning doctrine, planning levels, uneven regional development, role of the city in spatial organization, the mechanisms of the city and city regions governance.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p>Knowledge and understanding of: The research process in geography connected with the meaning of city in the regional planning . Theoretical basis in regional and spatial planning. Methods and techniques in regional and spatial planning. Human geographic factors in spatial planning, especially population, settlements, form of population distribution, and economic factors. Contemporary processes and problems in urban development.</p> <p>Cognitive abilities and skills:</p> <p>Applying knowledge in determining, defining, and solving spatial problems of high complexity on the regional and national levels. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Practical abilities and skills: Applying appropriate statistical and graphic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning. Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> -to explain the notion and development of the regional planning doctrine -to evaluate the role of the cities as cause for and solution of the uneven regional development -to evaluate the role of the city as a pivotal factor and instrument of the regional planning and spatial organization -to compare the role of the cities in the regional planning of selected countries -to differentiate the role of monocentric and policentric city regions in the regional planning -to develop critical thought about the solving of the regional disparities on different levels in Croatia 	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Notion and development of the regional planning doctrine. 2. Levels of the regional planning. 3. Development of the regional planning in the world. 4. Uneven regional development. 5. Theory of polarized development. 6. Growth centers concept. 7. Core-periphery concept. 8. Optimum and minimum city size concept. Rank size rule. 9. City as an instrument of regional planning. 10. City as a focus of spatial transformation. 11. The role of the city in the functional organization. 12. Monocentric and policentric urban regions. 13. City and urban regions governance. 14. Urban growth and policy of big cities. 15. Small agglomerations urban policy. 	
<p>2.6. Format of instruction:</p>	<p>x lectures x seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety</p>	<p>x independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory x work with mentor</p>
		<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input type="checkbox"/> (other)		
2.8. Student responsibilities	Regular class attendance, oral presentation of written essay.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests		Oral exam	2	(other)
	Written exam	1,5	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	The final grade is based on the written exam, oral exam and written essay. Each component has to be evaluated positively.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i> , Školska knjiga, Zagreb.			10	yes
	Hall, P., Tewdwr-Jones, M., 2011: <i>Urban and Regional Planning</i> , 5th ed., Routledge.			5	yes
	Newman, P., Thornley, A., 1996: <i>Urban Planning in Europe</i> , Routledge.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Badcock, B., 2002: <i>Making Sense of Cities – A Geographical Survey</i> , Arnold.				
	Braam, W., 1987: <i>Stadtplanung – Aufgabenbereiche, Planungsmethodik</i> , Rechtsgrundlagen; Werner-Verlag.				
	Hall, P., 2013: <i>Good Cities, Better Lives: How Europe Discovered the Lost Art of Urbanism</i> , Routledge.				
	Herrschel, T., Newman, P., 2002: <i>Governance of Europe's City Regions – Planning, Policy and Politics</i> , Routledge.				
	Wannop, U. A., 1995: <i>The Regional Imperative – Regional Planning and Governance in Britain, Europe and the United States</i> , RSA-JKP.				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				
2.14. Other (as the proposer wishes to add)	-				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Martina Jakovčić	1.6. Year of the study programme	2 nd
1.2. Name of the course	Transport and spatial organization	1.7. Credits (ECTS)	5
1.3. Associate teachers	Slaven Gašparović	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>General aim of the course is to explain the role of transport in spatial organization and its impact on development of system of settlement and spatial organization of various economic activities. Students should acquire knowledge on the position and role of transport system in development of spatial plans and master plans.</p> <p>To develop ability to apply complex methods of analysis of transportation networks and systems such as transportation accessibility, node hierarchy, transportation network hierarchy etc.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>The research process in geography.</p> <p>Theoretical basis of cartographic, statistical and graphic techniques in regional and spatial planning.</p> <p>Theoretical basis in regional and spatial planning.</p> <p>Transport and spatial organization on local, regional and national levels.</p> <p>Differentiation of transportation networks and systems and ability to apply methods of analysis of transportation networks.</p> <p>Planning future requirements of transportation networks.</p> <p>Applying appropriate methods and techniques.</p> <p>Information-technology skills.</p> <p>Functioning effectively as an individual and as a team member.</p> <p>Autonomous continuous professional improvement needed in professional development.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning	Analyse and explain transportation networks and systems on selected examples.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

<p>outcomes)</p>	<p>Apply models and methods of the analysis of transportation network. Research and explain the role of transportation and its influence of location and development of primary, secondary, tertiary and quarterly economic activities. Explain the role of transportation on spatial organization at various levels. Explain the role of transportation on urbanization and spatial mobility of people. Explain relationship of transportation and urban systems. Differ differences of transportation in rural and urban areas. Use relevant methods and approaches of transportation geography in colleting, processing and interpretation of spatial data. Apply knowledge in determining, and solving spatial problems of medium level complexity.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Transportation network and system. Models and methods of analysis of the transportation network 2. Transport, transportation accessibility and location 3. Role of transport on development of primary, secondary, tertiary and quarterly economy activities 4. Transport and spatial organization at global, regional and local level 5. Role of transportation on social processes – urbanization, migrations etc. 6. Transport and spatial planning 7. Transport and transportation planning 8. Transportation system and urban system 9. Transportation in the city – part I 10. Transportation in the city – part II 11. Transportation in the city – part III 12. Transportation in the city – part IV 13. Transportation in the city – part V 14. Transportation in rural areas 15. Transportation and transportation marginalization and social exclusion 	
<p>2.6. Format of instruction:</p>	<input type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)
<p>2.8. Student responsibilities</p>	<p>Regular attending of lecture and seminars. Acitive participation in lectures. Preparation of seminar esseey. Application of cartographic methods in filed research (o organization and conduction of mapping). Oral and written report on the results of field work.</p>	
		<p>2.7. Comments:</p>
		<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1,5	(other)	
	Tests		Oral exam		(other)	
	Written exam	3	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Notes on attendance of lectures, seminars and mapping and noting student activities. Final mark will be a result of a written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Hoyle, B. S., Knowles, R. D. (urednici), 1996: <i>Modern Transport Geography</i> , John Wiley & Sons.			5	yes	
	Black, W. R., 2003: <i>Transportation: a geographical analysis</i> , The Guilford Press, New York.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Optional literature will be determined according to students preferences.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science</p> <ul style="list-style-type: none"> - University student questionnaire survey; - Self-evaluation of the class: updating and revising class goals and content and strategies of teaching, learning, and evaluating learning outcomes; - Questionnaire survey for graduated students; - Other procedures prescribed by the University and Faculty acts on internal quality assurance. 					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Stiperski	1.6. Year of the study programme	2 nd
1.2. Name of the course	Regional Development	1.7. Credits (ECTS)	5
1.3. Associate teachers	Jelena Lončar	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The analysis of the regional development. Offering development models. Specifically review regional development of Croatia. Understanding of important economic topics.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills:</u> <i>Knowledge and understanding of:</i> The research process in geography Theoretical basis in regional and spatial planning, terminology and economic theories important for regional development. The role of human geographic factors in spatial planning, especially economic factors Subjects and factors of regional development. Causes of uneven regional development at the local and regional level. The role of local and state government in regional development. Regional development of Croatia.</p> <p><u>Cognitive, practical and generic abilities and skills:</u> Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The skills needed for evaluation, interpretation, and synthesis of relevant information.</p> <p>The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p>Applying appropriate maps and cartographic methods in analysis and in the presentation of the results.</p> <p>Applying appropriate prediction methods of spatial changes. Evaluation and decision-making in preparing relevant documents of spatial planning and regional development.</p> <p>Problem solving related to qualitative and quantitative geographic information.</p> <p>Information-technology skills.</p> <p>Functioning effectively as an individual and as a team member.</p> <p>Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - Explain economic terms and concepts important for regional development - Explore the impact of government (state and local) on regional development - Analyze the causes and consequences of polarized development at local and regional level - Explain the importance of international exchange of goods and services for the local community - Identify and compare the economic development strategies - Explore the issue of natural resources and environmental management, written and oral presentation of research results - Explore the possibilities of financing local projects - Predict measures for increasing involvement of local and regional governments in international projects
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Basic concepts of regional development 2 Production and business organization 3 Production factors: the importance of space 4 The labour market: the importance of space 5 The relation between land (space) and capital 6 State, local community and the problem of choice 7 Systems of taxation: state and local levels 8 Natural resources and environmental management 9 Solving the problems of poverty in the local community 10 Relation between consumption and the importance of investing 11 Basics of banking and financing local projects 12 Impact of business cycles on regional development 13 The economic consequences of mortgaging 14 Understanding the international exchange of goods and services 15 Economic development strategies



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -			
2.8. Student responsibilities	Attending classes and seminars regularly. Written seminar based on individually collected and analyzed literature.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1,5	(other)	
	Tests		Oral exam	2	(other)	
	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	The final grade is determined on the basis of the seminar evaluation, colloquium results, written and oral exams. All elements of evaluation except colloquium must be positive.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Stiperski, Z., 2014: <i>Regional Development</i> , Internal course materials, Department of Geography, Faculty of Science, Zagreb.			10	Web	
	Stinson, R. J., Stough, R. R., Roberts, B. H., 2006: <i>Regional economic development</i> , Springer.			5	yes	
	Pike, A., Rodrigez-Pose, A., Tomaney, J., 2006: <i>Local and Regional development</i> , Routledge, London, New York.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Vietor, R. H. K., 2010: <i>Kako se zemlje natječu – strategija, struktura i državno upravljanje u globalnoj ekonomiji</i> , MATE, Zagreb.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	The procedures listed in the Rule Book and the Manual of Quality Management at the University of Zagreb and the Faculty of Science: - University and college student survey - Self-evaluation of teaching: updating and revising the aims and subjects of course; updating teaching and learning strategies; evaluation of learning outcomes by analyzing students performance based on the personal data and data of					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	the Student Administration Office - Exit polls: evaluation of graduate study - Interview with companies, institutions and institutes where students perform their practical work
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

ELECTIVE COURSE

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Applied Geomorphology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of the course are to provide students with knowledge and skills related to the application of geomorphological research. The emphasis is on exploring and evaluating features and principles of action of recent geomorphological processes and landforms, their mapping and graphical presentation.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> - Be familiar with the sources and methods applied geomorphological research - Understanding of the earth's surface systems including features, terms, processes, and changes - Ability to conduct fundamental research morphostructural and exogenously-morphological features of the relief - Ability to plan, organize and implement applied geomorphological research, engineering - geomorphological mapping and making geomorphological studies - The ability to evaluate lanscape, particularly with regard to the protection of geodiversity and tourist exploitation - An understanding of the fundamental principles of geomorphological regionalization 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><u>Knowledge and understanding of:</u></p> <p>The role of natural elements in spatial planning, especially of climate, water and relief. Protection of environment and nature, and spatial planning of protected areas. Identification and evaluation of resources on local, regional and national level.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Cognitive, practical and generic abilities and skills:</u> Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Mapping of geographic data, georeferencing. Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the purpose, tasks and the division of applied geomorphology Independently apply the approaches and methods of the applied geomorphology used in the preparation of geomorphic studies To explain the characteristics of recent geomorphological processes and their impact on the types and forms of relief To explain the distribution and characteristics of slope, fluvial, coastal and karst processes in engineering geomorphology Evaluate the relief forms and processes from various aspects, especially in terms of environmental protection and tourism Apply appropriate mapping and measurement procedures in practice Make a geomorphological regionalization of the area on several levels Make an example geomorphological studies</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Applied Geomorphology - definition, objectives, tasks and division, Fundamentals of geomorphology of Croatia 2 Introduction into making of geomorphological studies 3 Sources of data in applied geomorphological research 4 Field work in geomorphology 5 Landscape as system (ESS) - features, factors, changes 6 Basic knowledge of geology for geomorphological research 7 Morphometric and morphographic methods in applied geomorphological research 8 Structural-geomorphological research 9 Slopes and slope processes 10 Fluvial processes 11 Coasts and coastal processes 12 Karst and karst processes 13 Evaluation methods of landscape and landforms, Geoheritage and geotourism 14 Engineering-geomorphological mapping and applied geomorphological map



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	15 Geomorphological regionalization				
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)		2.7. Comments:	
2.8. Student responsibilities	Attendance to class, completed exercises and field work.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training	
	Experimental work		Report	(other)	
	Essay		Seminar essay	1 (other)	
	Tests		Oral exam	2 (other)	
	Written exam	1	Project	(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 10 %; Written exam 30 %; Essay 30 %; Oral exam 30 %.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Marković, M., 1983: <i>Osnovi primijenjene geomorfologije</i> , Geoinstitut, posebno izdanje, Knjiga 8, Beograd.			10	yes
	<i>Uputstva za izradu detaljne geomorfološke karte 1 : 100 000</i> (Grupa autora)			5	CD
	Fookese, P. G, Lee, E. M., Griffiths, J. S: 2007: <i>Engineering Geomorphology – theory and practice</i> . Whittles publishing, Dunbeath, 281 pp (selected chapters).			5	yes
	Regolini-Bissig G., Reynard, E. (Eds) (2010): <i>Mapping Geoheritage</i> . Institut de géographie, Université de Lausanne (selected chapters).			1	CD
2.12. Optional literature (at the time of submission of study programme proposal)	Fookese, P. G., Lee, E. M., Griffiths, J. S., 2007: <i>Engineering Geomorphology –theory and practice</i> . Whittles publishing, Dunbeath, 281 pp. Allison, R. J. (Eds), 2003: <i>Applied Geomorphology</i> . John Wiley&Sons LTD.				
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Karst Geomorphology and Hydrology	1.7. Credits (ECTS)	5
1.3. Associate teachers		1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of this course are that students learn basic knowledge on karst geomorphology and hydrography with application to the significant karst areas of the world and focus on the Dinaric karst that is part of Croatia.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> Understanding of the conditions and processes of karstification Understanding the specifics of karst hydrography Recognition of surface and underground karst landforms, and an understanding of their origin Knowledge about geomorphologic - hydrographical features of Croatian karst and important karst areas in the world Understanding the importance of karst areas, identifying specific problems and the ability of their solutions The ability to evaluate karst areas Understanding the threats and protection of karst areas and the ability to find solutions in line with sustainable development 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><u>Knowledge and understanding of:</u></p> <ul style="list-style-type: none"> The research process in geography. Theoretical basis of cartographic, statistical and graphic techniques in regional and spatial planning. The role of natural elements in spatial planning, especially of climate, water and relief. Protection of environment and nature, and spatial planning of protected areas. Identification and evaluation of resources on local, regional and national level. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Cognitive, practical and generic abilities and skills:</u> Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the concept, history, research and distribution of karst in Croatia and the world In selected cases to extract and interpret the factors that affect the karst process Explain the specificity of karst hydrography and its relation to the geomorphology of karst Field work and cabinetmaking determine surface and underground karst relief forms Distinguish types of karst in Croatia and abroad, and their special values Evaluate the significance of karst areas Provide effective measures for the protection and management of karst areas with the concept of sustainable development Apply basic geomorphological research methods and protection of karst</p>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction, history of study of karst 2 Terms and geomorphological processes in karst 3 Karst hydrography (Part 1) 4 Karst hydrography (Part 2) 5 Karst Geomorphology - grikes 6 Karst Geomorphology - dolines 7 Karst Geomorphology - large depressions and poljes 8 Karst Geomorphology - karst plateau 9 Speleological objects - the origin and typology 10 Karst sediments and residual hills 11 Fluviokarst, glaciokarst and coastal karst 12 Morphogenesis and typology of karst 13 Threats and protection of karst 14 Croatian karst - an overview 15 Significant karst areas in the world 		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p>X independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	-	
2.8. Student responsibilities	Attendance to class, completed seminars, independent assignments and field work			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	2 (other)
	Written exam	1	Project	1 (other)
2.10. Grading and evaluating student work in class and at the final exam	Written and oral exam, project.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Ford, D., Williams, P., 2007: <i>Karst Hydrogeology and Geomorphology</i> . 562 str., John Wiley i Sons, Chichester, West Sussex, England.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	White, W. B., 1988: <i>Geomorphology and Hydrology of Karst Terrains</i> . Oxford university press, New York-Oxford. Herak, M., Stringfield, V. T., 1972: <i>Karst – Important Karst Regions of the Northern Hemisphere</i> . Elsevier publishing company, Amsterdam-London-New York. Gines, A., Knez, M., Slabe, T., Dreybrodt, W., 2009: Karst rock features – karren sculpturing. <i>Carsolodica</i> 9, Založba ZRC SAZU, Postojna.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ksenija Bašić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Geographic Analysis of Small-Area Population	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	General objective is to comprehend population as the maker and the user (consumer) of the space, both in quantitative indicators as well as in qualitative aspects. Accordingly, students are expected to acquire knowledge and skills to gather and use relevant data to make qualitative population study of a particular area or place, that includes the analysis of changes in the past, presentation of the actual situation and projection for the interval for which regional plan is being made.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in general and in geography. Human geographic factors in spatial planning, especially population, settlements, form of population distribution, and economic factors. Regional development of Croatia.</p> <p>Cognitive abilities and skills: The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>				
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding the significance of demographic aspects in regional planing. Knowledge of the basic units in population research. Knowledge of the data sources on population. Knowledge and application of the basic methods in analysing dynamic and structural features of population. Knowledge and application of the basic methods of population projection.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 The objectives and course content, learning outcomes; concept and work plan; evaluation of the achievements of students. 2 Demographic aspects in regional planing. 3 Notion and distinguishing features of the geographic analysis of small-area population in regional planing. 4 Basic units in population research and data sources. 5 Distribution of population and population density. 6-7 Total population change. 8 Natural change of population. 9 Mobility of population. 10 Age and sex composition of population. 11 Socio-economic composition of population. 12 Cultural and anthropological composition of population. 13 Synthetic indicators of demographic resources. 14 Projections of small-area population. 15 Population policies.</p>				
<p>2.6. Format of instruction:</p>	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p>		
<p>2.8. Student responsibilities</p>	<p>Regular class attendance. Independent project of geographic analysis of chosen small-area population.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)</p>	<p>Class attendance</p> <p>Experimental work</p> <p>Essay</p> <p>Tests</p> <p>Written exam</p>		<p>Research</p> <p>Report</p> <p>Seminar essay</p> <p>Oral exam</p> <p>Project</p>	<p></p> <p></p> <p>3</p> <p>2</p> <p></p>	<p>Practical training</p> <p>(other)</p> <p>(other)</p> <p>(other)</p> <p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.10. Grading and evaluating student work in class and at the final exam	Positive project evaluation is a requirement for taking oral examination.		
2.11. Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Breznik, D., 1988: <i>Demografija: analiza, metode, modeli</i> , Naučna knjiga, Beograd.	10	yes
	Nejašmić, I., 2005: <i>Demogeografija: stanovništvo u prostornim odnosima i procesima</i> , Školska knjiga, Zagreb.	10	yes
	Nejašmić, I., 2008: <i>Stanovništvo Hrvatske: demogeografske studije i analize</i> , Hrvatsko geografsko društvo, Zagreb.	10	yes
	Plane, D. A., Rogerson, P. A., 1994: <i>The geographical analysis of population with applications to planning and business</i> . Wiley, New York	5	yes
	Wertheimer-Baletić, A., 1999: <i>Stanovništvo i razvoj</i> , Mate, Zagreb.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Nejašmić, I., 1991: <i>Depopulacija u Hrvatskoj: korijeni, stanje, izgledi</i> , Globus, Zagreb.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Curić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Tourism and Recreation in Spatial Planning	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To get the students acquainted with modern trends in tourism, tourism impact on space and geographic aspects of planning tourism and recreation.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Knowledge and understanding of:</p> <ul style="list-style-type: none"> - theoretical and methodological geographic systems - research work process (generally and in geography) - specific statistical and graphical methods - tourist evaluation of natural elements and social constituents, as well as of cultural offer -concept of sustainable development in tourism and recreation <p>Cognitive, practical and generic capabilities and skills:</p> <p>Application of knowledge in establishing, defining and solving the spatial problems of high complexity. Capability of recognizing and singling out the phenomena and processes crucial for the geosystems' stability. Capability of interpretation and discussing relevant and actual geographic phenomena and processes. Skills necessary for evaluation, interpretation and synthesis of information and data. Skills in presentation of scientific contents and argumentations, written and orally.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Use of thematic maps and cartographic methods in the analysis and presentation of research results. Formation of project suggestions and making of elaborates. Solving of the tasks connected with qualitative and quantitative geographic information. Effective work (individual and team). Individual work necessary for professional progress.</p>				
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Having attended the course and passed the exam the students will be able to:</p> <ul style="list-style-type: none"> - understand and explain modern trends in tourism - define the basic notions and elements of a spatial system - define regional planning and distinguish the kinds of its plans - take part in the planning team for the analysis and evaluation of tourism potentials in an area - adopt the methodology and stages of the regional plans elaboration - recognize a geographer's role in regional planning - explain the nature protection categories - come to know the ways of the protected areas management - define the areas intended for recreation and tourism development 				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Contemporary trends in the world, European and Croatian tourism. 2. Geographic aspect of planning tourism and recreation in an area. 3. Elements of tourist offer and demand. 4. Needs and possibilities of tourism development in an area. 5. Concept of sustainable development in theory and practice. 6. Regional tourist plans and tourism development strategy. 7. Recreation and spatial planning. 8. Kinds of the regional planning plans. 9. Methodology and stages of the regional plan elaboration. 10. – 15. Nature protection and regional planning. 				
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments X multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>		
<p>2.8. Student responsibilities</p>	<p>Attending classes and seminars regularly. Written seminar based on individually collected and analyzed literature.</p>				
<p>2.9. Screening student work (<i>name the</i></p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>		<p>Practical training</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests	1	Oral exam	1	(other)	
	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance, activity in making seminars and writing essays, taking part in the discussions during the lectures, evaluation of preliminary, written and oral exams.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Kušen, E., 2002: <i>Turistička atrakcijska osnova</i> , Institut za turizam, Zagreb.			10	yes	
	Čavlek, N. i suradnici, 2011: <i>Turizam – ekonomske osnove i organizacijski sustavi</i> , Školska knjiga, Zagreb.			10	yes	
	Marinović-Uzelac, A., 2001: <i>Prostorno planiranje</i> , Dom i svijet, Zagreb.			10	yes	
	Vidaković, P., 2003: <i>Nacionalni parkovi i zaštićena područja u Hrvatskoj</i> , Fond za stipendiranje mladih za zaštitu prirode i turizam - Zagreb 1990., Zagreb.			10	yes	
	Vukonić, B., Čavlek, N. i dr., 2001: <i>Rječnik turizma</i> , Masmedia, Zagreb.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Hall, C. M., Page, S. J., 2002: <i>The geography of tourism and recreation: environment, place, and space</i> , Routledge, London – New York.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	<ul style="list-style-type: none"> - Self-evaluation of the teaching process: revision of the teaching purposes, modernization of the course contents, teaching strategies' use, evaluation of the learning results by the students' successfulness analysis (on the basis of their own documentation) - University and/or faculty students' questionnaires - Questionnaires after employment, i. e. after the first year of work (survey of employment possibilities after the study and progress in profession) 					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Stiperski	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Factors of industry and management location	1.7. Credits (ECTS)	5
1.3. Associate teachers	Jelena Lončar	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The objective is to introduce students with development of location theory, most significant theoreticians and development of doctrines in industry location. The goal is also to get insight in the role and significance of natural and technical factors in choosing location, structural changes in industry and criteria for location selection, as in spatial models and basics of spatial economy. One of the main goals is also knowing place and significance of spatial economy in economic and development policy, industrial organisation and corporate structure and strategy.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities, and skills:</u></p> <p><u>Knowledge and understanding of:</u> The research process in geography. Theoretical basis in regional and spatial planning. Human geographic factors in spatial planning, especially population, settlements, form of population distribution, and economic factors. Subjects and factors of regional development. Models of regional development. The role of local and state government in regional development.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Cognitive, practical and generic abilities and skills:</u> Recognition and isolation of objects and processes crucial for spatial and regional planning. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Abilities needed for the field work. The ability to interpret and discuss geography-related problems and processes. Problem solving related to qualitative and quantitative geographic information The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Problem solving related to qualitative and quantitative geographic information. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - understanding of theoretical bases in location theory - interpreting the role of natural and other factors in selection of individual and group industry location - differentiate factors of contemporary requirements and needs in industry location - recognize and argument solutions of geospatial problems especially industry location - explain problems and validity of other science disciplines in the same field of work.
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Historical development of doctrins and location theories in industry J. H. Von Thünen: Origins of space economy, Model of concentric circles Predecessors of A.Weber: Historical and theoretical frame of Weber theory emergence Andreas Predohl: Marginalism and industry location, Supstitution of factors in industry location Tord Palander: Goals and methods in Palander's theory August Loesch: Basic problematics of A. Loesch theory 2. Afterwar development of theories and doctrins of industry location War and after war period Contribution of French authors to location theory Development of theories and doctrins of industry location between 1957and 1970 3. Response of industry location construction on practical concepts in locational decision making The role and significance of natural factors in location selection Structural changes in industry and criteria for location selection Choosing new places for one single industrial firm location Significance of firm size and its influence in new places of location selection Influence of technical integration and specialization on location in industry 4. Significance and location of industry in regional planning and programming Industry location and problem of undeveloped regions Industry location in depressive regions Industry location in agglomerations



DETAILED PROPOSAL OF THE STUDY PROGRAMME

5. Space in economics

Contents and division of space in economics

Location models: individual location models, models of group locations: industrial zones, industrial complexes; Specific location relevant validity

6. Spatial models

Concept and types of spatial models

Goals and tasks of spatial models

Principles of topology in space

7. Basics of polycentric system

Poles of development as organ of economic and spatial expansion

Axes of development

Theory of threshold

8. Place and significance of spatial theory in economic and development policy

Case study: Policy of development and layout of textile industry in the world

Case study: Policy of development and layout of steel industry

Case study: Policy of development and layout of automobile industry

9. Industrial clusters and economic development

Location and clusters, Starting industrial clusters, Identification of industrial clusters, Small clusters and growth policy,

Analysis of industrial clusters

10. Industrial districts (fields)

Definition and emergence

Multisector analysis

Infrastructure

11. Industrial organization

Environment and organizational structures

Location and organization

12. Corporative structure and strategy

Competition and strategy: Monopoly

Multinational (international) corporations

Restructuring of companies

Corporative form and space

Geographic concentration of economic activities

13. Innovations

National business systems

Location and innovation

Innovation networks, regions and globalization

14. Regional economy and location component of development

Regional economy – definition



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Markets and company location analysis Location of production Agglomeration (cluster) economies Life cycle of product 15. Work force: Regional labor market				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -		
2.8. Student responsibilities	Regular class attendance, passed preliminary exam, reserach discussion and independent research elaboration.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests		Oral exam	1	(other)
	Written exam	2	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	The final grade is determined on the basis of the seminar evaluation, colloquium results, written and oral exams. All elements of evaluation except colloquium must be positive.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	McDermott Taylor; Michael, 2009: <i>Industrial organisation and location</i> , Cambridge University Press, London, New York, New Rochelle, Melbourn, Sidney.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Blair, J. P., Carroll, M. C., 2009: <i>Local Economic Development; Analysis, Practices and Globalization</i> , Sage. L. Angeles, London, N.Delhi, Singapore. Boglicino, F., Pinata, M., 2011: <i>Engines of growth. Innovation and productivity in industry groups</i> , Structural and Economic Dynamics. Bodas Freitas, I. M., Marques, R. A., De Paula e Silva, E. M., 2012: <i>University-industry collaboration and innovation in emergent and mature industries in new industrialized countries</i> , Research Policy. Edwards, E. M., 2007: <i>Regional and urban Economics and Development; Theory and Methods</i> , Auerbach Publications.				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Strauss-Khan, V., Vives, X., 2009: Why and where do headquarters move?, <i>Regional science and Urban economics</i>, 39, 168-186.</p> <p>Zdrilić, I., Puvača, M., Roso, D., 2010: <i>Utjecaj globalizacije na promjene u načinu poslovanja i organizacijskoj strukturi</i>, Ekonomski vjesnik.</p>
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>University student questionnaire survey;</p> <ul style="list-style-type: none">- Self-evaluation of the class: updating and revising class goals and content and strategies of teaching, learning, and evaluating learning outcomes;- Questionnaire survey for graduated students;- Other procedures prescribed by the University and Faculty acts on internal quality assurance.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Stiperski	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	International Organizations	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding the importance and role of international organizations in today's society, economy, and especially for regional development in Croatia.		
2.2. Course enrolment requirements and entry competences required for the course	--		
2.3. Learning outcomes at the level of the programme to which the course contributes	The subject contributes to understanding of international issues of the international organizations, its importance and role in regional development. The course contributes to the development of professional competence in geography science, the development of competence for independent research and application of knowledge in determining, identifying and solving spatial problems of high complexity and the ability to recognize and separation phenomena and processes which are crucial for regional development.		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> -explore the importance of international organizations in the development of the world and the local communities -understand the policies and activities of international organizations such as the International Monetary Fund and the World Trade Organization -explore the development and activities of transnational corporations -understand the concept of Glocal - think globally, act locally, often applied by multinational corporations -explore the share of multinational corporations in the development of industrial production 		
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1 International organizations: the importance, structure, development 2 The International Monetary Fund 3 Policies of the International Monetary Fund on several examples 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>4 The World Trade Organisation 5 Other important international organizations: the World Bank, OPEC 6 The issue of governance at the global level without global government 7 transnational Corporations 8 Relation between space and multinational organizations 9 The role of multinational corporations in the world industry 10 Multinational corporations in the auto industry: the development, changes, influences 11 The role of international organizations in mass and lean manufacturing process 12 Toyota: trends in production, services in Japan and around the world 13 Toyota's global vision: raw materials, recycling, energy conservation 14 Glocal concept: think globally, act locally, using the example of international organizations 15 Sogo Shoshi: Japanese corporation in charge of foreign trade, investment and research that operate in the global market</p>					
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:			
2.8. Student responsibilities	Attending classes and seminars regularly. Written seminar based on individually collected and analyzed literature.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1,5	(other)	
	Tests		Oral exam	2	(other)	
	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	The final grade is determined on the basis of the seminar evaluation, colloquium results, written and oral exams. All elements of evaluation except colloquium must be positive.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Stiperski, Z., 2014: <i>International Organizations</i> , Internal course materials, Department of Geography, Faculty of Science, Zagreb.			10	Web	
	Stiglitz, J. E., 2004: <i>Globalizacija i dvojbe koje izaziva</i> . Algoritam. Zagreb.			10	yes	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	<p>Hurd, I., 2010: <i>International organizations: Politics, Law, Practice</i>, Cambridge University Press.</p> <p>Armstrong, D. 2004: <i>International organizations in world politics</i>, Palgrave MacMillan.</p> <p>Archer, C., 2001: <i>International organizations</i>, Routledge.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>The procedures listed in the Rule Book and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - University and college student survey - Self-evaluation of teaching: updating and revising the aims and subjects of course; updating teaching and learning strategies; evaluation of learning outcomes by analyzing students performance based on the personal data and data of the Student Administration Office - Exit polls: evaluation of graduate study - Interview with companies, institutions and institutes where students perform their practical work 		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Toskić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Analyses in GIS	1.7. Credits (ECTS)	5
1.3. Associate teachers	Luka Valožić	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+30+0 (1+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Capability for conducting analyses in GIS for practical purposes.		
2.2. Course enrolment requirements and entry competences required for the course	No conditions.		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills:</u> <i>Knowledge and understanding of:</i> The research process in geography. Theoretical basis of cartographic, statistical and graphic techniques in regional and spatial planning. Theoretical basis in regional and spatial planning. Methods and techniques in regional and spatial planning</p> <p><u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining and solving spatial problems of high complexity.. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p><u>Practical abilities and skills:</u> Applying appropriate GIS methods and techniques. Mapping of geographic data, georeferencing. Applying appropriate statistical and graphic methods in analysis and in the presentation of the results; especially quantitative analysis of transport networks.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Designing of organisational models in space. <u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - knowledge of user - spatial data interaction - independently conduct spatial analysis on given examples - differentiate and analyse vector and raster data - know and apply the methods of transformation and overlay, display and analysis of relief - overlay error correction - know and apply methods of spatial interpolation 		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Interaction between user and spatial data. Spatial analysis. 2. Selections and data mining. 3 Reclassification of vector and raster data. 4 Measurements: length, area. Polygon complexity. Slope and aspect. 5 Transformations: Buffering (vector) 6 Polygon overlay. Overlay methods. Overlay errors and their correction 7 Analysis of raster data. Methods for spatial interpolation 8 Map algebra, local operations, neighborhood operations, zonal operations 9 Overlaying, Weighted overlaying. (raster) 10 Buffering (raster) 11 Cost distance analysis 12 Digital elevation model. Display and analysis of the relief. Triangular irregular network (TIN) 13 Methods of spatial statistics. Centroid. Weighted mean center. 14 Standard deviational ellipse. 15 Point pattern analysis. Moran's index. 		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p><input type="checkbox"/> independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	-	
2.8. Student responsibilities	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam, oral exam results and quality of seminar essay.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,2	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests	2,4	Oral exam	2,4 (other)
	Written exam		Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam and oral exam results.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Longley, P. A., Goodchild, M. F., Maguire, D. J., Rhind, D. W., 2010: <i>Geographic Information Systems and Science</i> , John Wiley&Sons., Chichester.		10	yes
	Maguire, D. J., Batty, M., Goodchild, M. (ed.), 2005: <i>GIS, Spatial analysis and Modeling</i> , ESRI Press, Redlands.		5	yes
	Maantanay, J., Ziegler, J., 2006: <i>GIS for the Urban Environment</i> , ESRI Press, Redlands.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Population of Croatia	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development.	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Introduce students with the basic demographic indicators, processes and trends in the population development of Croatia.</p> <p>Insight students with the contemporary demographic state of Croatia and the terms in which it appeared.</p> <p>Develop epistemology in accordance with the particularities od Croatian demographics out of the theory of demographical transition frame.</p> <p>Insight the students with the destructional war impacts on the population structures and on the population development of Croatia.</p> <p>Explain students the meaning of Croatian demographics in contemporary spatial processes and relations.</p> <p>Introduce students with the demographic perspective sand projection proceeding in Croatia.</p> <p>Introduce students with the strategies and models of population revitalisation in Croatia.</p> <p>Explain students the role and meaning of geographical population inquiries in different forms of planning (regional, spatial, social).</p> <p>Enable students for independant scientific-research work.</p> <p>Develop the understanding of population's primary impact and action in Croatian spatial reality.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	Knowledge, abilities and skills: consideration, understanding and cognition of- Geographical theoretical and methodological concept and system.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Logics and functional spatial organization on the surface of Earth. Model projectioning of spatial relations. Cognitive, graphic, cartographic, calculative method applicability. Geographical space structure as the basal for all forms of planning. Strategic meaning of geographical space and its spatial laws. Social (civilizational) structures in the spatial organization function. Order of conditionality in space. Corelation of natural ground and social superstructure in geographical space. Common and regional spatial organization concept. Regional, spatial and social planning in geographical space. Functional and sustainable spatial organization. Strategic meaning of geographical scientific approach.</p> <p>Cognitive abilities and skills: Spatial law spotting, defining and predictioning. Spatial disproportion understanding and explaining. Interpretation, discussion and annotation of relevant geographical spatial processes, relationships, links and models. Ability of written and oral geographic scientific content and approach consideration and explication.</p> <p>Practical abilities and skills: Understanding of spatial logics. Geographical context, process, relationship and link mapping. Pertinent calculative and graphic method appliance in the consideration and explication process. Cartographic method and prediction appliance in the geographical law consideration, explication and devolution.</p> <p>Operational abilities and skills: Individual searching and database selection. The research task suggestion. Construction of research case study.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge, abilities and skills: consideration, understanding and cognition of: Theoretical and methodological concept of population geography system. Logics and population functional organization in Croatia. Model projectioning of demographic relations in Croatian geographical space.</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Demographic space structure as the basal for all planning. Methodological system in population inquiries. Strategic meaning of population for complete development of Croatia. Corelation of natural ground and population in Croatia. Common and regional spatial organization concept of Croatia. Functional and sustainable population organization. Strategic meaning of population scientific approach.</p> <p>Cognitive abilities and skills: Spotting, defining, resolving and predictioning of spatial laws which came into existance through the population acting. Demographic spatial disproportion understanding and settlement. Interpretation, discussion and annotation of relevant demographic spatial processes, relationships, links and models. Ability of written and oral demographic scientific content and approach consideration and explication.</p> <p>Practical abilities and skills: Understanding of spatial logics. Demographic content, process, relationship and link mapping. Pertinent calculative and graphic method appliance in the consideration and explication process. Cartographic method and prediction appliance in the demographic law consideration, explication and devolution.</p> <p>Operational abilities and skills: Individual searching and database selection. The research task suggestion. Construction of research case study.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Demographic aspects of Croatian development. 2. Spatial distribution and regional differences of the Croatian population. 3. Development and population movement in Croatia. 4. Intercensus and general population movement of Croatia. 5. Natural population movement of Croatia. 6. Population spatial mobility in Croatia. 7. Biodiyamic features of Croatian population. 8. Economic and social structures of Croatia. Ethnical and religious composition. 9. Population composition and movement predictions (prognosis) and projections of Croatia.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	10. Contemporary demographic trends in Croatia. Natural decrease, depopulation and dying out.				
	11. Demographic resources and potentials of Croatia.				
	12. Population substitution in Croatia.				
	13. Revitalisation models of Croatian population.				
	14. Population as the fundament for development and planning.				
	15. Criterion of population policy in Croatia.				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
					This course especially accents students discussions and development of its cognitive abilities.
2.8. Student responsibilities	Regular class attendance, passed preliminary exam, reserach discussion and independent research elaboration.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests	1	Oral exam	1	(other)
	Written exam	1	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, seminar essay, written and oral exam, mentor instructions.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Šterc, S., 1991: The general demographic cross section of the Republic of Croatia, <i>Geographical Papers</i> , 8, 1 -38.			10	yes
	Nejašmić, I., 2008: <i>Stanovništvo Hrvatske - demogeografske analize i studije</i> , Hrvatsko geografsko društvo, Zagreb.			10	yes
	Šterc, S., Komušanac, M., 2012: Neizvjesna demografska budućnost Hrvatske-izumiranje i supstytucija stanovništva ili populacijska revitalizacija...? <i>Društvena istraživanja</i> , 117 (god.21., br. 3), 693-714.			10	yes
	Wertheimer-Baletić, A., 2007: <i>Depopulacija, starenje stanovništva i populacijska politika u Hrvatskoj</i> , Rad HAZU, 45, 73 -120.			10	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	<p>Gelo, J., Akrap, A., Čipin, I., 2005: <i>Temeljne značajke demografskog razvoja Hrvatske (bilanca 20. stoljeća)</i>, Ministarstvo obitelji, branitelja i međugeneracijske solidarnosti, Zagreb.</p> <p>Wertheimer-Baletić, A., 2004: Depopulacija i starenje stanovništva - temeljni demografski procesi u Hrvatskoj, <i>Društvena istraživanja</i> 72 - 73, 631-651.</p> <p>Nejašmić, I., 1991: <i>Depopulacija u Hrvatskoj - korijeni, stanje, izgledi</i>, Globus, Zagreb.</p> <p>Frižanović, M. A., Šterc, S., 1993: Demogeografski razvoj i populacijska politika Republike Hrvatske, <i>Društvena istraživanja</i> 1, 151-165.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.		
2.14. Other (as the proposer wishes to add)	Croatian population has been, through history, developing under special terms, and nowadays it becomes strategic issue of Croatian contemporary spatial and demographic improvement.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban-social Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Society, emphasised throughout transformations in the spatial structure of the city (functional, social and morphological transformations). Particular objectives of the course are: synthesis of contemporary theory and methodology on transformations of the spatial structure of the city, which are induced by the interaction of different economic, social, cultural and political factors on global, regional and local scale. On the number of examples from various cities around the world and in Croatia, problems of a transformation of the urban-social structure will be discussed and explained. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of transformations of an urban-social structure.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish and explain approaches in the research of a social space of the city - apply theories and models of the urban-social structure, particularly the theory of the sustainable urban development - explain development of urban planning in Croatia and in the selected countries, and a contemporary development of the cities in the context of the economic transformations - explain cultural and social context of a transformations within the Croatian and the cities in selected countries - conduct a research on one of the selected topic: socio-spatial differentiation, segregation, inner-city migrations, revitalisation and gentrification in the city (using GIS) - make a researched based solution for the problems of the socio-spatial structure of the city - write a report/essay on a topic related to a changes within the socio-spatial structure of the city
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 INTRODUCTORY LECTURE – Goals and aims of the course; Approaches in the research of the social space (positivism, behaviourism, structuralism, post-structuralism); Socio-spatial dialectic; City as a stage of social, economic, cultural and political changes</p> <p>2 THEORIES AND MODELS OF URBAN-SOCIAL STRUCTURE – Chicago school and social ecology; Burgesses’ model; Hoyts’ model; Hariss-Ullmans’ model; Other theories and models</p> <p>3 URBAN PLANNING AND POLICY - Emergence of urban planning; Urban planning in selected countries (USA, Western Europe, Post-socialist cities, Croatia); Theory of sustainable urban planning; Urban-social structure and urban planning</p> <p>4 ECONOMIC CONTEXT OF TRANSFORMATIONS IN THE CITY – Pre-capitalist and pre-industrial city; Industrial city (Fordism, Keynesianism); Contemporary city (Post- fordism, Post-industrial society; Globalisation)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>5 CULTURAL CONTEXT OF TRANSFORMATIONS IN THE CITY – What is a culture? Relation culture – city; Post-colonial theory; Space, power and culture; Post-modernism and city</p> <p>6 SOCIAL CONTEXT OF TRANSFORMATIONS IN THE CITY – Morphogenesis; Morphology of the city (housing, types of buildings); Socio-demographic characteristics of the city; Social topography</p> <p>7 SOCIO-SPATIAL DIFFERENTIATION AND SEGREGATION IN THE CITY – Segregation (USA, Western Europe, Post-socialist cities, Croatia); Social polarisation</p> <p>8 SOCIO-SPATIAL STRUCTURE OF THE CITY – PROBLEMS OF DEVELOPMENT – Poverty; Homelessness; Unemployment; Social exclusion; Environmental quality</p> <p>9 SOCIO-SPATIAL STRUCTURE OF THE CITY – INSTITUTIONAL FRAMEWORK – Socio-spatial structure and public institutions; Public vs. Private; Social Justice and the City (importance of David Harvey's' research)</p> <p>10 HOUSING AND INNERCITY MIGRATIONS – Housing areas in the city; Housing market; Types of inner-city migrations; Life-cycles in the city</p> <p>11 REVITALISATION AND GENTRIFICATION 1 – Definition and meaning of the notions (revitalisation, gentrification); Emergence of revitalisation and gentrification in the city; Rent gap theory; Consumption theory; Revitalisation and gentrification in selected cities (USA, Western Europe, Post-socialist cities, Croatia)</p> <p>12 REVITALISATION AND GENTRIFICATION 2 – Field work 1 (revitalised/gentrified areas in Zagreb)</p> <p>13 QUALITY OF LIFE IN THE CITY – Definition and meaning of the notion; Objective and subjective indicators of a quality of life in the city; Spatial levels of the analysis (city, district, neighbourhood)</p> <p>14 COGNITIVE ELEMENTS IN THE CITY – City image; Mental maps; Other approaches in a research of the city image</p> <p>15 CONCLUDING LECTURE – Field work 2 (urban-social structure of Zagreb)</p>					
2.6. Format of instruction:	<p>x lectures</p> <p>x seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>x field work</p>	<p>x independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p>x work with mentor</p> <p><input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p> <p>Two fieldworks:</p> <p>a) Revitalised/gentrified areas in Zagreb (Cvjetni trg, Zavrtnica-Radnička-Vukovarska-HeinzeloVA);</p> <p>b) Urban-social structure of Zagreb</p>			
2.8. Student responsibilities	<p>Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork. GIS analysis of a selected topic.</p>					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the	Class attendance		Research		Practical training	1
	Experimental work		Report	1	(other)	
	Essay		Seminar essay		(other)	
	Tests		Oral exam	1	(other)	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written evaluation, oral examination.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Green, R. P., Pick, J. B., 2006: <i>Exploring the Urban Community: A GIS Approach</i> , Pearson Prentice Hall, Upper Saddle River.			10	yes	
	Knox, P., Pinch, S., 2006: <i>Urban Social Geography: An Introduction</i> , Pearson Education Limited, Harlow.			10	yes	
	Pacione, M., 2009: <i>Urban Geography: A Global Perspective</i> , Routledge, London (selected chapters).			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Atkinson, R., Bridge, G. (ur.), 2005: <i>Gentrification in a Global Context: The New Urban Colonialism</i> , Routledge, London (selected chapters). Paddison, R. (ur.), 2001: <i>Handbook of Urban Studies</i> , Sage, London (selected chapters).					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Sanja Klempić Bogadi	1.6. Year of the study programme	1 st
1.2. Name of the course	Contemporary Themes in Social Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Adopting basic knowledge of selected socio-geographic themes. Developing the ability of one's own critical analysis of data, understanding the processes and adopting the methodology of research in geography.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills: Knowledge and understanding of: The research process in geography. Human geographic factors in spatial planning, especially population. Subjects and factors of regional development.</p> <p>Cognitive, practical and generic abilities and skills: Application of knowledge in one's own study of socio-geographic issues. Recognition and isolation of objects and processes crucial for spatial and regional planning: migration, aging, social exclusion, segregation etc. The ability to interpret and discuss socio-geographic processes. The skills needed for evaluation, interpretation, and synthesis of relevant information and data on migration, aging, social exclusion and segregation. The skills needed for presenting scientific contents and arguments about socio-geographic processes in written and oral form Applying appropriate statistical and graphic methods in analysis and in the presentation of the results. Solving problems related to the use of different sources required in research of socio-geographic topics.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.				
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> - knowledge and understanding of different socio-geographic processes such as migration, aging, social exclusion, segregation, etc. - develop the habits and skills of correlation geography contents with contents of related fields of science - knowledge of different sources required in research socio-geographic themes - acquired skill of understanding and explaining socio-geographic processes at the local, regional, national and global level - developing communication and presentation skills, and critical and creative thinking 				
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1. Migration - basic terms and theories 2. International migration 3. Migration policies and asylum 4. Ethnicity 5. Aging 6. Formal and non-formal care for elderly persons, living arrangements 7. Employment, retirement, health care 8. Migration and aging 9. Quality of life - concept and theoretical approaches to the study 10. Quality of life of various groups of population 11. Quality of life in space/communities 12. Social inequalities 13. Poverty and deprivation 14. Social exclusion 15. Segregation 				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
2.8. Student responsibilities	Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay	0,5	Seminar essay	1	(other)
	Tests		Oral exam	3	(other)
	Written exam		Project		(other)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.10. Grading and evaluating student work in class and at the final exam	Essay, seminar essay and oral exam.		
2.11. Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Castles, S. & Miller, M. J., 2009: <i>The Age of Migration - International Population Movements in the Modern World</i> , Palgrave Macmillan.	5	yes
	Uhlenberg, P. (ur.), 2009: <i>International Handbook of Population Aging</i> , Springer.	5	yes
	Šućur, Z., 2001: <i>Siromaštvo: teorije, koncepti i pokazatelji</i> , Pravni fakultet, Zagreb.	5	yes
	Butler, T., Watt, P., 2007: <i>Understanding Social Inequality</i> , SAGE Publications, London.	5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Del Casino, V. J., 2009: <i>Social Geography: A Critical Introduction</i>, Wiley-Blackwell, Chichester.</p> <p>Mesić, M., 2002: <i>Međunarodne migracije, tokovi i teorije</i>, Societas, Zagreb</p> <p>Rapley, M., 2003: <i>Quality of Life – A Critical Introduction</i>, Sage Publications, London</p> <p>Kazepov, Y. (ur.), 2005: <i>Cities of Europe: Changing Context, Local Arrangements and Challenge to Social Cohesion</i>, Blackwell, Oxford.</p> <p>Nejašmić, I., 2005: <i>Demogeografija: stanovništvo u prostornim odnosima i procesima</i>, Školska knjiga, Zagreb</p> <p>Wertheimer-Baletić, A., 1999: <i>Stanovništvo i razvoj</i>, Mate, Zagreb.</p> <p>Musterd, S. & Ostendorf, W. (ur.), 1998: <i>Urban Segregation and the Welfare State</i>, Routledge, London.</p> <p>Pain, R., Barke, M., Fuller, D., Gough, J., MacFarlane, R., Mowl, G., 2001: <i>Introducing Social Geographies</i>, Arnold, London.</p> <p>Pacione, M. (ur.), 1987: <i>Social Geography: Progress and Prospects</i>, Croom Helm, Kent.</p> <p>Platt, L., 2011: <i>Understanding Inequalities: Stratification and Difference</i>, Polity, Cambridge.</p> <p>Podgorelec, S., 2008: <i>Ostarjeti na otoku – kvaliteta života starijeg stanovništva hrvatskih otoka</i>, IMIN, Zagreb.</p> <p>Smith, S. J., Pain, R., Marston, S. A., Jones, J. P., 2010: <i>The SAGE Handbook of Social Geographies</i>, SAGE Publications, London.</p> <p>TESG-a, special issue, 2009, 100 (4)</p>		
2.13. Quality assurance methods that ensure the acquisition of exit	The quality and success of course teaching is being registered through teacher's self-evaluation, student survey and statistical analysis of students success based on Student Office data.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

competences	
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Miodrag Roić	1.6. Year of the study programme	1 st
1.2. Name of the course	Real Estate Cadastre	1.7. Credits (ECTS)	5
1.3. Associate teachers	Baldo Stančić	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+0+15+0 (3+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge of the theory and practice of registering real estate and rights to them Understanding the characteristics of the land that is registered in the Cadastre. Gaining knowledge about the possibilities of using the registered data.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in general and in geography. Cadastre of realities: content and purpose, data input, maintenance and management, responsibility. Identification and evaluation of resources at the local, regional and national levels especially land.</p> <p>Cognitive, practical and generic skills and abilities: Application of knowledge in determining, identifying and solving the problem of high spatial complexity. Skills in presenting scientific content and arguments in writing and orally. Application mapping geographic content. Application of appropriate maps and cartographic methods in the analysis and presentation of real estate cadastre.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Solving problems related to the real estate cadastre. Information-technology skills. Work effectively, independently and in a team. Independent work required for professional advancement and professional development.					
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> - Detect the features of land for the registration in the official registers - Explain how particular features of land register in the cadastre - Connect the Registers of real estate and interests - Apply knowledge acquired in real estate market - Analyze the data registered in the cadastre 					
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1 Basic features of the cadastre. Activity in the real estate cadastre (land). 2 Jurisdictions. Authorization. Administrative structure. 3 Cadastral parcels. The content and purpose of the cadastre. Cadastral documentation. Parts of the cadastral documentation. 4 Cadastral territorial units. Technical methods. Definition, bordering and presentation of boundaries. 5 The basis of measurement and methods. Numeration of parcels. 6 Exposure data for public review. Making cadastral documentation. 7 Technical part. Book part. Land Registry Database. 8 Maintaining data. Implementation of changes. 9 Maintenance surveying - study. Collection of documents. 10 Recovery (revision) of the cadastre. 11 Retention of cadastral documents. Cadastral Office. Activity of cadastral offices. Data access. 12 Dual registration systems. Land book. Registration in land book. 13 Other registers (cadastres). Enter special properties of parts. Public goods, general goods and maritime domain. 14 Registers in the world. Cadastre management and accountability. Finance and pricing strategy. 15 An efficient data access. Interpretation of the data registered. 					
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input checked="" type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:	
					-	
2.8. Student responsibilities	Attend a class (min. 70 %), to submit the results of research, to achieve the minimum number of points on mid-term exams, written and oral exam.					
2.9. Screening student work (name the proportion of ECTS credits for each	Class attendance		Research	1	Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay		(other)	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Tests	1	Oral exam	1	(other)	
	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	During classes: - Research and practical work - mid-term exams / quizzes (possible exemption from the written part of the exam) Final exam: - Written 50 % - Oral 50 %					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Roić, M., 2012: <i>Upravljanje zemljišnim informacijama-katastar</i> , Sveučilišni udžbenik, Geodetski fakultet, Zagreb			10 (AGG, Kačićeva 26)		yes
	Roić, M., 2011: <i>Katastar nekretnina</i> - interna skripta, Geodetski fakultet, Zagreb.			10		yes
	Roić, M., Medić, V., Fanton, I., 1999: <i>Katastar zemljišta i zemljišna knjiga</i> . Skripta, Geodetski fakultet, Zagreb 1999.			10		yes
	Official Gazette: Regulations			10		yes
2.12. Optional literature (at the time of submission of study programme proposal)	Roić, M., 2005: <i>KATASTAR 2014 - VIZIJA BUDUĆIH KATASTARSKIH SUSTAVA</i> , Geodetski fakultet, prijevod publikacije FIG-a. Roić, M., Fjalestad, J. B., Steiwer, F., 2008: <i>Regionalna studija o katastru</i> , Državna geodetska uprava, Zagreb.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Anonymous student surveys and other methods of quality assurance system at the University of Zagreb.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Anita Filipčić	1.6. Year of the study programme	1 st
1.2. Name of the course	Applied Climatology	1.7. Credits (ECTS)	5
1.3. Associate teachers	Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	One of the most important objectives is to determine the way the climate influence on the development and relationships between physical and social elements. One must determine the predictable changes in geographical systems influenced by climatic changes as well as the climatic consequences of anthropogenic influences and influences of natural hazards. Getting and developing of research competencies.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities, and skills:</u></p> <p><u>Knowledge and understanding of:</u> The research process in geography. The integrity of geographical area. Climate influence on other geographical elements. Climate influence on human and human activities. The role of natural elements in spatial planning, especially of climate. Protection of environment and nature, and spatial planning of protected areas.</p> <p><u>Cognitive, practical and generic abilities and skills:</u> Applying knowledge of climatology in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The ability to interpret and discuss climate changes and climatic consequences of antropogenic influences and climatic hazards.</p> <p>The skills needed for evaluation, interpretation, and synthesis of climate data and climate changes.</p> <p>The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p>Mapping of climatic data and climate change consequences..</p> <p>Applying appropriate statistical and graphic methods in analysis and in the presentation of climate research.</p> <p>Applying appropriate maps and cartographic methods in analysis and in the presentation of the climate research.</p> <p>Applying appropriate methods of spatial planning.</p> <p>Functioning effectively as an individual and as a team member.</p> <p>Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowing, understanding and independent realization of statistical analyses of climatic data.</p> <p>Knowing, understanding and independent explanation of climate influence on hidrological processes.</p> <p>Knowing, understanding and independent explanation of climate influence on geomorphological processes.</p> <p>Knowing, understanding and independent explanation of climate influence on vegetation.</p> <p>Knowing, understanding and independent explanation of climate influence on fauna.</p> <p>Knowing, understanding and independent explanation of climate influence on human.</p> <p>Knowing, understanding and independent interpretation of climate influence on human activities.</p> <p>Knowing, understanding and independent interpretation of urban climate.</p> <p>Knowing, understanding and independent explanation of climate extremes, differing them from climate change.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Applied climatology: definition and development 2. The research methods in applied climatology. The measurements of climatic elements 3. The statistical analyse of climatic data. Climatic models 4. Climate changes and hidrological processes 5. The climate influence on geomorphological processes 6. Climate and vegetation 7. Climate and fauna 8. Climate and human 9. The climate influence on urban planning and architecture 10. The climate influences on agriculture 11. The climate influence on industrial activities 12. The climate influence on transport services 13. Climatic changes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	14. The urban climate 15. Climatic extremes			
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:	
2.8. Student responsibilities	Attendance to lectures and seminar presentations. Seminar paper and presentation.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.25	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	0.75 (other)
	Tests		Oral exam	(other)
	Written exam	4.0	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar writing and presentation, written exam.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Thompson, R. D., Perry, A. (ed.), 1997: <i>Applied Climatology</i> . Routledge. London. 352 pp.		5	yes
	McLeman, R. A., 2013: <i>Climate and Human Migration: Past Experiences, Future Challenges</i> . Cambridge University Press, Cambridge.		5	yes
	Dahl, T., 2009: <i>Climate and Architecture</i> . Routledge, New York.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Articels from relevant publications.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.			
2.14. Other (as the proposer wishes to add)				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Danijel Orešić	1.6. Year of the study programme	1 st
1.2. Name of the course	Natural Hazards	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding of main types of natural hazards, of the probability of their occurrence, expected and real damage. Understanding of prevention possibilities and of management possibilities after disasters.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities, and skills:</u></p> <p><i>Knowledge and understanding of:</i></p> <p>The research process in geography. The role of natural elements in spatial planning, especially of climate, water and relief. Protection of environment and nature, and spatial planning of protected areas.</p> <p><u>Cognitive abilities and skills:</u></p> <p>Applying knowledge in determining, defining, and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for spatial and regional planning. The ability to interpret and discuss geography-related problems and processes. The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form.</p> <p><u>Practical abilities and skills:</u></p> <p>Applying appropriate statistical and graphic methods in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis and in the presentation of the results. Applying appropriate methods of spatial planning. Designing of organisational models in space.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding of the definitions and the terminology in the field of natural hazards. Recognising of types of natural hazards, understanding of their occurrence. Knowledge and ability of accessing the probability of main types of natural hazards. Understanding and interpreting of natural hazards probability maps. Knowledge of prevention methods. Ability to cooperate in planning and proposing risk management measurements and measurements of reducing effects of natural catastrophes. Ability to cooperate in planning of spatial management immediately after catastrophes. Ability of simple damage assessments. Ability of independent browsing and consulting of relevant literature.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Natural hazards – definitions, terminology. 2 Classifications according to origin, location, size and time scales. 3 Trends in natural catastrophes. 4 Paradigms in natural hazards. 5 Natural exposition and vulnerability to natural hazards. 6 Risk assessments and risk management. 7 Reduction of effects of catastrophes. 8 – 15 Types of hazards, causes, historic records, examples, consequences, reactions, possibilities of prediction and prevention: 8 Geologic hazards. 9 Geomorphologic hazards. 10 - 12 Hydrometeorologic hazards. 13 Marine hazards. 14 Biologic hazards. 15. Chronic and rare global hazards.</p> <p>Seminar: written seminar paper on a specific hazard, case study.</p>	
<p>2.6. Format of instruction:</p>	<p><input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning</p>	<p><input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p> <p>2.7. Comments: -</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> field work			
2.8. Student responsibilities	Attendance to class, seminar paper.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	1,25 (other)
	Tests		Oral exam	(other)
	Written exam	3,25	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar evaluation, written examination, oral examination optional. Attendance to class 10 % + seminar paper 25 % + written examination 40 - 65 %, oral examination 0 - 25 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Smith, K., Petley, D. N., 2009: <i>Environmental Hazards, Assessing Risk and Reducing Disaster</i> . Routledge, 5th edition.		5	yes
	Bryant, E., 2006: <i>Natural Hazards</i> . Cambridge Univ. Press, 2nd edition.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles in scientific literature and on internet.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban Regions	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Surroundings, emphasised throughout transformations in the spatial structure of the surroundings (functional, social and morphological transformations). A particular objective of the course is: synthesis of contemporary theory and methodology on the transformations of the urban regions. On the number of examples from various urban regions around the world and in Croatia, problems of a development and the importance of the research with possible application in the field of regional and urban planning will be discussed. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of a transformations and a development of the urban regions.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish types of the urban regions - explain and apply models and methods in the research of the urban regions - explain the development of urban regions in Croatia and in the world, within the context of regional and urban planning, particularly in the developed countries (Germany, United Kingdom, USA etc.) - select an urban region in Croatia and to conduct a research – analyse functional, morphological and social transformations, size, population development and migrations (using GIS) - write a report/essay on a topic related to transformations in the urban regions of Croatia
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 INTRODUCTORY LECTURE – Goals and aims; Students obligations; Schedule of written and oral exams; Definitions of main notions and terms 2 CITY AND SURROUNDINGS – City and its surroundings; Emergence of urban regions; Suburbanisation 3 TYPES OF URBAN REGIONS – Morphological urban regions; Socioeconomic urban regions; Selected examples from the world and Croatia 4 THEORIES AND MODELS OF URBAN REGIONS – Hay-Hall model; Model of urban cycles; Soja’s model 5 METHODS IN THE RESEARCH OF URBAN REGIONS – Analyses of the settlement (urban) network 6 URBAN REGIONS IN EUROPE 1 – Emergence of urban regions in Europe; United Kingdom (MELA – Metropolitan Economic Labour Areas, SMELA – Standard Metropolitan Labour Areas), Germany (Stadtregion, Verdichtungsräume, Ballungsgebiete); Randstad Holland in the Netherlands; Examples from a selected countries 7 URBAN REGIONS IN EUROPE 2 – European urban regions and regional policy; Management of monocentric and polycentric urban regions; ESPON (European Spatial Planning Observation Network) 8 URBAN REGIONS IN USA – Emergence of urban regions; Metropolitan Statistical Area; Micropolitan Statistical Area



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>9 DEVELOPMENT OF THE URBAN REGIONS IN A SELECTED COUNTRIES OF THE WORLD – Canada; Japan; Less developed countries</p> <p>10 URBAN REGIONS AND GLOBALISATION – Influence of the globalisation on a development of the urban regions; Global urban system; Mega-cities</p> <p>11 URBAN REGIONS IN CROATIA 1 – Emergence and development of the urban regions in Croatia; Models in the research of the urban regions; Size and structure of the urban regions</p> <p>12 URBAN REGIONS IN CROATIA 2 – Population development; Socioeconomic changes; Residential suburbanisation</p> <p>13 URBAN REGIONS IN CROATIA 3 – Migrations – in-immigration, daily commuting (migrations)</p> <p>14 URBAN REGIONS IN CROATIA 4 – Urban regions within the context of the regional and urban planning</p> <p>15 FIELD WORK – selected examples of the(sub) urbanization in the Urban region of Zagreb</p>					
2.6. Format of instruction:	x lectures x seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning x field work		x independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory x work with mentor <input type="checkbox"/> (other)		2.7. Comments: Field work in the Urban region of Zagreb at the end of a semester.	
2.8. Student responsibilities	Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	2	Research		Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written evaluation, oral examination.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Hall, P., 2002: <i>Urban and Regional Planning</i> , Routledge, London.				5	yes
	Herrschel, T., Newman, P., 2002: <i>Governance of Europe's City Regions: Planning, Policy and Politics</i> , Routledge, London.				5	yes
	Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i> , Školska knjiga, Zagreb.				10	yes
	Selected articles from Croatian and international geographic journals.					yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	<p>Hall, P., Pain, K. (ur.), 2006: <i>The Polycentric Metropolis: Learning from Mega-City Regions in Europe</i>, Earthscan, London.</p> <p>Hoggart, K. (ur.), 2005: <i>The City's Hinterland: Dynamism and Divergence in Europe's Peri-Urban Territories</i>, Ashgate, Aldershot.</p> <p>Taylor, P. J., 2004: <i>World City Network: A Global Urban Analysis</i>, Routledge, London.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Lukić	1.6. Year of the study programme	1 st
1.2. Name of the course	Heritage and Tourism in Rural Areas	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>General aim: Knowledge of heritage valorization in tourism and their role in integral development of rural areas.</p> <p>Educational aims: knowledge about human, social and natural resources and their usage in valorizing heritage and developing rural tourism. Understanding the role of rural tourism as a developmental factor in integral planning of rural areas. Acquiring basic knowledge in planning rural tourist product and developing rural tourist destination.</p> <p>Functional aims: Developing spatial and logical way of thinking and abilities to research influences of tourism on development and transformation of rural areas.</p> <p>Developing positive attitudes towards 1) importance of protection of natural and cultural heritage and 2) importance of sustainable use of heritage in economic development.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i></p> <p>Theoretic and methodologic geography system.</p> <p>The research process in general and in geography.</p> <p>Specific statistic and graphic techniques.</p> <p>Evaluation of natural elements, social components, and cultural offers in tourism.</p> <p>Cultural heritage as a spatial phenomenon.</p> <p>The relationship between natural and cultural heritage and tourism, specifically selective forms of tourism: ecotourism, geotourism, rural tourism, cultural tourism, etc.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Concept of sustainable development in tourism and recreation industries.</p> <p><u>Practical abilities and skills:</u> Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals.</p> <p><u>All cognitive and generic skills and abilities defined in programme.</u></p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding mutual dependencies between rural areas, heritage and tourism. Understanding and knowledge of contemporary transformation of rural areas and the role of tourism in their sustainable development. Understanding the importance of creating identity and perceptions of rural areas for tourism development. Understanding the concept, principles and specificity of rural tourism and its varieties. Understanding and knowledge of heritage as a resource in rural tourism. Understanding and knowledge of tourism as an element of diversification of rural areas. Understanding the process of planning and managing rural tourist destination.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction (aims, objectives and formats of instruction). Introducing key terms and their mutual dependencies: rural areas, heritage and (rural) tourism.</p> <p>2 Roles and functions of rural areas in post-industrial society. Restructuring of rural areas. Productivism, postproductivism and diversification in rural areas. Commodification of rural areas.</p> <p>3 Identity, perceptions and geographical marketing of rural areas. Images and perceptions of rurality and their role for tourism development. Popular culture and media as push factors and tourism. Authenticity in rural tourism.</p> <p>4 Rural tourism. Definition. Historical development (Europe and Croatia). Legal framework. Characteristics and specificities. Researching rural tourism.</p> <p>5 Heritage as a resource in developing rural tourism (I). Role of heritage in rural tourism. Identity as heritage. Cultural landscape as heritage. Material culture as heritage.</p> <p>6 Heritage as a resource in developing rural tourism (II). Authentic food products as heritage. Festival and manifestations as heritage. Economic valorization of heritage in rural areas.</p> <p>7 Developmental factors of rural tourism. Supply and demand. Demographic characteristics. Normative, organizational, educational, financial and other factors..</p> <p>8 Rural tourism forms. Agritourism. Hunting and fishing. Health and wellbeing tourism. Sport tourism. Educational tourism. Adventure tourism. Transit tourism. Gastronomical and enogastronomical tourism. Tourism in protected areas. Cultural tourism. Other forms of tourism in rural areas.</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>9 Geographical aspects of mutual dependencies between tourism and agriculture. Detailed study on farm tourism. Wine roads.</p> <p>10 Second-homes in rural areas. Historical development of second-homes phenomenon in rural areas. Economic and non-economic impacts of second homes. Regional differences in second home in rural Croatia.</p> <p>11 Rural tourism in Europe and Croatia – selected case studies.</p> <p>12 Development and current state of tourism in rural areas of Croatia. Analysis of regional differences.</p> <p>13 Impacts of (rural) tourism on spatial transformations. Socio-economic, functional and physiognomic transformation of rural areas. Impacts of tourism on perceptions of rurality.</p> <p>14 Tourism and sustainable development of rural areas. Tourism as an instrument in rural development. Typologies of rural areas. Tourism as an element of development in rural periphery. Role of rural tourism in developing tourist destinations. Rural tourism and recreation in outskirts of the city.</p> <p>15 Planning and managing tourism as an element of integral development of rural areas. Actors of rural tourism development. Concepts and principles in planning and management of tourism in rural areas. Rural tourism destination development (resources analysis, networking, marketing, research).</p>				
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work	X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -		
2.8. Student responsibilities	Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay	1	Seminar essay	1	(other)
	Tests		Oral exam	1	(other)
	Written exam	1	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance (10 %), essay (10 %), seminar and project (20 %), written and oral exam (60 %).				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Butler R., Hall C. M., Jenkins J. (ur.), 1998: <i>Tourism and Recreation in Rural Areas</i> ,			5	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	John Wiley & Sons, Chichester (selected chapters)		
	Čorak, S., Mikačić, V., 2006: <i>Hrvatski turizam: plavo, bijelo, zeleno</i> , Institut za turizam, Zagreb (selected chapters)	10	yes
	Demonja, D., Ružić, P., 2011: <i>Ruralni turizam u Hrvatskoj, s hrvatskim primjerima dobre prakse i europskim iskustvima</i> , Meridijani, Samobor i Institut za međunarodne odnose, IMO, Zagreb	10	yes
	Lukić, A., 2012: <i>Mozaik izvan grada - tipologija ruralnih i urbaniziranih naselja Hrvatske</i> , Meridijani, Samobor (selected chapters)	15	yes
	Woods, M., 2011: <i>Rural</i> , Routledge, Oxon (selected chapters)	5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Atkinson, D., 2008: Baština, u Atkinson, D., Jackson, P., Sibley, D., Washbourne, N. (ur). <i>Kulturna geografija, kritički rječnik ključnih pojmova</i>, Disput, Zagreb (189-199).</p> <p>Baćac, R., 2011: <i>Priručnik za bavljenje seoskim turizmom, Korak po korak od ideje do uspješnog poslovanja</i>, Ministarstvo turizma Republike Hrvatske, Zagreb.</p> <p>Hall, D., Roberts, L., Mitchell, M. (ur.), 2003: <i>New Directions in Rural Tourism</i>, Ashgate, Aldershot (selected chapters).</p> <p>Lukić, A., 2001: Ruralni turizam – čimbenik integralnog razvitka ruralnih prostora Hrvatske: od mašte do stvarnosti, <i>Geografski horizont</i> 1/2, 7-31.</p> <p>Woods, M., 2004: <i>Rural Geography: Processes, Responses and Experiences in Rural Restructuring</i>, Sage Publications, Thousand Oaks (selected chapters).</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Martina Jakovčić	1.6. Year of the study programme	1 st
1.2. Name of the course	Geography of Trade	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Aim of the course is to gain knowledge on geography of consumption with the special attention to retail geography as on of consumption activities. Understand factors of development of consumption, contemporary places of consumption and main consumption activities. Understand contemporary function of consumption spaces. Widen once knowledge and skills in social geography. Apply knowledge and skill in cartography, economic geography and methods in field work and practice.</p> <p>Understand and explain causes and consequences of geographical distribution of consumption activities.</p> <p>Understanding complex systems of consumption and its impact on consumer behaviour.</p> <p>Understanding complex system of consumption and its impact on consumer behaviour.</p> <p>Understand role of location of consumption spaces and especially shops and shopping centres on functional and spatial structure of the city and development of tourism.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>The research process in geography.</p> <p>Specific statistic and graphic methods.</p> <p>Application of knowledge in determination and resolving of spatial problems of high level complexity.</p> <p>Ability to explain and discuss relevant and contemporary geographic phenomena and processes, complex systems of consumption and its impact on consumer behaviour, complex system of consumption and its impact on consumer behaviour.</p> <p>Understand role of location of consumption spaces and especially shops and shopping centres on functional and spatial structure of the city and development of tourism.</p> <p>Skills needed to evaluate, information and data on impact of location of consumption space and especially retail and shopping centres on spatial and functional structure of the city and its role on development of tourism.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Skill to present scientific results in oral and written form. Skills needed for the filed work. Mapping. Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain development of consumption as activity Compare importance of consumption spaces on spatial structure of the city Differ and understand characteristics and specifics of location of certain consumer activity Know and explain development, location and function of shopping centres on chosen examples in Croatia and the world. Use relevant methods in collection, processing and distribution of spatial data. Apply knowledge in determining, and solving spatial problems of medium level complexity.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Geography of consumption – definition, methods, trends of development 2. Geographic research of consumption and consumer behaviour 3. Development of consumption from industrial revolution till 1960 4. Development of consumption from 1960s till today. 5. Consumption systems and consumption activities – retail 6. Consumption systems and consumption activities – eating, fun, education and culture 7. Street as a consumption space – alternative economic spaces 8. Shopping centre as a consumption spaces – term, definition, development, location, function 9. Shop as a consumption space – retail location in the city 10. Consumer types 11. Impact of culture, and subcultures in consumer behaviour 12. Development of consumption in Croatia from 1945 and 1990 13. Development of consumption in Croatia from 1990 14. Globalization and contemporary consuming culture 15. Future trends and development of consumption 	
<p>2.6. Format of instruction:</p>	<input type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other) <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>2.7. Comments:</p> <p>-</p> </div>
<p>2.8. Student responsibilities</p>	<p>Regular attending of lecture and seminars. Active participation in lectures. Preparation of seminar essay. Application of</p>	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	cartographic methods in field research (organization and conduction of mapping). Oral and written report on the results of field work.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1,5	(other)
	Tests		Oral exam		(other)
	Written exam	3,0	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Notes on attendance of lectures, seminars and mapping and noting student activities. Final mark will be a result of a written exam and seminar essay.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Mansvelt, J., 2005: <i>Geographies of Consumption</i> , Sage Publications, London, 190 pp.			5	
	Schiffman, L. G., Kanuk, L. L., 2004: <i>Ponašanje potrošača</i> , Mate, Zagreb, chapter 2, 5, 12 i 13.			10	
	Cross, G., 2010: <i>An all-consuming century</i> , Columbia University Press, New York, chapter 5, 6, 7.			5	
	Smart, B., 2010: <i>Consumer society, critical issues and environmental consequences</i> , Sage Publications, London.			5	
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Zukin, S., 2005: <i>Point of purchase: how shopping changed American culture</i>, Routledge, New York, 325 pp.</p> <p>Miller, D. et al, 1998: <i>Shopping, place and identity</i>, Routledge, London, 214 pp.</p> <p>Ritzer, G., 1999: <i>McDonaldizacija društva. Istraživanje mijenjajućeg karaktera suvremenog društvenog života</i>, Jesenski i Turk, Zagreb, 326 pp.</p> <p>Duda, I., 2005: <i>U potrazi za blagostanjem, O povijesti dokolice i potrošačkog društva u Hrvatskoj 1950-ih i 1960-ih</i>, Srednja Europa, Zagreb.</p> <p>Duda, I., 2010: <i>Pronađeno blagostanje : Svakodnevni život i potrošačka kultura u Hrvatskoj 1970-ih i 1980-ih godina</i>, Srednja Europa, Zagreb.</p>				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				
2.14. Other (as the proposer wishes to add)	-				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Stiperski, Darko Stilinović	1.6. Year of the study programme	1 st
1.2. Name of the course	Cross-border cooperation and regional policy EU	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Overview of the EU funds at disposal to the Republic of Croatia as a new Member State in the context of Cohesion policy		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Proposed programme contributes to the familiarity of students with EU Structural funds (ERDF & ESF) as well as Cohesion fund while gaining necessary methodology for utilisation of EU funding, based on the project management. The purpose of the subject is to use concrete examples for project development by Department of Geography as a potential beneficiary in the context of regional development and territorial cooperation issues. The value of the project development method is basically of twofold: on individual level of attendees bringing them closer to the idea of project management as a tool for young scientists and researchers and on the level of the Department of Geography in the sense of future actions in regards to various possibilities for project application/s. Furthermore, the subject explores possibilities of EU funds benefits for Geography as a whole and gives insight in functioning and organisation of basic EU bodies, such are European Commission (including relevant DG's), European Parliament and European Council.</p> <p>The added value of the subject is in modernising the programme of the Department of Geography in the light of Bologna Reform. At the same time it serves as a practical link between various themes ranging from the social to physical Geography and implementation in the field of regional and Cohesion policy.</p> <p>Finally, the subject offers to students new possibilities for employment in Croatian and EU public sector (administration) and private sector (i.e. regional development agencies, ngo's etc).</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> - understanding Cohesion policy of the EU; - understanding the relationship between Croatian regional policy and EU regional policy; - understanding the concept of the EU Territorial cooperation; 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<ul style="list-style-type: none"> - understanding methodology of the EU project management; - understanding the role and functioning of the state administration bodies and regional self government bodies in the RoC engaged in utilising EU funding. 				
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1. Introduction in the EU: institutions, history, the process of integration of the RoC ; 2. Preaccession funds: CARDS, PHARE, ISPA, SAPARD; 3. Preaccession fund IPA: five components; 4. INTERREG 2004 – 2006 in Croatia; 5. IPA Cross border cooperation with EU Member States 2007/2013; 6. IPA Cross border cooperation with Non-EU Member States 2007/2013; 7. Transnational and Interregional cooperation 2007/2013; 8. Regional and Cohesion policy 9. Strategy of Regional Development and the Law on Regional Development; 10. Structural Funds (ERDF and ESF) and Cohesion fund; 11. Objective 3 Territorial cooperation 2014 - 2020 12. New regional associations: macroregions and EGTC's 13. Decision making in the joint bodies (JMC, JTS) 14. Project Cycle Management (PCM) 15. Development of Project Application 				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
					-
2.8. Student responsibilities	Participation at lectures and project development exercise				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1,5	(other)
	Tests		Oral exam	2	(other)
	Written exam	1	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Written exam and course work.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the	Availability via other media



DETAILED PROPOSAL OF THE STUDY PROGRAMME

		library	
	Stilinović, D., 2014: Cross-border cooperation and regional policy <i>EU</i> , Internal course materials, Department of Geography, Faculty of Science, Zagreb.	10	yes
	<i>Hrvatska i Europska unija - Prednosti i izazovi članstva</i> , Sanja Tišma, Višnja Samardžija, Krešimir Jurlin (eds.), 2012: IMO, Zagreb.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Adams N., Cotella G., Nunes R. (eds.), 2011: <i>Territorial development, cohesion and spatial planning: knowledge and policy development in an enlarged EU</i>, Abingdon, Routledge.</p> <p>Wassenberg B., Beck J. (dir.), 2011: <i>Living and researching cross-border cooperation / Volume 3, The European dimension</i>, Stuttgart, Steiner.</p> <p>Andrew E., 2005: <i>EU Regional Policy</i>, Richmond, Richmond Law and Tax Ltd.</p> <p>Andrew E., 2005: Cohesion policy and European Integration – Building multi level Governance, <i>EU Regional Policy</i>, Richmond, Richmond Law and Tax Ltd, Oxford Univeesity press.</p> <p>Puljiz, J., 2011: <i>Analiza regionalnih kapaciteta za korištenje EU fondova na županijskoj razini</i>, IMO, Zagreb.</p> <p>Zakonski, podzakonski akti i strategije Ministarstva regionalnoga razvoja i fondova Europske unije, dostupni na: http://www.mrrfeu.hr/default.aspx?id=8</p> <p>Zakonski, podzakonski akti, strategije i programi Europske unije dostupni na: http://ec.europa.eu/regional_policy/what/future/proposals_2014_2020_en.cfm http://www.interact-eu.net/</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>The procedures listed in the Rules and Manual on Quality Management at the Faculty of Science of the Zagreb University:</p> <ul style="list-style-type: none"> -university and faculty conducted student questionnaire -self-evaluation of classes: updating and revising the objectives and subject content as well as the strategies and methods of teaching; evaluating learning outcomes by monitoring and analyzing success of students in tests, tasks, seminar work, written and oral exams - exit surveys for graduates - telephone and mail surveys of graduated students after the first year of employment (tracking employment after graduation and success in the profession) -Interviews with companies, institutes and other institutions in which students completed their internships 		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st
1.2. Name of the course	Geography of Karst	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Acquiring knowledge and developing skills on the structures, processes, and problems and opportunities for sustainable development of karst areas in Croatia and abroad.</p> <p>Understanding the principles of sustainable development and problems of the development of karst areas, and their place and role in regional development and spatial planning. Adoption of research methods and techniques for sustainable development of karst areas.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge and skills</u></p> <p><u>Knowledge and understanding:</u></p> <p>Process of research work in the study of karst areas.</p> <p>Special features of karst areas in regional planning.</p> <p>Environmental protection and management of karst areas.</p> <p><u>Cognitive, practical and generic skills and abilities:</u></p> <p>Application of knowledge in determining, identifying and solving the problem of high spatial complexity in karst areas.</p> <p>Ability to identify and separation phenomena and processes in the Croatian karst areas important for spatial and regional planning.</p> <p>Ability to interpret and discuss the evolution of landscape, environmental degradation and sustainable development issues of</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Croatian karst areas. Skills in presenting scientific content and arguments in writing and orally. The skills needed for field work. Application mapping geographic content. Choosing appropriate prediction methods of changes in the karst areas of Croatia. Application of the model and creating sustainable development projects karst areas. Work effectively, independently and in a team. Independent work required for professional advancement and professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Ability to:</p> <ul style="list-style-type: none"> - Define and explain the objects, approaches, methods, and research purposes karst geography - Explain the elements, characteristics and distribution of karst - Identify and evaluate the role of relief and visual elements as well as the factors of karst areas - Explain the particularities of karst ecosystem - Interpret the evolution of the landscape and environmental degradation in karst regions - Recognize the problems of sustainable development of karst areas - Identify and implement models for sustainable development of karst areas - Create a project for sustainable development of karst areas - Explain the benefits and management of protected areas in Dinaric karst in Croatia - Evaluate the educational potential of karst and karst areas
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction: The scientific basis of the subject 2. Geospatial System of Karst 3. Relief as an element and factor in karst areas 4. Water as an element and a factor in karst areas 5. Environment and ecosystems in karst areas 6. Population and social functions as factors in karst areas 7. Role of historical and spatial development in environmental degradation and the evolution of the landscape of karst areas 8. Problems of sustainable development in karst areas in modern conditions 9. Geographical features of karst areas in Europe 10. Geographical features of karst areas in non-European continents 11. Croatian karst area 12. Croatian Dinaric karst: case studies of sustainable development issues 13. Protected areas of the Dinaric Karst: meaning and problems of sustainable management 14. Models and projects for sustainable development in karst areas



DETAILED PROPOSAL OF THE STUDY PROGRAMME

15. Didactic potential of karst and karst areas				
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)	2.7. Comments: -	
	2.8. Student responsibilities Regular school attendance. Homework and seminar work. Leaving the seminar before the study group and to participate in thematic discussions			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	0,5 (other)
	Tests		Oral exam	2 (other)
	Written exam	2	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Regularity of attendance and class participation to 10 % + seminar 20 % + written exam 30 % + oral exam 40 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Roglić, J., 2004: <i>Krš i njegovo značenje</i> , sabrana djela, 360 pp.		10	Da
	Matas, M., 2009: <i>Krš Hrvatske: geografski pregled i značenje</i> , Hrvatsko geografsko društvo – Split, Split, 264 pp.		10	Da
	Pravdić, V., 2003: Održivi razvoj: značenje, poimanje i primjena, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 285-309.		10	Da
	Pejnović, D., 2005: <i>Održivi razvoj naseljenosti na krškom području Hrvatske</i> , Zbornik prvog savjetovanja Hrvatski krš i gospodarski razvoj (ur. B. Biondić i J. Božičević), Centar za krš, Gospić/Zagreb, Zagreb, 19-31.		10	Da
	Butula, S., 2003: Planiranje za održivi razvoj: značenje različitosti društvenog interesa za krajobraz, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 427-441.		10	Da
2.12. Optional literature (at the time of submission of study programme proposal)	Brinkmann, R., 2010: Karst and sustainability in Florida, U.S.A., u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i> , International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 25-32. Dörflinger, N., Plagnes, V., Kavouri, K., 2010: PaPRIKa a multicriteria vulnerability method as a tool for sustainable management of karst aquifers – Example of application on a test site in SW France, u: <i>Sustainability of the karst environment -</i>			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><i>Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 49-56.</p> <p>Guo Fang, J. G., 2010: The resources, environment and development in Fengshan Geopark karst area, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 75-82.</p> <p>Maleković, S., Tišma, S., Farkaš, A., 2010: Capacity for managing local development in karst areas, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 129-136.</p>
<p>2.13. Quality assurance methods that ensure the acquisition of exit competences</p>	<p>The procedures set forth in the Rules and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - University and college student survey - Self-evaluation of teaching: updating and revising the objectives and subject content and teaching and learning strategies, assessment of learning outcomes analysis of the student's success in the tasks they perform, the colloquia, seminars, written and oral exams - Exit polls for graduates - Telephone and mail surveys after the first year of service (tracking employment after graduation and success in the profession) - Interview with companies, institutes and institutions in which students perform internships
<p>2.14. Other (as the proposer wishes to add)</p>	<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

List of required and elective courses and/or modules with class hours and ECTS credits, course: HERITAGE AND TOURISM

LIST OF COURSES									
Year of study: 1st									
Semester: Winter									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective	
	Introduction to Scientific Research	S. Šterc	1	0	1	0	3	required	
	Research Methods in Human Geography	B. Fuerst-Bjeliš, L. Šakaja	2	2	0	0	5	required	
	Tourism Valorisation of Heritage	V. T. Opačić	3	2	0	0	7	required	
	Environmental History	B. Fuerst-Bjeliš	2	2	0	0	5	required	
	Elective course 1						5	required	
	Elective course 2						5	required	
	Climate and Tourism	A. Filipčić	2	1	0	0	5	elective	
	Karst Gemorphology and Hidrography	N. Bočić	2	1	0	0	5	elective	
	Analyses in GIS	A. Toskić	1	0	2	0	5	elective	
	Historical GIS	B. Fuerst-Bjeliš, A. Durbešić	1	2	0	0	5	elective	
	Tourism Destination Management	A. Tomašević	2	1	0	0	5	elective	
	Social Ecology	V. Lay	2	1	0	0	5	elective	

LIST OF COURSES									
Year of study: 1st									
Semester: Summer									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective	
	Physical Geography in Tourism	N. Buzjak, A. Filipčić, D. Orešić	2	2	0	0	5	required	
	Elective course 3						5	required	
	Elective course 4						5	required	
	Elective course 5						5	required	
	Elective course 6						5	required	
	Fieldwork in Geography IV	According to decision of Geography					5	required	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

		Department Council						
	Urban-Social Geography	V. Prelogović	2	1	0	0	5	elective
	Urban Regions	V. Prelogović	2	1	0	0	5	elective
	Geography of Trade	M. Jakovčić	2	1	0	0	5	elective
	Geographical Aspect of Recreation	V. T. Opačić	2	1	0	0	5	elective
	Heritage and Tourism in Rural Areas	A. Lukić	2	1	0	0	5	required
	Cultural Landscapes: Protection and Management	I. Zupanc	2	1	0	0	5	elective
	Coast and Coastal Water Management	D. Orešić	2	1	0	0	5	elective
	Croatian Islands - Sociogeographic Themes	K. Bašić	2	1	0	0	5	elective
	Geography of Karst	D. Pejnović	2	1	0	0	5	elective

LIST OF COURSES

LIST OF COURSES									
Year of study: 2nd									
Semester: Winter									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective	
	Geography of Cultural Offer	L. Šakaja	2	2	0	0	5	required	
	Urban Historical Geography	I. Zupanc	2	2	0	0	5	required	
	Forms of Tourism	V. T. Opačić	2	2	0	0	5	required	
	Practice (90 hours/year)						5	required	
	Elective course 7						5	required	
	Graduate seminar		0	5	0	0	5	required	
	Climate and Tourism	A. Filipčić	2	1	0	0	5	elective	
	Karst Gemorphology and Hidrography	N. Bočić	2	1	0	0	5	elective	
	Analyses in GIS	A. Toskić	1	0	2	0	5	elective	
	Historical GIS	B. Fuerst-Bjeliš, A. Durbešić	1	2	0	0	5	elective	
	Tourism Destination Management	A. Tomašević	2	1	0	0	5	elective	
	Social Ecology	V. Lay	2	1	0	0	5	elective	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

LIST OF REQUIRED COURSES

Year of study: 2nd

Semester: Summer

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/ elective
	Master thesis with thesis defense	Mentor according to student's choice					30	required



DETAILED PROPOSAL OF THE STUDY PROGRAMME

REQUIRED COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st
1.2. Name of the course	Introduction to Scientific Research	1.7. Credits (ECTS)	3
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+15+0 (1+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Enable students for independant scientific-research work. Introduce students with the structure and stages of the scientific-research proceeding. Train students for the appliance of standard and special research methods and techniques. Explain students the specificities of geographical methodology in research process. Teach students how to define main research aims, tasks, hypothesis, spatial laws, models, projections and conclusions. Capacitate students with the particularities of the geographical research approach.</p>		
2.2. Course enrolment requirements and entry competences required for the course			
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>This course contribution to the programme is held in the definition of outer and inner research frame, in directioning the inquiry towards crucial processes in space and in the comprehension of spatial laws and objective spatial reality. Very complex context, relationship and link conditionality in geographical space, unique methodology and theoretical concept, research task definitions, individual practice in the research steps, and the recognition of spatial complexity have been validated. Also, the spatial allocate and function determination, spatial typization and regionalization, spatial modeling, projections of future changes, applicability of pertinent methodology, research epistemology comprehension etc., have been appointed.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Outcomes expected on the level of this course are linked with the high-level education in which the concerned knowledge points out the folowing abilities.</p> <ol style="list-style-type: none"> 1. The ability of spatial content observing, defining, categorizing, mapping and clarifying. 2. The research ability of spatial law consideration, discussion, detection, definition, projection and direction. 3. Extended epistemology and coverage of the special approach. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>4. Cognitive and cognition ability of revealing conditioned spatial links among complex contexts in geographical space, its causal clarification and resolvment.</p> <p>5. The ability of complex methodological system appliance in interdisciplinary approach and in logically settled fundamental spatial relations.</p> <p>6. Individual approach in spatial disproportion perceivment and in research task definition.</p> <p>7. The ability of the empiric research which can be applicable in basic spatial planns.</p> <p>8. Spatial functional organization ability in accordance with the phylosophy and logics of space.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1. Scientific systems.</p> <p>2. Sistematizations and approaches within scientific system.</p> <p>3. Example of geographical research subject-matter.</p> <p>4. Work definitions and atributions.</p> <p>5. Approach to the research and to the paper writing.</p> <p>6. Research methods and techniques.</p> <p>7. Data analysis.</p> <p>8. Geographical approach to the research.</p> <p>9. Field work inquiries.</p> <p>10. Research task definition.</p> <p>11. Scientific knowledge presentation and popularising.</p> <p>12. The role of research in educational system.</p> <p>13. Process of scientific work publication.</p> <p>14. The meaning of geographical cognitions for objective geographical reality comprehension.</p> <p>15. Theme elaboration through the research proceeding.</p>				
<p>2.6. Format of instruction:</p>	<p>X lecture</p> <p>X seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>x field work</p>	<p>X independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p>X work with mentor</p> <p><input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p> <p>This course aims to learn students how to independently enter in the research proceeding.</p>		
<p>2.8. Student responsibilities</p>	<p>Regular class attendance, passed preliminary exam, reserach discussion and independent research issue elaboration.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>	<p>1</p>	<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>		<p>(other)</p>
	<p>Tests</p>	<p>0.5</p>	<p>Oral exam</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	0.5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Montello, D. R., Sutton, P. C., 2006: <i>An Introduction to Scientific Research Methods in Geography</i> , SAGE Publications, London.			10	yes	
	Zelenika, R., 2000: <i>Metodologija i tehnologija izrade znanstvenog i stručnog djela</i> , Ekonomski fakultet Sveučilišta u Rijeci, Rijeka.			10	yes	
	Milas, G., 2009: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i> , Naklada Slap, Zagreb.			10	yes	
	Mejovšek, M., 2008: <i>Metode znanstvenog istraživanja u društvenim i humanističkim znanostima</i> , Naklada Slap, Zagreb.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Robinson, G. M., 1998: <i>Methods and Techniques in Human Geography</i> , John Wiley & Sons, Chichester.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.					
2.14. Other (as the proposer wishes to add)	Research tasks have been assigned by students individual choice (associated with their course).					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Borna Fuerst-Bjeliš Laura Šakaja	1.6. Year of the study programme	1 st
1.2. Name of the course	Research Methods in Human Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	Lana Slavuj Borčić	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Familiarizing students with basic methods and techniques used in sciences, and particularly in human geography. Identical attention will be given to quantitative and qualitative research methods, as to enable students to more easily develop research concepts.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Knowledge and understanding of:</p> <p>Theoretical and methodological basis of human geography The research process in general and in geography.</p> <p>Development of cognitive, practical and generic abilities and skills:</p> <p>Applying knowledge in determining, defining, and solving spatial problems of high complexity. The ability to interpret and discuss geography-related problems and processes. The skills needed for collection, evaluation, interpretation and presentation of the research results in written form. Applying appropriate GIS methods in analysis and presentation of the research results. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning	<p>Independently plan the research and create a research proposal. Distinguish and properly choose research variables in a given or independently chosen example.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

outcomes)	<p>Select a population sample for the research. Distinguish different measurement scales and apply them in research in a given or independently chosen example. Evaluate advantages and disadvantages of quantitative and qualitative research methods in a given or independently chosen example. Apply relevant quantitative and qualitative research methods, techniques and procedures in a given or independently chosen example.</p>				
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<p>Research planning - research proposal, variables in research, measurement scales Sampling (sampling steps, non-probability sampling) Sampling (probability sampling, sample size) Quantitative research methods - Questionnaire Survey (error sources in questionnaire survey, questionnaire survey design) Quantitative research methods - Questionnaire Survey (techniques of data collection) Quantitative research methods – Content Analysis (method development, basic features, elements of research process) Quantitative research methods – Content Analysis (units of analysis, coding) Qualitative methodology (basic features and characteristics) Qualitative research methods – Interview (types of interview, interview design) Qualitative research methods – Interview (interview procedure, transcription, interview analysis) Qualitative research methods – Focus Groups (focus groups features, focus groups procedure and results interpretation) Qualitative research methods – Participatory Observation and Participatory Action Research (general research phases, recording of the data, results presentation and report writing, ethical issues) Qualitative data analysis (coding, code types, results interpretation) Geographic information system (possibilities and application of GIS tools in the analysis of research results) Geographic information system (processing and visualisation of research results)</p>				
2.6. Format of instruction:	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	2.7. Comments: -		
2.8. Student responsibilities	Regular attendance, performance of practical tasks and exercises and literature analysis in seminars.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	2	(other)
	Tests		Oral exam		(other)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class participation and discussion activities 10 %, seminar execution 35 %, written exam 55 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Milas, G., 2009: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i> , Naklada Slap, Jastrebarsko.			10		yes
	Hay, I., 2005: <i>Qualitative Research Methods in Human Geography</i> , Oxford University Press, Oxford.			5		yes
2.12. Optional literature (at the time of submission of study programme proposal)	Clifford, N., Valentine, G., 2003: <i>Key methods in geography</i> . Sage Publications, London. Kitchin, R., Tate, N. J., 2000: <i>Conducting Research in Human Geography: theory, methodology and practice</i> , Pearson Education Limited, Harlow.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vuk Tvrтко Opačić	1.6. Year of the study programme	1 st
1.2. Name of the course	Tourism Valorisation of Heritage	1.7. Credits (ECTS)	7
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+30+0+0 (3+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main course objective is to acquire knowledge of interrelation between heritage and tourism and of opportunities and challenges of tourism valorisation of natural and cultural heritage. Through seminars students will individually examine contents from this topic. The accent in seminars will be both – learning of the relevant factographical and applying theoretic and methodologic geography system. The main objective of the course field trip is to introduce how heritage and tourism go together in practice.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Evaluation of natural elements, social components, and cultural offers in tourism. Cultural heritage as a spatial phenomenon. Tourism forms and their characteristics: development trends, their role in spatial transformation, and their importance on the tourism market. The relationship between natural and cultural heritage and tourism, specifically selective forms of tourism: ecotourism, geotourism, rural tourism, cultural tourism, etc. Heritage and tourism in urban environments; cultural resources of cities, the cultural industry and creation of cultural offers. Concept of sustainable development in tourism and recreation industries.</p> <p>Cognitive, practical and generic abilities and skills:</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - to explain heritage as a topic of a geographic study - to distinguish mass and alternative forms of tourism - to analyse heritage tourism development, as well as heritage as a part tourism offer - to examine and interpret tourism valorisation of anthropogenic (cultural) elements of heritage - to examine and interpret tourism valorisation of natural elements of heritage - to evaluate the role of the state and international organisations in cultural tourism - to analyse present conditions of cultural tourism in Croatia and Europe - to examine and explain the role of heritage in cultural tourism in Croatian counties - to apply tourism geography methodology on given case study and to introduce results of the research in written and oral form
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction to course 2. Heritage phenomenon – definitions, divisions, significance; Heritage as a topic of geographic study 3. Tourism – basic terms and concepts; Mass and alternative forms of tourism; Heritage tourism – development and contemporary role; Demand in heritage tourism 4. Heritage as a part of tourism supply; Culture, cultural heritage, cultural tourism 5. Tourism valorisation of anthropogenic elements (cultural-historical monuments) 6. Tourism valorisation of anthropogenic elements (living culture, famous persons and historical events, various events, cultural and religious institutions, panoramic roads and paths, artificial attractions) 7. Tourism valorisation of natural elements of heritage (geological-geomorphological elements, hydrological elements, floristic and faunistic elements, protected areas) 8. The role of international organisations in cultural tourism (UNESCO, Council of Europe, European Union) 9. The role of international organisations in cultural tourism (World Tourism Organisation, ICOM, ICCROM, ICOMOS) 10. The role of the state in cultural tourism; Analysis of the cultural tourism sector in Europe – examples from several European countries



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	11. Cultural tourism in Europe (Central and Eastern Europe, Southern Europe, Mediterranean islands, Western Europe, Northern Europe) 12. Present conditions of cultural tourism in Croatia 13. Course field trip – official visit and discussion with authorities of the liable institutions in charge with natural and/or cultural heritage protection or management (for example national park, nature park, tourism board etc.) 14. Cultural tourism in Croatia – documents, politics, strategies 15. Heritage in tourism supply of Croatian counties																																	
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -																															
2.8. Student responsibilities	Attendance to class, essay with oral presentation, seminar essay with oral presentation, discussions with authorities of the liable institutions on course field trip.																																	
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td>1</td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td>1</td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>2</td></tr> </table>	Class attendance	1	Experimental work		Essay	1	Tests		Written exam	2	<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td>2</td></tr> <tr><td>Oral exam</td><td>1</td></tr> <tr><td>Project</td><td></td></tr> </table>	Research		Report		Seminar essay	2	Oral exam	1	Project		<table border="1"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)		
Class attendance	1																																	
Experimental work																																		
Essay	1																																	
Tests																																		
Written exam	2																																	
Research																																		
Report																																		
Seminar essay	2																																	
Oral exam	1																																	
Project																																		
Practical training																																		
(other)																																		
(other)																																		
(other)																																		
(other)																																		
2.10. Grading and evaluating student work in class and at the final exam	Written and oral exam, seminar essay and essay.																																	
2.11. Required literature (available in the library and via other media)	<table border="1"> <thead> <tr> <th>Title</th> <th>Number of copies in the library</th> <th>Availability via other media</th> </tr> </thead> </table>		Title	Number of copies in the library	Availability via other media																													
Title	Number of copies in the library	Availability via other media																																
Jelinčić, D. A., 2008: <i>Abeceda kulturnog turizma</i> , Meandarmedia i Meandar, Zagreb.		10	yes																															
Graham, B., Ashworth, G., J., Tunbridge, J., E., 2000: <i>A geography of heritage: power, culture and economy</i> , Arnold, London.		10	yes																															
<i>Turizam</i> , vol. 48, br. 4, tematski broj: Ekoturizam i održivi razvoj turizma u ekološki osjetljivim prostorima (ur. M. Klarić), Hrvatska turistička zajednica i Institut za turizam, Zagreb, 2000.		10	yes																															



DETAILED PROPOSAL OF THE STUDY PROGRAMME

<p>2.12. Optional literature (at the time of submission of study programme proposal)</p>	<p><i>A companion to tourism</i> (ur. A. A. Lew, C. M. Hall, A. M. Williams), Blackwell Publishing, Malden, Oxford, Calden, 2004.</p> <p>Antolović, J., 1998: <i>Ekonomsko vrednovanje graditeljske baštine</i>, Mikrorad, Zagreb.</p> <p><i>Cultural resources for tourism: patterns, processes and policies</i> (ur. M. Jansen-Verbeke, G. K. Priestly, A. P. Russo), Nova Science Publishers, Inc., New York.</p> <p>Jelinčić, D. A., 2010: <i>Kultura u izlogu</i>, Meandarmedia i Meandar, Zagreb.</p> <p>Kušen, E., 2002: <i>Turistička atrakcijska osnova</i>, Institut za turizam, Zagreb.</p> <p>Mc Kercher, B., Du Cros, H., 2002: <i>Cultural tourism: The partnership between tourism and cultural heritage management</i>, The Haworth Hospitality Press, New York.</p> <p>Timothy, D. J. , 2011: <i>Cultural heritage and tourism: an introduction</i>, Channel View Publications, Bristol, Buffalo, Toronto.</p> <p>Timothy, D. J., Boyd, S. W., 2003: <i>Heritage tourism</i>, Prentice Hall, Harlow.</p> <p>Vidaković, P., 1997: <i>Nacionalni parkovi u svijetu</i>, Fond za stipendiranje mladih za zaštitu prirode i turizam – Zagreb 1990, Zagreb.</p> <p>Vidaković, P., 2003: <i>Nacionalni parkovi i zaštićena područja u Hrvatskoj</i>, Fond za stipendiranje mladih za zaštitu prirode i turizam – Zagreb 1990, Zagreb.</p>
<p>2.13. Quality assurance methods that ensure the acquisition of exit competences</p>	<p>In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.</p>
<p>2.14. Other (as the proposer wishes to add)</p>	<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Borna Fuerst-Bjeliš	1.6. Year of the study programme	1 st
1.2. Name of the course	Environmental History	1.7. Credits (ECTS)	5
1.3. Associate teachers	Marin Cvitanović	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Man – environment relations in holocene. Changes in material world as well as in the world of ideas and worldviews. Worldview as a base of man's relation towards the nature: actions, politics and consequences. Main phases of availability, access, quantities and types of used energy. Size and types of environmental change.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques. Environmental history and large-scale environmental modifications. Principles of landscape protection, restoration, and management. Concept of sustainable development in tourism and recreation industries.</p> <p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes related to man-environment relation. The skills needed for evaluation, interpretation and synthesis of relevant information on environmental history. The skills needed for presenting scientific contents and stances in written and oral form. Orientation in space with the assistance of modern technology and other skills needed in fieldwork. Mapping of geographic data, georeferencing.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals. Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development. Fundamentals of remote sensing in the analysis of environmental change.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding of causal relations of man –environment relations. Understanding of relation between rising energy use and environmental impact through main phases of technological evolution of mankind. Understanding of connection between worldviews with concrete actions and politics towards nature/ environment, and their consequences. Knowing the research field of environmental history, main themes, its position in science fields and knowing the basic environmental historical bibliography and periodics.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Mastering the marks: states of change – ways of life / economies. Population and degradation? Availability and access to energy/energy consumption. 2. Access to energy/phases of technological evolution of humankind (hunters/gatherers; preindustrial agriculture; industrial era;post-industrial economies). 3. Development of the scientific field and research; history of human – nature worldviews. Differencies with regard to the time, space, culture and religions. 4. Research themes and approaches. Environmental history in Croatia. 5. Environmental regionalization of Europe. Basic presumptions: opportunities; constraints; environmental change types; hazards. Characteristic relic landscapes according to main phases od development (hunter-gatherers, traditional-agricultural, industrial), and post-industrial. 6. Environmental management: protection, restoration, reconstruction. 7. Environmental restoration, green urbanism and post-modern landscapes. 8. Urban environmental restoration project in Seoul (restoration-reconstruction?). 9. Hundertwasser and ecological programme of urban re-afforestation. 10. Main environmental history phases: Hunthers/gatherers. 11. Pre-industrial agriculture. 12. Industrial era. 13. Post-industrial era. 14. Globally important issues.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	15. Contemporary problems and questions: media analysis (degradation narratives, advocacy, professionalism, determinism)			
2.6. Format of instruction:	X lectures		X independent assignments	2.7. Comments: -
	X seminars and workshops		X multimedia and the internet	
	<input type="checkbox"/> exercises		<input type="checkbox"/> laboratory	
	<input type="checkbox"/> on line in entirety		<input type="checkbox"/> work with mentor	
	<input type="checkbox"/> partial e-learning		<input type="checkbox"/> (other)	
	X field work			
2.8. Student responsibilities	Preparation and presentation of selected chapters from the bibliography. Active contribution in discussion. Writing short essays on selected topics. Taking part in the field trip (area of Zagreb city; museums). Completion of the project on the environmental change of the chosen location – textual and cartographic analysis, including bitemporal presentation.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	(other)
	Written exam	2	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Active discussion 10%, seminar attendance, completed project and written essays 35 %, wrritten exam 55 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Fuerst-Bjeliš, B., Cvitanović, M., Petrić, H., 2011: Što je povijest okoliša u Hrvatskoj?, u: Hughes, J. D.,: <i>Što je povijest okoliša</i> , 175-198, Disput, Zagreb.		10	yes
	Hughes, J. D., 2011: <i>Što je povijest okoliša</i> , Disput, Zagreb, 198.		10	yes
	Simmons, I. G., 2010: <i>Globalna povijest okoliša</i> , Disput, Zagreb, 306.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Atkins, P., Simmons, I., Roberts, B., 2003: <i>People, Land & Time</i> , Arnold.			
	Diamond, J., 2007: <i>Sva naša oružja</i> , Algoritam.			
	Diamond, J., 2008: <i>Slom</i> , Algoritam.			
	Higgs, E., 2003: <i>Nature by Design</i> , The MIT Press, Cambridge, Mass., London.			
	Hughes, Donald J., 2009: <i>An Environmental History of the World</i> , Routledge.			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Lovelock, J., 2005: <i>Geja – novi pogled na život Zemlje</i> , Izvori. Pyne, Stephen J., 2010: <i>Vatra – sažeta povijest</i> , Prosvjeta. Uekotter, F. (ur.), 2010: <i>Turning Points of Environmental History</i> , University of Pittsburgh Press, Pittsburgh.
2.13. Quality assurance methods that ensure the acquisition of exit competences	University and faculty student questionnaire, self-evaluation, continued revision and other University documents
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Nenad Buzjak Anita Filipčić, Danijel Orešić	1.6. Year of the study programme	1 st
1.2. Name of the course	Physical Geography in Tourism	1.7. Credits (ECTS)	5
1.3. Associate teachers	Ivan Čanjevac Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To know the incentive and limiting effects of climate, water and relief on tourism development. To know the role of geoheritage and of geomorphologic sites in tourism development. To master the methods and techniques of mapping and visualization of relief elements in tourism planning and in tourism offering. Get to know and practical apply the methods and techniques of planning, building and use of educational paths in touristic presentation, with an emphasis on natural basis. To be able to apply the methods of geocological relief valuation for the tourism. To be able to put forward and define predictable changes in touristic areas under the influence of climate changes.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<u>Professional knowledge, abilities and skills</u> <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques. Environmental history and large-scale environmental modifications. Principles of landscape protection, restoration, and management. Evaluation of natural elements, social components, and cultural offers in tourism. Importance of climate in tourism, bio-meteorological indices, and climate related therapy. Importance of waters in tourism and water resources as limiting factors. Geocological evaluation of relief in relation to tourism, and possibilities of tourism development in relation to relief.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The relationship between natural and cultural heritage and tourism, specifically selective forms of tourism: ecotourism, geotourism, rural tourism, cultural tourism, etc. Concept of sustainable development in tourism and recreation industries. <u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. <u>Practical abilities and skills:</u> Orientation in space with the assistance of modern technology and other skills needed in fieldwork. Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals. <u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowing, understanding and being able to valorise the main elements of physical geography as natural attractive factors in tourism. Knowing, understanding and being able to valorise the main elements of physical geography as limiting factors in tourism. Knowing and understanding the interactions between elements in physical geography. Being able to geoecologically evaluate relief from the standpoint of tourism. Understanding and applying the concept of sustainable development of tourism and recreation. Having skills and abilities concerning applied geomorphologic mapping in tourism.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Climate as a basis for developing tourism and as a limiting factor in tourism. 2 Climate in determining of the tourist season. 3 Biometeorological indexes. 4 Climatotherapia and health tourism. 5 Importance of climate in receptive factor planning. 6 Land waters as natural attractions. 7 Ice and snow as natural attractions. 8 Thermomineral springs in tourism. 9 Seas and sea-shores as natural attractions. 10 Water resources as limiting factor in tourism development. 11 The role of relief in tourism development.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>12 The concept and features of geoheritage, geodiversity and geomorphologic sites. 13 Mapping and visualization of geodiversity and geomorphologic sites. 14 Presentation of geomorphologic and geological heritage sites. 15 Principles and methods of geoecological evaluation.</p> <p>Seminar: written paper and presentation on a chosen theme, discussion.</p>				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments:		
2.8. Student responsibilities	Attendance to class, seminar paper and presentation.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1,5	(other)
	Tests		Oral exam	3	(other)
	Written exam		Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar paper, presentation and activity evaluation, written examination. Attendance to class 10 % + seminar 30 % + written examination 60 %				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Becken, S., Hay, J., 2007: <i>Tourism and Climate Change. Risks and Opportunities</i> . Channel View Publications. 352 pp.			5	
	Bognar, A., Bognar, H., 2010: Geoekološko vrednovanje reljefa R. Hrvatske. <i>Geoekologija XXI vijeka</i> , Zbornik referata, 44-55, Filozofski fakultet Nikšić.			10	pdf
	Buzjak, N., 2008: Geoekološko vrednovanje speleoloških pojava Žumberačke gore (Geoecological evaluation of the speleological features of Žumberačka gora Mt. - Croatia). <i>Hrv. geografski glasnik</i> , 70/2, 73-89.			10	pdf
	Hall, C. M., Higham, J. E. S. (ed.), 2005: <i>Tourism, Recreation and Climate Control</i> . Multilingual Matters. 309 pp.			5	
	Kušen, E., 2002: <i>Turistička atrakcijska osnova</i> . Institut za turizam, Zagreb, 262 str.			10	
	Reynard, E., Coratza, P., Regolini-Bissig, G., 2009: <i>Geomorphosites</i> . Verlag Dr. F. Pfeil, München.			5	pdf



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	Relevant scientific articles and other relevant information in literature, on internet and in other sources.
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	Passive knowledge of English language needed.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Laura Šakaja	1.6. Year of the study programme	2 nd
1.2. Name of the course	Geography of Cultural Offer	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main goals of the course are:</p> <ul style="list-style-type: none"> - to develop an understanding of the way the cultural offer is formed; - to develop an understanding of the role of culture, cultural activities and cultural/creative industries in local and regional development; - to develop an understanding of heritage as a developmental resource; - to expand knowledge of the Croatian cultural heritage - to expand knowledge of the world cultural heritage <p>Students will acquire knowledge of cultural policies and strategies for the protection and promotion of regional/national culture. Through project tasks within seminars, students will acquire the knowledge necessary for independent presentation or creation of cultural offer.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>The course contributes to professional knowledge, abilities and skills:</p> <p><i>Knowledge and understanding of:</i></p> <ul style="list-style-type: none"> -the theoretical and methodological fundamentals of human geography -the research process in geography. -the developmental potential of cultural resources 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>-the social contexts of the interpretation of heritage</p> <p><u>Cognitive, practical and generic abilities and skills.</u></p> <p>Applying knowledge and creative approach during the preparation of new contents through a term paper</p> <p>The ability to analyse and interpret actual socio-geographic phenomena and processes</p> <p>The skills needed for presentation of scientific contents and stances in written and oral form.</p> <p>Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the research results.</p> <p>Designing project proposals.</p> <p>Problem solving, relating to qualitative and quantitative geographic information.</p> <p>Efficiency at the individual level, and as a member of a team.</p> <p>Continuous professional development</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowing and understanding the concept of culture, cultural activities, cultural industries and cultural heritage</p> <p>Understanding urban cultural resources</p> <p>Knowing and understanding entrepreneurial strategies in the field of culture</p> <p>Knowing and understanding the elements of cultural (especially architectural) heritage</p> <p>Ability to analyze heritage in different socio-political contexts</p> <p>Ability to evaluate local, regional and national cultural policy</p> <p>Ability to evaluate the role of international organizations in the promotion of cultural activities and in preservation of cultural heritage</p> <p>Knowing and ability to interpret and discuss the role of cultural industries and cultural heritage in the local and regional development</p> <p>Ability to create new contents within the cultural offer</p> <p>Ability to present scientific contents and stances in written and oral form.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Culture, globalization and international market 2. Models of cultural policy 3. Cultural activities and cultural industries. Services and products of cultural/creative industries 4. Museums and galleries: history, social function and entrepreneurial strategies 5. Performing arts: history, impact on urban development, commercialization processes 6. Festivals: impact on cultural tourism 7. Creative sector and urban development: the example of world fashion centers 8. City as a cultural resource 9. Impact of heritage on urban development 10. Heritage sites 1: Antiquity 11. Heritage sites 2: The Middle Ages 12. Heritage sites 3: Renaissance and Baroque 13. Heritage sites: 18th -19 th centuries



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	14. Heritage sites: 20th century 15. Culture and cultural heritage in EU documents and programs				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments: -
2.8. Student responsibilities	Attendance to class, completed seminar essey, multimedial presentation of seminar essay.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	2	(other)
	Tests		Oral exam	2	(other)
	Written exam		Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Seminar essay and oral exam.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	1. Švob-Đokić, N., Primorac, J., Jurlin, K., 2008: <i>Kultura zaborava. Industrijalizacija kulturnih djelatnosti.</i> (pojedina poglavlja). Jesenski i Turk, Zagreb.			10	yes
	2. Šakaja, L., 1999: <i>Kultura i prostor: prostorna organizacija kulturnih djelatnosti u Hrvatskoj</i> (pojedina poglavlja), Hrvatska sveučilišna naklada, Zagreb.			10	yes
	3. Marasović, T., 2001: <i>Kulturna baština I. i II.</i> (pojedina poglavlja), Veleučilište u Splitu, Split.			10	yes
	4. Mohorovičić, A., 1992: <i>Graditeljstvo u Hrvatskoj</i> , Školska knjiga, Zagreb.			10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	1. Melvin, J., 2006: <i>Understanding Architecture</i> , Universe.				
	2. Evans, G., 2003: <i>Cultural planning. An urban renaissance?</i> Routledge, London.				
	3. Hughes, H., 2000: <i>Arts, entertainment and tourism</i> , Butterworth-Heinemann, Oxford.				
	4. Breward, C. & Gilbert, D. (eds.), 2006: <i>Fashion's world cities</i> , Berg, Oxford.				
	5. Kearns, G., Philo, C., 1993: <i>Selling Places: City as Cultural Capital, Past and Present (Policy planning & Critical Theory)</i> .				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>6. <i>Kulturna politika Republike Hrvatske</i>. Nacionalni izvještaj. Ministarstvo Republike Hrvatske, 1998.</p> <p>7. Flew, T., 2012: <i>The Creative Industries. Culture and Policy</i>, Queensland University of Technology.</p> <p>8. Singh, J. P., 2010: <i>Globalized Arts: The entertainment economy and Cultural Identity</i>, Columbia University Pres.</p> <p>9. www.europa.eu/culture/key-documents/doc599_en.htm</p>
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ivan Zupanc	1.6. Year of the study programme	2 nd
1.2. Name of the course	Urban Historical Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To knowledge students with basics of urban development and with different city types according to historical periods, functions and cultures. Knowledge of urban heritage as autochthonous urban form and urban landscape; education for protection and management for sustainable development.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills: Knowledge and understanding of: Theoretic and methodological geography system. The research process in general and in geography. Specific statistic and graphic techniques. Environmental history and large-scale environmental modifications. Principles of landscape protection, restoration, and management. Cultural heritage as a spatial phenomenon. Heritage and tourism in urban environments; cultural resources of cities, the cultural industry and creation of cultural offers.</p> <p>Cognitive abilities and skills: The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate maps and cartographic methods in analysis in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge and understanding of: -development of cities according to the context of genesis (period, function, culture) (in the world and in Croatia) -processes and problems of urban development during the historical periods. -phenomena of the city and planning as expression of most complicated space organisation of different communities and civilisations. -the ideas of local and global planning. -processes and relations in specific characteristic typical examples of urban development in the world and in Croatia. Built sense for urban heritage as cultural landscape. Ability of heritage planning and management as a resource of revitalisation in small towns. To autonomously create seminar in written form with use of the specific sources and methods and knowing literature.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction 2. Proto-urban period – first forms of settlements 3. The early cities 4. The early cities 5. Cities of Greek civilisation 6. Cities of Roman civilisation 7. Cities of Roman civilisation in Croatia 8. The medieval towns in Europe 9. Renaissance towns 10. Baroque towns 11. Industrial city 12. Colonial cities 13. Urban landscape and heritage 14. Revitalisation of small towns 15. Planning and management for tourism in historic towns 	
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p><input type="checkbox"/> independent assignments</p>
		<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	-	
2.8. Student responsibilities	Properly class attendance and one written seminar essay.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	1 (other)
	Tests		Oral exam	1 (other)
	Written exam	2	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Written and oral exam. Written seminar essay.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Carter, H., 1983: <i>An Introduction to Urban Historical Geography</i> , Edward Arnold, London.		5	yes
	Milić, B., 1994: <i>Razvoj grada kroz stoljeća I.: prapovijest-antika</i> , Školska knjiga, Zagreb.		10	yes
	Milić, B., 1995: <i>Razvoj grada kroz stoljeća II.: srednji vijek</i> , Školska knjiga, Zagreb.		10	yes
	Milić, B., 2002: <i>Razvoj grada kroz stoljeća III.: novo doba</i> , Školska knjiga, Zagreb.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Burke, G., 1977: <i>Towns in the making</i> , Edward Arnold, London. Kostof, S., 2012: <i>The City Shaped: Urban Patterns and Meanings Through History</i> , Bulfinch Press, New York. Morris, A. E. J., 1994: <i>History of Urban Form: Before the Industrial Revolutions</i> , Pearson Education Limited, Harlow.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vuk Tvrtko Opačić	1.6. Year of the study programme	2 nd
1.2. Name of the course	Forms of Tourism	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+30+0+0 (2+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main course objective is to acquire knowledge about the main developmental features and the role of different forms of tourism from their geographical point of view. The emphasis is based on tourism offer conception in Croatian tourism practice. One of the main goal of this course is to understand the role of mass and alternative forms of tourism in total tourism offer in designated space and place.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques. Tourism forms and their characteristics: development trends, their role in spatial transformation, and their importance on the tourism market. Concept of sustainable development in tourism and recreation industries.</p> <p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>- to explain features, classifications, and spatial implications of mass and alternative forms of tourism - to analyse development of Croatian tourism - to distinguish, compare and explain features of different forms of tourism: "Sun and beach" tourism, nautical tourism, cruising tourism, camping tourism, transit tourism, ecotourism, rural tourism, game tourism, health and spa tourism, mountain tourism, ski tourism, youth tourism, religious tourism, etc. - to apply tourism geography methodology on given case study and to introduce results of the research in written and oral form</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction to course 2. Mass and alternative forms of tourism – the main features, definitions, classifications, distinctions, spatial implications 3. Features and developmental stages of Croatian tourism 4. "Sun and beach" tourism 5. Nautical tourism 6. Cruising tourism 7. Camping tourism 8. Transit tourism 9. Ecotourism 10. Rural tourism 11. Game tourism 12. Health and spa tourism 13. Mountain and ski tourism 14. Youth tourism 15. Religious tourism 	
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)</p>
<p>2.8. Student responsibilities</p>	<p>Attendance to class, seminar essay with oral presentation.</p>	
		<p>2.7. Comments:</p>
		<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written and oral exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Hrvatski turizam: plavo, bijelo, zeleno (ur. S. Čorak, V. Mikačić), Institut za turizam, Zagreb, 2006.			10	yes	
	Čorak, S., Mikačić, V., Trezner, Ž., 2009: <i>Osnove turizma</i> , Školska knjiga, Zagreb.			10	yes	
	Čavlek, N. i suradnici, 2011: <i>Turizam – ekonomske osnove i organizacijski sustavi</i> , Školska knjiga, Zagreb.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	<p><i>A companion to tourism</i> (ur. A. A. Lew, C. M. Hall, A. M. Williams), Blackwell Publishing, Malden, Oxford, Calden, 2004.</p> <p><i>Critical issues in tourism: a geographical perspective</i> (ur. G. Shaw, A. M. Williams), Blackwell Publishers, Oxford, 2002.</p> <p>Hall, C. M., Page, S. J., 2002: <i>The geography of tourism and recreation: environment, place and space</i>, Routledge, London – New York.</p> <p>Jadrešić, V., 2001: <i>Turizam u interdisciplinarnoj teoriji i primjeni – Zbornik istraživanja</i>, Školska knjiga, Zagreb.</p> <p><i>Turizam i sport – razvojni aspekti</i> (ur. M. Bartoluci i N. Čavlek), Školska knjiga, Zagreb, 2007.</p> <p>Vlahović, D., 2003: <i>Maritimna turistička Hrvatska</i>, Ogranak Matice hrvatske Split, Matica hrvatska, Split-Zagreb.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

ELECTIVE COURSE

1. GENERAL INFORMATION			
1.1. Course teacher	Anita Filipčić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Climate and Tourism	1.7. Credits (ECTS)	5
1.3. Associate teachers	Mladen Maradin	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The learning objective is determination of climatic influence on touristic valorisation of an area. Also the influence of climatic changes on transformations of touristic areas has to be determined.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Knowledge and understanding of: Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques. Importance of climate in tourism, bio-meteorological indices, and climate related therapy. Concept of sustainable development in tourism and recreation industries.</p> <p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Orientation in space with the assistance of modern technology and other skills needed in fieldwork. Mapping of geographic data. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>				
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowing, understanding and independent realization of statistical analysis of climatic data. Knowing, understanding and independent explanation of climate-man interaction. Knowing, understanding and independent interpretation of climatic elements significance in tourism development. knowing, understanding and independent explanation of climate extremes.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Climate and tourism development. 2. Climate as limited factor in tourism 3. The global climate system 4. Climate (change) and determination of tourist season 5. The economic significance of climate stability 6. The influence of the climate extremes on tourism 7. Human response to climate 8. Biometeorological indexes 9. Climatotherapia 10. The tourist importance of Solar radiatiion and insolation 11. Importance of winds in tourism 12. The air temperature asa tourist (un)convenience 13. Importance of precipitations for tourist planning 14. Climate consideration in receptive factors planning 15. Climate consideration in route making 				
<p>2.6. Format of instruction:</p>	<p><input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>		
<p>2.8. Student responsibilities</p>	<p>Attendance to lectures and seminar presentations. Semenar paper and presentation.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS</p>	<p>Class attendance</p>	<p>0.25</p>	<p>Research</p>		<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>	<p>0.75</p>	<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

credits is equal to the ECTS value of the course)	Tests		Oral exam	4.00	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Attendance and active contribution to class, seminar writing and presentation, written exam.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Becken, S., Hay, J., 2007: <i>Tourism and Climate Change. Risks and Opportunities.</i> Channel View Publications. 352 pp.			5		
	Hall, C. M., Higham, J. E. S. (ed.), 2005: <i>Tourism, Recreation and Climate Control.</i> Multilingual Matters. 309 pp.			5		
2.12. Optional literature (at the time of submission of study programme proposal)	Articles in relevant publications.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Karst Geomorphology and Hydrology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of this course are that students learn basic knowledge on karst geomorphology and hydrography with application to the significant karst areas of the world and focus on the Dinaric karst that is part of Croatia.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> Understanding of the conditions and processes of karstification Understanding the specifics of karst hydrography Recognition of surface and underground karst landforms, and an understanding of their origin Knowledge about geomorphologic - hydrographical features of Croatian karst and important karst areas in the world Understanding the importance of karst areas, identifying specific problems and the ability of their solutions The ability to evaluate karst areas Understanding the threats and protection of karst areas and the ability to find solutions in line with sustainable development 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i></p> <ul style="list-style-type: none"> Theoretic and methodologic geography system. The research process in general and in geography. Principles of landscape protection, restoration, and management. Evaluation of natural elements, social components, and cultural offers in tourism. Geo-ecological evaluation of relief in relation to tourism, and possibilities of tourism development in relation to relief. The relationship between natural and cultural heritage and tourism, specifically selective forms of tourism: ecotourism, geotourism, rural tourism, cultural tourism, etc. Concept of sustainable development in tourism and recreation industries. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for presenting scientific contents and stances in written and oral form. Orientation in space with the assistance of modern technology and other skills needed in fieldwork. Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the concept, history, research and distribution of karst in Croatia and the world In selected cases to extract and interpret the factors that affect the karst process Explain the specificity of karst hydrography and its relation to the geomorphology of karst Field work and cabinetmaking determine surface and underground karst relief forms Distinguish types of karst in Croatia and abroad, and their special values Evaluate the significance of karst areas, especially in tourism Provide effective measures for the protection and management of karst areas with the concept of sustainable development Apply basic geomorphological research methods and protection of karst</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction, history of study of karst 2 Terms and geomorphological processes in karst 3 Karst hydrography (Part 1) 4 Karst hydrography (Part 2) 5 Karst Geomorphology - grikes 6 Karst Geomorphology - dolines 7 Karst Geomorphology - large depressions and poljes 8 Karst Geomorphology - karst plateau 9 Speleological objects - the origin and typology 10 Karst sediments and residual hills 11 Fluviokarst, glaciokarst and coastal karst 12 Morphogenesis and typology of karst 13 Threats and protection of karst 14 Croatian karst - an overview 15 Significant karst areas in the world 	
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety</p>	<p>X independent assignments X multimedia and the internet <input type="checkbox"/> laboratory X work with mentor</p>
		<p>2.7. Comments:</p>
		<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> (other)		
2.8. Student responsibilities	Attendance to class, completed seminars, independent assignments and field work			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	2 (other)
	Written exam	1	Project	1 (other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 20%; Written exam 20%; Oral exam 40%; Project 20%.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Ford, D., Williams, P., 2007: <i>Karst Hydrogeology and Geomorphology</i> . 562 pp, John Wiley i Sons, Chichester, West Sussex, England.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	White, W. B., 1988: <i>Geomorphology and Hydrology of Karst Terrains</i> . Oxford university press, New York-Oxford.			
	Herak, M., Stringfield, V. T., 1972: <i>Karst – Important Karst Regions of the Northern Hemisphere</i> . Elsevier publishing company, Amsterdam-London-New York.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	Gines, A., Knez, M., Slabe, T., Dreybrodt, W., 2009: Karst rock features – karren sculpturing. <i>Carsologica</i> 9, Založba ZRC SAZU, Postojna.			
	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Toskić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Analyses in GIS	1.7. Credits (ECTS)	5
1.3. Associate teachers	Luka Valožić	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+30+0 (1+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Capability for conducting analyses in GIS for practical purposes.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills:</u> <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques.</p> <p><u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining and solving spatial problems of high complexity.. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p><u>Practical abilities and skills:</u> Applying appropriate GIS methods and techniques. Orientation in space with the assistance of modern technology and other skills needed in fieldwork. Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals.</p> <p><u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development				
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> - knowledge of user - spatial data interaction - independently conduct spatial analysis on given examples - differentiate and analyse vector and raster data - know and apply the methods of transformation and overlay, display and analysis of relief overlay error correction - knowledge how to apply methods of spatial interpolation 				
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1 Interaction between user and spatial data. Spatial analysis. 2 Selections and data mining. 3 Reclassification of vector and raster data. 4 Measurements: length, area. Polygon complexity. Slope and aspect. 5 Transformations: Buffering (vector) 6 Polygon overlay. Overlay methods. Overlay errors and their correction 7 Analysis of raster data. Methods for spatial interpolation 8 Map algebra, local operations, neighborhood operations, zonal operations 9 Overlaying, Weighted overlaying. (raster) 10 Buffering (raster) 11 Cost distance analysis 12 Digital elevation model. Display and analysis of the relief. Triangular irregular network (TIN) 13 Methods of spatial statistics. Centroid. Weighted mean center. 14 Standard deviational ellipse. 15 Point pattern analysis. Moran's index. 				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
					-
2.8. Student responsibilities	Attending classes and seminars regularly. Written seminar based on individually collected and analyzed literature.				
2.9. Screening student work (name the proportion of ECTS credits for each	Class attendance	0,2	Research		Practical training
	Experimental work		Report		(other)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Essay		Seminar essay		(other)	
	Tests	2,4	Oral exam	2,4	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam and oral exam results.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Longley, P. A., Goodchild, M. F., Maguire, D. J., Rhind, D. W., 2010: <i>Geographic Information Systems and Science</i> , John Wiley & Sons., Chichester.			10	yes	
	Maguire, D. J., Batty, M., Goodchild, M. (ed.), 2005: <i>GIS, Spatial analysis and Modeling</i> , ESRI Press, Redlands.			5	yes	
	Maantanay, J., Ziegler, J., 2006: <i>GIS for the Urban Environment</i> , ESRI Press, Redlands.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)						
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Borna Fuerst-Bjeliš Anamarija Durbešić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Historical GIS	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+30+0 (2+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Exploring possibilities of GIS applications in research and reconstruction of changes and processes over longer time periods. Introduction to specific data sources documenting past periods (quantitative and qualitative), their use in GIS and their analysis. Modelling positive and negative processes leading to changes in the environment and the cultural landscape design and preparation of plans and projects for rehabilitation of degraded land and reducing effects of anthropogenic disturbances with the ultimate goal to improve living conditions.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> the process of scientific work in general and in geography, specific statistical and graphical methods.</p> <p>Cognitive, practical and generic abilities and skills Application of knowledge to determination, identification and solving the problem of the high spatial complexity. Ability of interpretation and discussion of relevant and current geographic phenomena and processes. Developing of skills needed for evaluation, interpretation and synthesis of information and data, skills in presenting scientific content and arguments in writing and orally. Mapping geographic content, geo-referencing. Application specific statistical and graphical methods in the analysis and presentation of results. Application of thematic maps and cartographic methods to analysis and presentation of results. Application of specific GIS techniques. Solving problems related to qualitative and quantitative geographic information. Information-technology skills.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	How to work effectively, independently and in a team. Independent work required for professional advancement.		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Using a variety of sources and processing in GIS. Synchronization and integration of spatial data from various sources. Analysis of the data obtained in order to explore cultural landscape and environmental changes. Ability to identify and separate phenomena and processes critical to the stability geo-system. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. The ability to interpret and discuss actual geography-related problems and processes</p>		
2.5. Course content broken down in detail by weekly class schedule (syllabus)	1	Introductory lesson. Explaining concepts of GIS and Cultural Landscape	
	2	Lecture: Basic Concepts. Workshop: Vectorization of polygons and geocoding maps (repetition of basic skills in GIS)	
	3	Lecture: GIS analysis of the cultural landscape (modes of evaluating the cultural landscape through the tangible and intangible elements). Workshop: Individual design projects.	
	4	Workshop: Vectorization of selected data	
	5	Workshop: Vectorization of selected data	
	6	Workshop: Vectorization of selected data	
	7	Workshop: Preparing the presentations of the obtained data and their exchange among students	
	8	Lecture: Correlation and interdependence of physical-geographic features. Workshop: Analysis of interdependence of physical-geographic features	
	9	Lecture: Intangible elements in the analysis of cultural landscape. Workshop: Cartographic representation of distribution of settlements and their connection to the population census data base.	
	10	Lecture: Methods of data analysis. Workshop: Layers convergence and first analysis	
	11	Lecture: GIS in the analysis of field data. Workshop: Creating a plan of field research in GIS	
	12	Lecture: Preparation of field research. Workshop: Creating a plan of field research in GIS	
	13	Lecture: Development and protection assessment guidelines. Workshop: GIS in making the development and protection assessment guidelines	
	14	Lecture: Types and trends of landscape change. Workshop: Defining the types of landscape change and tracking trends	
	15	Lecture: Final synthesis of materials. Workshop: GIS in development assessment guidelines	
2.6. Format of instruction:	X lectures	X independent assignments	2.7. Comments:



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		
2.8. Student responsibilities	Regular class attendance, completion of the project and one seminar essay (oral / written)			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	1 (other)
	Tests		Oral exam	1 (other)
	Written exam		Project	2 (other)
2.10. Grading and evaluating student work in class and at the final exam	Completion of workshop assignments (project, seminar essay) 65 %. Oral exam 35 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Gregory, I. N., Ell, P. S., 2007: <i>Historical GIS, Technologies, Methodologies and Scholarship</i> , Cambridge University Press.		5	yes
	Knowles, A. K., 2002: <i>Past Time, Past Place - GIS for History</i> , ESRI Press, Redlands, California.		5	yes
	Knowles, A. K., 2008: <i>Placing History, How Maps, Spatial data and GIS Are Changing Historical Scholarship</i> , ESRI press, Redlands, California.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Harley, J. B., 2001: <i>The New Nature of Maps</i>, The John Hopkins University Press, Baltimore.</p> <p>Fuerst-Bjeliš, B., Lozić, S., Cvitanović, M., Durbešić, A. 2011: Promjene okoliša središnjeg dijela Dalmatinske zagore od 18. stoljeća, u: <i>Zagora između stočarsko-ratarske tradicije te procesa litoralizacije i globalizacije: zbornik radova</i> (ur. Matas, M i Faričić, J.), Zadar - Dugopolje, 19 - 21. listopada 2010., Sveučilište u Zadru, Kulturni sabor Zagore, Split, Matica hrvatska Split, 117-129.</p> <p>Fuerst-Bjeliš, B., Durbešić, A., 2013: Littoralization and Behind: Environmental Change in Mediterranean Croatia. U: <i>The Overarching Issues of the European Space/Grandes Problemática do Espaço Europeu. Strategies for Spatial (Re)planning based on Innovation, Sustainability and Change/ Estratégias de (Re)ordenamento Territorialnum Quadro de Inovação, Sustentabilidade e Mudança</i> (ur. Pina, H., Martins, F., Ferreira, C.), Fundação Universidade do Porto – Faculdade de Letras da</p>			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Universidade do Porto, 136-147.
2.13. Quality assurance methods that ensure the acquisition of exit competences	University student survey, self-assessment, continuous review, other procedures of the internal quality assurance required by the University and the Faculty.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Amelia Tomašević	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Tourism Destination Management	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Introduction to Tourist destination management and marketing, DMO, DMC, activities and strategies, seminar, financial planning for promotion on specific markets. Students will visit Tourist information centers, to evaluate total information service.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Course enables knowledge and understanding of theoretic and methodologic geography system the research process in general and in geography specific statistic and graphic techniques destination management, strategies, relationship among state, city authorities and tourist boards and industry</p> <p>Cognitive abilities and skills Applying knowledge in determining, defining and solving spatial problems of high complexity The ability to interpret and discuss relevant and actual geography-related problems and processes The skills needed for evaluation, interpretation and synthesis of relevant information and relationship among state, city authorities and tourist boards and industry The skills needed for evaluation, interpretation and synthesis of relevant information The skills needed for presenting scientific contents and stances in written and oral form Designing project proposals Problem solving related to qualitative and quantitative geographic information Functioning effectively as an individual and as a team member</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Autonomous continuous professional improvement needed in professional development				
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Explaining the destination management Explaining the role of the national tourist organization Analyzing the strategy of development Researching and interpreting the distribution channels Analyzing the potentials of specific tourist destination Explaining the design of the operational marketing plan				
2.5. Course content broken down in detail by weekly class schedule (syllabus)	1. introduction (syllabus, instructions for seminar, course goals, evaluation system, literature) 2. tourist organization management, definition of tourist organization, development of business cooperation 3. tourism destination as integral market value, internal and external activities, sustainable tourism 4. tourist destination functions, planning, vision, mission, strategies 5. organization of tourist destination, organizational chart 6. DMO and DMC roles, tourist board role, their relationship 7. Croatian national tourist organization system, type of tourist organizations, analyze of sustainability of existing system 8. tourist destination marketing, different kinds of destination promotion 9. tourism and global processes, factors which influence the relationship between tourism and global processes 10. operational marketing plan of Zagreb, strategies of promotion on specific markets 11. top destinations of the future, predictions, reasons, analyze of potentials 12. budgeting destination promotion, design of financial plan of promotion on on specific markets 13. what is the value of states as brands? How to brand specific destinations? 14. SWOT, PEST analysis, possibilities which these analysis offer and how to use them 15. role of state and city administration in the development of management, synergy of administration, tourist boards and industry				
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
					-
2.8. Student responsibilities	Participation in discussion. Tests. Seminar.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)



DETAILED PROPOSAL OF THE STUDY PROGRAMME

credits is equal to the ECTS value of the course)	Tests	3	Oral exam		(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Active discussion 10 %, seminar 20 %, tests 70 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Notes – Tomašević, A., 2012: <i>Tourist Destination Management and Marketing</i> , PMF, Zagreb.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Magaš, D., 2008: <i>Destinacijski menadžment, modeli i tehnike</i>, Sveučilište u Rijeci, Fakultet za turistički i hotelski menadžment u Opatiji, Opatija.</p> <p>Stanić, M., 2008: <i>Destinacijski menadžment kompanije</i>, UHPA, Zagreb.</p> <p>Harrill, R., 2005: <i>Fundamentals of Destination Management and Marketing</i>, American Hotel & Lodging Educational Institute, Destination Marketing Association International, Washington.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>University questionnaire</p> <p>Self evaluation – continuous improvement and modernization of course goals, content, learning strategies and evaluation of learning outcomes</p> <p>Interview with companies, institutes and organizations for students internship</p> <p>Other procedures as per University and Faculty policies on internal quality assurance</p>					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban-Social Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers		1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Society, emphasised throughout transformations in the spatial structure of the city (functional, social and morphological transformations). Particular objectives of the course are: synthesis of contemporary theory and methodology on transformations of the spatial structure of the city, which are induced by the interaction of different economic, social, cultural and political factors on global, regional and local scale. On the number of examples from various cities around the world and in Croatia, problems of a transformation of the urban-social structure will be discussed and explained. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of transformations of an urban-social structure.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results. Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish and explain approaches in the research of a social space of the city - apply theories and models of the urban-social structure, particularly the theory of the sustainable urban development - explain development of urban planning in Croatia and in the selected countries, and a contemporary development of the cities in the context of the economic transformations - explain cultural and social context of a transformations within the Croatian and the cities in selected countries - conduct a research on one of the selected topic: socio-spatial differentiation, segregation, inner-city migrations, revitalisation and gentrification in the city (using GIS) - make a researched based solution for the problems of the socio-spatial structure of the city, with a particular emphasis on a possibilities of redevelopment of the brownfields - write a report/essay on a topic related to a changes within the socio-spatial structure of the city
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 INTRODUCTORY LECTURE – Goals and aims of the course; Approaches in the research of the social space (positivism, behaviourism, structuralism, post-structuralism); Socio-spatial dialectic; City as a stage of social, economic, cultural and political changes</p> <p>2 THEORIES AND MODELS OF URBAN-SOCIAL STRUCTURE – Chicago school and social ecology; Burgesses’ model; Hoyts’ model; Hariss-Ullmans’ model; Other theories and models</p> <p>3 URBAN PLANNING AND POLICY - Emergence of urban planning; Urban planning in selected countries (USA, Western Europe, Post-socialist cities, Croatia); Theory of sustainable urban planning; Urban-social structure and urban planning</p> <p>4 ECONOMIC CONTEXT OF TRANSFORMATIONS IN THE CITY – Pre-capitalist and pre-industrial city; Industrial city (Fordism, Keynesianism); Contemporary city (Post- fordism, Post-industrial society; Globalisation)</p> <p>5 CULTURAL CONTEXT OF TRANSFORMATIONS IN THE CITY – What is a culture? Relation culture – city; Post-colonial</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>theory; Space, power and culture; Post-modernism and city</p> <p>6 SOCIAL CONTEXT OF TRANSFORMATIONS IN THE CITY – Morphogenesis; Morphology of the city (housing, types of buildings); Socio-demographic characteristics of the city; Social topography</p> <p>7 SOCIO-SPATIAL DIFFERENTIATION AND SEGREGATION IN THE CITY – Segregation (USA, Western Europe, Post-socialist cities, Croatia); Social polarisation</p> <p>8 SOCIO-SPATIAL STRUCTURE OF THE CITY – PROBLEMS OF DEVELOPMENT – Poverty; Homelessness; Unemployment; Social exclusion; Environmental quality</p> <p>9 SOCIO-SPATIAL STRUCTURE OF THE CITY – INSTITUTIONAL FRAMEWORK – Socio-spatial structure and public institutions; Public vs. Private; Social Justice and the City (importance of David Harvey's research)</p> <p>10 HOUSING AND INNERCITY MIGRATIONS – Housing areas in the city; Housing market; Types of inner-city migrations; Life-cycles in the city</p> <p>11 REVITALISATION AND GENTRIFICATION 1 – Definition and meaning of the notions (revitalisation, gentrification); Emergence of revitalisation and gentrification in the city; Rent gap theory; Consumption theory; Revitalisation and gentrification in selected cities (USA, Western Europe, Post-socialist cities, Croatia)</p> <p>12 REVITALISATION AND GENTRIFICATION 2 – Field work 1 (revitalised/gentrified areas in Zagreb)</p> <p>13 QUALITY OF LIFE IN THE CITY – Definition and meaning of the notion; Objective and subjective indicators of a quality of life in the city; Spatial levels of the analysis (city, district, neighbourhood)</p> <p>14 COGNITIVE ELEMENTS IN THE CITY – City image; Mental maps; Other approaches in a research of the city image</p> <p>15 CONCLUDING LECTURE – Field work 2 (urban-social structure of Zagreb)</p>		
<p>2.6. Format of instruction:</p>	<p>x lectures</p> <p>x seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>x field work</p>	<p>x independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p>x work with mentor</p> <p><input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p> <p>Two fieldworks:</p> <p>a) Revitalised/gentrified areas in Zagreb (Cvjetni trg, Zavrtnica-Radnička-Vukovarska-HeinzeloVA);</p> <p>b) Urban-social structure of Zagreb</p>
<p>2.8. Student responsibilities</p>	<p>Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork. GIS analysis of a selected topic.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance		Research		Practical training	1
	Experimental work		Report	1	(other)	
	Essay		Seminar essay		(other)	
	Tests		Oral exam	1	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written evaluation, oral examination.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Green, R. P., Pick, J. B., 2006: <i>Exploring the Urban Community: A GIS Approach</i> , Pearson Prentice Hall, Upper Saddle River.				5	yes
	Knox, P., Pinch, S., 2006: <i>Urban Social Geography: An Introduction</i> , Pearson Education Limited, Harlow.				5	yes
	Pacione, M., 2009: <i>Urban Geography: A Global Perspective</i> , Routledge, London (selected chapters).				5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Atkinson, R., Bridge, G. (ur.), 2005: <i>Gentrification in a Global Context: The New Urban Colonialism</i> , Routledge, London (selected chapters). Paddison, R. (ur.), 2001: <i>Handbook of Urban Studies</i> , Sage, London (selected chapters).					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban Regions	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Surroundings, emphasised throughout transformations in the spatial structure of the surroundings (functional, social and morphological transformations). A particular objective of the course is: synthesis of contemporary theory and methodology on the transformations of the urban regions. On the number of examples from various urban regions around the world and in Croatia, problems of a development and the importance of the research with possible application in the field of regional and urban planning will be discussed. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of a transformations and a development of the urban regions.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish types of the urban regions - explain and apply models and methods in the research of the urban regions - explain the development of urban regions in Croatia and in the world, within the context of regional and urban planning, particularly in the developed countries (Germany, United Kingdom, USA etc.) - select an urban region in Croatia and to conduct a research – analyse functional, morphological and social transformations, size, population development and migrations (using GIS) - conduct the research on a topic of tourist and recreational zones and/or heritage in city surroundings - write a report/essay on a topic related to transformations in the urban regions of Croatia
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 INTRODUCTORY LECTURE – Goals and aims; Students obligations; Schedule of written and oral exams; Definitions of main notions and terms</p> <p>2 CITY AND SURROUNDINGS – City and its surroundings; Emergence of urban regions; Suburbanisation</p> <p>3 TYPES OF URBAN REGIONS – Morphological urban regions; Socioeconomic urban regions; Selected examples from the world and Croatia</p> <p>4 THEORIES AND MODELS OF URBAN REGIONS – Hay-Hall model; Model of urban cycles; Soja’s model</p> <p>5 METHODS IN THE RESEARCH OF URBAN REGIONS – Analyses of the settlement (urban) network</p> <p>6 URBAN REGIONS IN EUROPE 1 – Emergence of urban regions in Europe; United Kingdom (MELA – Metropolitan Economic Labour Areas, SMELA – Standard Metropolitan Labour Areas), Germany (Stadtregion, Verdichtungsräume, Ballungsgebiete); Randstad Holland in the Netherlands; Examples from a selected countries</p> <p>7 URBAN REGIONS IN EUROPE 2 – European urban regions and regional policy; Management of monocentric and polycentric urban regions; ESPON (European Spatial Planning Observation Network)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>8 URBAN REGIONS IN USA – Emergence of urban regions; Metropolitan Statistical Area; Micropolitan Statistical Area</p> <p>9 DEVELOPMENT OF THE URBAN REGIONS IN A SELECTED COUNTRIES OF THE WORLD – Canada; Japan; Less developed countries</p> <p>10 URBAN REGIONS AND GLOBALISATION – Influence of the globalisation on a development of the urban regions; Global urban system; Mega-cities</p> <p>11 URBAN REGIONS IN CROATIA 1 – Emergence and development of the urban regions in Croatia; Models in the research of the urban regions; Size and structure of the urban regions</p> <p>12 URBAN REGIONS IN CROATIA 2 – Population development; Socioeconomic changes; Residential suburbanisation</p> <p>13 URBAN REGIONS IN CROATIA 3 – Migrations – in-immigration, daily commuting (migrations)</p> <p>14 URBAN REGIONS IN CROATIA 4 – Urban regions within the context of the regional and urban planning</p> <p>15 FIELD WORK – selected examples of the(sub) urbanization in the Urban region of Zagreb</p>					
2.6. Format of instruction:	<p>x lectures</p> <p>x seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>x field work</p>		<p>x independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p>x work with mentor</p> <p><input type="checkbox"/> (other)</p>		<p>2.7. Comments:</p> <p>Field work in the Urban region of Zagreb at the end of a semester,</p>	
2.8. Student responsibilities	<p>Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork.</p>					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	2	Research		Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	<p>Written evaluation, oral examination.</p>					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Hall, P., 2002: <i>Urban and Regional Planning</i> , Routledge, London.				5	yes
	Herrschel, T., Newman, P., 2002: <i>Governance of Europe's City Regions: Planning</i> ,				5	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<i>Policy and Politics</i> , Routledge, London.		
	Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i> , Školska knjiga, Zagreb.	10	yes
	Selected articles from Croatian and international geographic journals.		
2.12. Optional literature (at the time of submission of study programme proposal)	Hall, P., Pain, K. (ur.), 2006: <i>The Polycentric Metropolis: Learning from Mega-City Regions in Europe</i> , Earthscan, London. Hoggart, K. (ur.), 2005: <i>The City's Hinterland: Dynamism and Divergence in Europe's Peri-Urban Territories</i> , Ashgate, Aldershot. Taylor, P. J., 2004: <i>World City Network: A Global Urban Analysis</i> , Routledge, London.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Martina Jakovčić	1.6. Year of the study programme	1 st
1.2. Name of the course	Geography of Trade	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Aim of the course is to gain knowledge on geography of consumption with the special attention to retail geography as on of consumption activities. Understand factors of development of consumption, contemporary places of consumption and main consumption activities. Understand contemporary function of consumption spaces. Widen once knowledge and skills in social geography. Apply knowledge and skill in cartography, economic geography and methods in field work and practice.</p> <p>Understand and explain causes and consequences of geographical distribution of consumption activities. Understanding complex systems of consumption and its impact on consumer behaviour. Understanding complex system of consumption and its impact on consumer behaviour. Understand role of location of consumption spaces and especially shops and shopping centres on functional and spatial structure of the city and development of tourism.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>The research process in geography. Specific statistic and graphic methods. Application of knowledge in determination and resolving of spatial problems of high level complexity. Ability to explain and discuss relevant and contemporary geographic phenomena and processes, complex systems of consumption and its impact on consumer behaviour, complex system of consumption and its impact on consumer behaviour. Understand role of location of consumption spaces and especially shops and shopping centres on functional and spatial structure of the city and development of tourism. Skills needed to evaluate, information and data on impact of location of consumption space and especially retail and shopping centres on spatial and functional structure of the city and its role on development of tourism. Skill to present scientific results in oral and written form.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Skills needed for the filed work. Mapping. Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain development of consumption as activity Compare importance of consumption spaces on spatial structure of the city Differ and understand characteristics and specifics of location of certain consumer activity Know and explain development, location and function of shopping centres on chosen examples in Croatia and the world. Use relevant methods in collection, processing and distribution of spatial data. Apply knowledge in determining, and solving spatial problems of medium level complexity.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Geography of consumption – definition, methods, trends of development 2. geographic research of consumption and consumer behaviour 3. Development of consumption from industrial revolution till 1960 4. Development of consumption from 1960s till today. 5. Consumption systems and consumption activities – retail 6. Consumption systems and consumption activities – eating, fun, education and culture 7. Street as a consumption space – alternative economic spaces 8. Shopping centre as a consumption spaces – term, definition, development, location, function 9. Shop as a consumption space – retail location in the city 10. Consumer types 11. Impact of culture, and subcultures in consumer behaviour 12. Development of consumption in Croatia from 1945 and 1990 13. Development of consumption in Croatia from 1990 14. Globalization and contemporary consuming culture 15. Future trends and development of consumption 	
<p>2.6. Format of instruction:</p>	<input type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other) <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>2.7. Comments:</p> <p>-</p> </div>
<p>2.8. Student responsibilities</p>	<p>Regular attending of lecture and seminars. Active participation in lectures. Preparation of seminar essay. Application of cartographic methods in field research (organization and conduction of mapping). Oral and written report on the results of field</p>	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	work.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1,5	(other)	
	Tests		Oral exam		(other)	
	Written exam	3,0	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Notes on attendance of lectures, seminars and mapping and noting student activities. Final mark will be a result of a written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Mansvelt, J., 2005: <i>Geographies of Consumption</i> , Sage Publications, London, 190 pp.			5	yes	
	Schiffman, L. G., Kanuk, L. L., 2004: <i>Ponašanje potrošača</i> , Mate, Zagreb, chapter 2, 5, 12 i 13.			10	yes	
	Cross, G., 2010: <i>An all-consuming century</i> , Columbia University Press, New York, chapter 5, 6, 7.			5	yes	
	Smart, B., 2010: <i>Consumer society, critical issues and environmental consequences</i> , Sage Publications, London.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Zukin, S., 2005: <i>Point of purchase: how shopping changed American culture</i> , Routledge, New York, 325 pp.					
	Miller, D. i dr., 1998: <i>Shopping, place and identity</i> , Routledge, London, 214 pp.					
	Ritzer, G., 1999: <i>McDonaldizacija društva. Istraživanje mijenjajućeg karaktera suvremenog društvenog života</i> , Jesenski i Turk, Zagreb, 326 str.					
	Duda, I., 2005: <i>U potrazi za blagostanjem, O povijesti dokolice i potrošačkog društva u Hrvatskoj 1950-ih i 1960-ih</i> , Srednja Europa, Zagreb.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Duda, I., 2010: <i>Pronađeno blagostanje : Svakodnevni život i potrošačka kultura u Hrvatskoj 1970-ih i 1980-ih godina</i> , Srednja Europa, Zagreb.					
	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vuk Tvrтко Opačić	1.6. Year of the study programme	1 st
1.2. Name of the course	Geographical Aspect of Recreation	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main course objective is to acquire knowledge about geographic perspective of recreation as a phenomenon in various environments. The emphasis in theoretical part of the course is given on defining similarities and differences between terms "recreation", "tourism", "trip", "leisure", "free time". Specific attention is given on consideration of second home phenomenon, as direct effect recreation, but also receiving part of tourism offer, as one of the main problems in Croatian Littoral.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. The research process in general and in geography. Specific statistic and graphic techniques. Concept of sustainable development in tourism and recreation industries.</p> <p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development.</p>			
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - to explain theory and methodology of the geography of tourism and recreation - to analyse and compare natural resources for outdoor recreation in coastal areas - to interpret second home phenomenon - to analyse and compare recreation in urban, rural and protected areas - to make an outline of the research on given case study - to select adequate methods and techniques for collecting data and conduct a research; to present the results in written and oral form 			
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction to course 2. Geography of tourism and recreation – terminology, classifications of recreation, the role of the recreation in geographic research 3. Free time as one of the basic life functions 4. Natural resources for outdoor recreation – relief, vegetation 5. Natural resources for outdoor recreation – climate, waters 6. Recreation in coastal areas 7. Second home phenomenon – contemporaneous expression of recreation and commercial tourism 8. Second home phenomenon in Littoral Croatia 9. Recreation in urban areas 10. Recreation in rural areas 11. Recreation in protected areas 12. Spatial aspect of recreation – main challenges and regional planning measures and solutions 13. Field trip preparation – making a questionnaire, defining the sample, making an interview 14. Course field trip – interviewing participants of outdoor recreation and local permanent population in recreational area; interviews with members of local authorities, local tourist board, local entrepreneurs, etc. 15. Field trip data analysis, interpretation, discussion, conclusions 			
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other) </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <p>2.7. Comments:</p> <p>-</p> </td> </tr> </table>	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p>-</p>
<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p>-</p>			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.8. Student responsibilities	Attendance to class, seminar essay with oral presentation, making a questionnaire for course field trip, attendance to course field trip.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	1	Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	2	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Oral exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Williams, S., 2003: <i>Tourism and recreation</i> , Prentice Hall, Harlow.				5	yes
	Plummer, R., 2009: <i>Outdoor recreation</i> , Routledge, Abington-New York. – odabrana poglavlja.				5	yes
	Opačić, V. T., 2012: <i>Vikendaštvo u hrvatskom priobalju: jučer, danas, sutra</i> , Hrvatska sveučilišna naklada, Zagreb.				5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Hall, C. M., Page, S. J., 2002: <i>The geography of tourism and recreation: environment, place and space</i>, Routledge, London – New York.</p> <p><i>Outdoor recreation management</i> (ur. J. Pigram, J. M. Jenkins), Routledge, London, New York, 2003.</p> <p><i>Tourism, mobility and second homes: between elite landscape and common ground</i> (ur. C. M. Hall, D. K. Müller), Channel View Publications, Clevedon.</p> <p><i>Tourism and recreation in rural areas</i> (ur. R. Butler, C. M. Hall, J. Jenkins), John Wiley and Sons, Chichester, 1999.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Lukić	1.6. Year of the study programme	1 st
1.2. Name of the course	Heritage and Tourism in Rural Areas	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>General aim: Knowledge of heritage valorization in tourism and their role in integral development of rural areas.</p> <p>Educational aims: knowledge about human, social and natural resources and their usage in valorizing heritage and developing rural tourism. Understanding the role of rural tourism as a developmental factor in integral planning of rural areas. Acquiring basic knowledge in planning rural tourist product and developing rural tourist destination.</p> <p>Functional aims: Developing spatial and logical way of thinking and abilities to research influences of tourism on development and transformation of rural areas.</p> <p>Developing positive attitudes towards 1) importance of protection of natural and cultural heritage and 2) importance of sustainable use of heritage in economic development.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i></p> <p>Theoretic and methodologic geography system.</p> <p>The research process in general and in geography.</p> <p>Specific statistic and graphic techniques.</p> <p>Evaluation of natural elements, social components, and cultural offers in tourism.</p> <p>Cultural heritage as a spatial phenomenon.</p> <p>The relationship between natural and cultural heritage and tourism, specifically selective forms of tourism: ecotourism, geotourism, rural tourism, cultural tourism, etc.</p> <p>Concept of sustainable development in tourism and recreation industries.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Practical abilities and skills:</u> Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate maps and cartographic methods in analysis in the presentation of the results. Designing project proposals.</p> <p><u>All cognitive and generic skills and abilities defined in programme.</u></p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding mutual dependencies between rural areas, heritage and tourism. Understanding and knowledge of contemporary transformation of rural areas and the role of tourism in their sustainable development. Understanding the importance of creating identity and perceptions of rural areas for tourism development. Understanding the concept, principles and specificity of rural tourism and its varieties. Understanding and knowledge of heritage as a resource in rural tourism. Understanding and knowledge of tourism as an element of diversification of rural areas. Understanding the process of planning and managing rural tourist destination.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>Introduction (aims, objectives and formats of instruction). Introducing key terms and their mutual dependencies: rural areas, heritage and (rural) tourism.</p> <p>Roles and functions of rural areas in post-industrial society. Restructuring of rural areas. Productivism, postproductivism and diversification in rural areas. Commodification of rural areas.</p> <p>Identity, perceptions and geographical marketing of rural areas. Images and perceptions of rurality and their role for tourism development. Popular culture and media as push factors and tourism. Authenticity in rural tourism.</p> <p>Rural tourism. Definition. Historical development (Europe and Croatia). Legal framework. Characteristics and specificities. Researching rural tourism.</p> <p>Heritage as a resource in developing rural tourism (I). Role of heritage in rural tourism. Identity as heritage. Cultural landscape as heritage. Material culture as heritage.</p> <p>Heritage as a resource in developing rural tourism (II). Authentic food products as heritage. Festival and manifestations as heritage. Economic valorization of heritage in rural areas.</p> <p>Developmental factors of rural tourism. Supply and demand. Demographic characteristics. Normative, organizational, educational, financial and other factors..</p> <p>Rural tourism forms. Agritourism. Hunting and fishing. Health and wellbeing tourism. Sport tourism. Educational tourism. Adventure tourism. Transit tourism. Gastronomical and enogastronomical tourism. Tourism in protected areas. Cultural tourism. Other forms of tourism in rural areas.</p> <p>Geographical aspects of mutual dependencies between tourism and agriculture. Detailed study on farm tourism. Wine</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>roads.</p> <p>Second-homes in rural areas. Historical development of second-homes phenomenon in rural areas. Economic and non-economic impacts of second homes. Regional differences in second home in rural Croatia.</p> <p>Rural tourism in Europe and Croatia – selected case studies.</p> <p>Development and current state of tourism in rural areas of Croatia. Analysis of regional differences.</p> <p>Impacts of (rural) tourism on spatial transformations. Socio-economic, functional and physiognomic transformation of rural areas. Impacts of tourism on perceptions of rurality.</p> <p>Tourism and sustainable development of rural areas. Tourism as an instrument in rural development. Typologies of rural areas. Tourism as an element of development in rural periphery. Role of rural tourism in developing tourist destinations. Rural tourism and recreation in outskirts of the city.</p> <p>Planning and managing tourism as an element of integral development of rural areas. Actors of rural tourism development. Concepts and principles in planning and management of tourism in rural areas. Rural tourism destination development (resources analysis, networking, marketing, research).</p>				
2.6. Format of instruction:	<p>X lectures</p> <p>X seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>X field work</p>	<p>X independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p><input type="checkbox"/> work with mentor</p> <p><input type="checkbox"/> (other)</p>	2.7. Comments: -		
2.8. Student responsibilities	Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay	1	Seminar essay	1	(other)
	Tests		Oral exam	1	(other)
	Written exam	1	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance (10 %), essay (10 %), seminar and project (20 %), written and oral exam (60 %).				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Butler R., Hall C. M., Jenkins J. (ur.), 1998: <i>Tourism and Recreation in Rural Areas</i> , John Wiley & Sons, Chichester (selected chapters).			5	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Čorak, S., Mikačić, V., 2006: <i>Hrvatski turizam: plavo, bijelo, zeleno</i>, Institut za turizam, Zagreb (selected chapters).</p>	10	yes
	<p>Demonja, D., Ružić, P., 2011: <i>Ruralni turizam u Hrvatskoj, s hrvatskim primjerima dobre prakse i europskim iskustvima</i>, Meridijani, Samobor i Institut za međunarodne odnose, IMO, Zagreb.</p>	10	yes
	<p>Lukić, A., 2012: <i>Mozaik izvan grada - tipologija ruralnih i urbaniziranih naselja Hrvatske</i>, Meridijani, Samobor (selected chapters).</p>	15	yes
	<p>Woods, M., 2011: <i>Rural</i>, Routledge, Oxon (selected chapters).</p>	5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Atkinson, D., 2008: Baština, u Atkinson, D., Jackson, P., Sibley, D., Washbourne, N. (ur.). <i>Kulturna geografija, kritički rječnik ključnih pojmova</i>, Disput, Zagreb (189-199).</p> <p>Baćac, R., 2011: <i>Priručnik za bavljenje seoskim turizmom, Korak po korak od ideje do uspješnog poslovanja</i>, Ministarstvo turizma Republike Hrvatske, Zagreb.</p> <p>Hall, D., Roberts, L., Mitchell, M. (ur.), 2003: <i>New Directions in Rural Tourism</i>, Ashgate, Aldershot (selected chapters).</p> <p>Lukić, A., 2001: Ruralni turizam – čimbenik integralnog razvitka ruralnih prostora Hrvatske: od mašte do stvarnosti, <i>Geografski horizont</i> 1/2, 7-31.</p> <p>Woods, M., 2004: <i>Rural Geography: Processes, Responses and Experiences in Rural Restructuring</i>, Sage Publications, Thousand Oaks (selected chapters).</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ivan Zupanc	1.6. Year of the study programme	1 st
1.2. Name of the course	Cultural Landscapes: Protection and Management	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To knowledge students with idea of cultural landscape as heritage. To build sense for recognising cultural landscapes as heritage. Understanding the need of protection and management for sustainable development and optimal function in local and regional development.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	Course contributes to professional knowledge, cognitive, practical and generic abilities and skills.		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Knowledge and understanding of: -cultural landscapes as resource for local and regional development. -cultural landscapes as heritage Ability of planning and management the cultural landscapes as heritage. To autonomous create seminar in written form with use the specific sources and methods and knowing literature.		
2.5. Course content broken down in detail by weekly class schedule (syllabus)	1. Introduction 2. Key spatial ideas and concepts in geography 3. The idea and concept of landscape in geography 4. Landscape as representation 5. Landscape as heritage 6. Landscape and identity		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	7. UNESCO – idea of world heritage 8. European landscapes 9. Sources about landscape 10. Methods for interpreting and researching the landscape 11. Visual sources and methods for landscape research 12. Landscape protection 13. Protection and management in Croatia 14. Landscape management 15. Landscape and tourism				
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -		
2.8. Student responsibilities	Properly class attendance and one written seminar essay.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests		Oral exam	1	(other)
	Written exam	2	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Written and oral exam. Written seminar essay.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Dumbović Bilušić, B. Obad Šćitaroci, M., 2007: Kulturni krajolici u Hrvatskoj – identifikacija i stanje zaštite, <i>Prostor</i> 15 (2/34), 261-271.			10	yes
	Jelinčić, D. A., 2010: <i>Kultura u izlogu: kratki vodič za upravljanje kulturnim dobrima</i> , Meandar media, Zagreb.			10	yes
	Martinić, I., 2010: <i>Upravljanje zaštićenim područjima prirode: planiranje, razvoj i održivost</i> , Sveučilište u Zagrebu, Šumarski fakultet, Zagreb.			10	yes
2.12. Optional literature (at the time of	Howard, P. J., 2011: <i>An Introduction to Landscape</i> , Farnham, Ashgate.				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

submission of study programme proposal)	
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Danijel Orešić	1.6. Year of the study programme	1 st
1.2. Name of the course	Coast and Coastal Water Management	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Understanding coastland as a geographic space where different processes, activities and functions occur, intertwine, support each other or come into conflict. Developing of critical thought aimed at coordination of activities and planning and possibilities of coastal management.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills</u> <i>Knowledge and understanding of:</i> Theoretic and methodologic geography system. Environmental history and large-scale environmental modifications. Principles of landscape protection, restoration, and management. Evaluation of natural elements, social components, and cultural offers in tourism. Concept of sustainable development in tourism and recreation industries.</p> <p><u>Cognitive abilities and skills:</u> Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p><u>Practical abilities and skills:</u> Designing project proposals.</p> <p><u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Information-technology skills. Functioning effectively as an individual and as a team member. Continuous professional improvement needed in professional development.</p>				
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge of the properties and dynamics of coastal waters and understanding of the oceans geocologic role. Knowledge of coast types and basic coastal natural processes. Knowledge of the maritime law basics and the regimes of exploitation on the sea. Understanding of the litoralisation processes. Ability to interpret and discuss the historic and geographic role of the world ocean, especially in relation to globalisation processes. Ability to interpret and discuss the need of ocean protection. Ability of independent browsing and consulting of relevant literature. Abilities and skills related to recognising of potential and actual conflicts of interest in coastland area and management possibilities.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction, terminology. 2 The properties and dynamics of coastal waters. 3 Coast types. 4 and 5 Litoralization, coast as a living areas. Ecological aspects of litoralization. 6 and 7 Coast as a touristic resource. 8 Fishery and mariculture. 9 Off-shore mining. 10 and 11 Maritime affairs, world harbours, shipping. 12 Sea boundaries. Exclusive economic zones. 13 Strategic aspects of the world ocean. 14 and 15 Management of coast and coastal waters, examples from the World and from Croatia. Seminar: written seminar paper on a given theme.</p>				
<p>2.6. Format of instruction:</p>	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments: -</p>		
<p>2.8. Student responsibilities</p>	<p>Attendance to class, seminar paper.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the</p>	<p>Class attendance</p>	<p>0,5</p>	<p>Research</p>		<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>	<p>2</p>	<p>(other)</p>
	<p>Tests</p>		<p>Oral exam</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	2,5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Seminar evaluation, written examination. Attendance to class 10 % + seminar paper 40 % + written examination 50 %					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Beatley T., Brower, D. J., Schwab, A. K., 2002: <i>An Introduction to Coastal Zone Management</i> . 2nd edit. Island Press, Washington, 342 pp.			5		yes
	Barnabe, G., Barnabe-Quet, R., 2000: <i>Ecology and Management of Coastal Waters</i> . Engl. izdanje: Springer Praxis Publishing Ltd., Chichester, 396 pp.			5		yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles in scientific journals and on internet.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	Passive knowledge of English language needed.					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ksenija Bašić	1.6. Year of the study programme	1 st
1.2. Name of the course	Croatian Islands – Sociogeographic Themes	1.7. Credits (ECTS)	5
1.3. Associate teachers	Lana Slavuj Borčić	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	To introduce students to the basic features of Croatian archipelago with a special emphasis on contemporary processes of depopulation and migration of the Croatian islands. Introduction to the trends transforming the island landscape. Understanding the potential and possibilities of modern development archipelago. Familiarizing students with socio-demographic characteristics of the islands and island groups and their local specificities.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Knowledge and understanding of:</u> Research process in geography. Renewal, conservation and forming of landscape issues. Touristic evaluation of natural elements, social components and cultural offer. Concept of sustainable development on the islands.</p> <p>Development of cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining, and solving spatial problems of high complexity on Croatian islands. The skills needed for collection, evaluation, interpretation and presentation of the research results in written form. Applying appropriate statistical, graphic and cartographic methods and GIS techniques in analysis and in the presentation of the results.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Select and explain the specifics of Croatian islands. Evaluate the significance of Croatian islands in the past and in contemporary time. Compare the valorisation of island space in the past and nowadays.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Analyse the demogeographic processes on Croatian islands. Determine the degree of cultural landscape transformation on Croatian islands. Explain the role of heritage in the island tourism. Examine and present the sociogeographic features of respective islands and island groups in written and oral form.</p>				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Classification, regionalisation and location of Croatian islands (number of islands, regional divisions, transport and geopolitical location) 2. Physical-geographical characteristics of Croatian islands (geological basis and relief, climate, water, soil) 3. Historical-geographical development of Croatian islands (Prehistory, Ancient Times, Middle Ages, Early Modern Age, 19. and 20. century) 4. Depopulation of Croatian islands – causes, processes and consequences (settlements’ development, settlement structure, general population movement) 5. Depopulation of Croatian islands– causes, processes and consequences (migrations) 6. Composition of the island population and demographic resources (natural movement of population, age and sex composition of population, socio-economic composition of population) 7. Composition of the island population and demographic resources (demographic resources) 8. Cultural heritage of Croatian islands (heritage on islands, cultural landscapes) 9. Economy of Croatian islands (concepts and models of economic development of Croatian islands) 10. Tourism of Croatian islands (factor of demographic renewal and cultural heritage revitalisation on Croatian islands) 11. Selected socio-geographic themes (quality of life on Croatian islands) 12. Kvarner islands (local specificities) 13. North Dalmatian islands (local specificities) 14. Central Dalmatian islands (local specificities) 15. South Dalmatian islands (local specificities) 				
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>		
<p>2.8. Student responsibilities</p>	<p>Performance of practical tasks and exercises and literature analysis in seminars.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>		<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>
	<p>Essay</p>		<p>Seminar essay</p>	<p>2</p>	<p>(other)</p>
	<p>Tests</p>		<p>Oral exam</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class participation and discussion activities 10 %, seminar execution 35 %, written exam 55 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Lajić, I. i Mišetić, R., 2006: <i>Otočni logaritam - aktualno stanje i suvremeni demografski procesi na jadranskim otocima</i> , Institut za migracije i narodnosti i Ministarstvo mora, turizma, prometa i razvitka, Zagreb.			10	yes	
	Hrvatski otoci, <i>Društvena istraživanja</i> , 1994, 3 (4-5) (tematski broj).			10	yes	
	Faričić, J., 2007: Sastavnice kulturne baštine hrvatskoga otočnog prostora i mogućnosti njihovoga društveno-gospodarskoga vrednovanja, u: <i>Zbornik 4. hrvatskog geografskog kongresa</i> , HGD, Zagreb, 73-96.			10	yes	
	Stražičić, N., 1997: Prilog poznavanju ukupnog broja hrvatskih jadranskih otoka i broja naseljenih otoka među njima, <i>Pomorski zbornik</i> , Rijeka, vol. 35, 219-240			10	yes	
	Lajić, I., 2006: <i>Kvarnerski otoci: demografski razvoj i povijesne mijene</i> , Institut za migracije i narodnosti, Zagreb.			10	yes	
	Lajić, I., Nejašmić, I., 1994: Metodološke osobitosti demografskog istraživanja hrvatskog otočja, <i>Društvena istraživanja</i> , 12-13 (4-5), 381-396.			10	yes	
	Nejašmić, I., 1997: Suvremene značajke (bio)reprodukcije stanovništva hrvatskog otočja, <i>Migracijske teme</i> , 13 (1-2), 71-83.			10	yes	
	Nejašmić, I., 2000: Prirodno kretanje stanovništva hrvatskog otočja (1991-1997), u: <i>Zbornik 2. hrvatskoga geografskog kongresa</i> , HGD, Zagreb, 263-272.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Nejašmić, I., 1999: Uloga turizma u diferenciranom demografskom razvitku otočnih naselja: primjer srednjodalmatinskog otočja, <i>Hrvatski geografski glasnik</i>, 61 (1), 37-52</p> <p>Podgorelec, S., 2008: <i>Ostarjeti na otoku: Kvaliteta života starijeg stanovništva hrvatskih otoka</i>, Institut za migracije i narodnosti, Zagreb.</p> <p>Other relevant articles published in national scientific journals: <i>Hrvatski geografski glasnik</i>, <i>Geoadria</i>, <i>Migracijske i etničke teme</i>, <i>Sociologija i prostor</i>, <i>Društvena istraživanja</i>.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dane Pejnović	1.6. Year of the study programme	1 st
1.2. Name of the course	Geography of Karst	1.7. Credits (ECTS)	5
1.3. Associate teachers	Petra Radeljčak	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Heritage and Tourism	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Acquiring knowledge and developing skills on the structures, processes, and problems and opportunities for sustainable development of karst areas in Croatia and abroad.</p> <p>Understanding the principles of sustainable development and problems of the development of karst areas, and their place and role in regional development and spatial planning. Adoption of research methods and techniques for sustainable development of karst areas.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge and skills</u></p> <p><u>Knowledge and understanding:</u></p> <p>Process of research work in the study of karst areas.</p> <p>Special features of karst areas in regional planning.</p> <p>Environmental protection and management of karst areas.</p> <p><u>Cognitive, practical and generic skills and abilities:</u></p> <p>Application of knowledge in determining, identifying and solving the problem of high spatial complexity in karst areas.</p> <p>Ability to identify and separation phenomena and processes in the Croatian karst areas important for spatial and regional planning.</p> <p>Ability to interpret and discuss the evolution of landscape, environmental degradation and sustainable development issues of Croatian karst areas.</p> <p>Skills in presenting scientific content and arguments in writing and orally.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The skills needed for field work. Application mapping geographic content. Choosing appropriate prediction methods of changes in the karst areas of Croatia. Application of the model and creating sustainable development projects karst areas. Work effectively, independently and in a team. Independent work required for professional advancement and professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Ability to:</p> <ul style="list-style-type: none"> - Define and explain the objects, approaches, methods, and research purposes karst geography - Explain the elements, characteristics and distribution of karst - Identify and evaluate the role of relief and visual elements as well as the factors of karst areas - Explain the particularities of karst ecosystem - Interpret the evolution of the landscape and environmental degradation in karst regions - Recognize the problems of sustainable development of karst areas - Identify and implement models for sustainable development of karst areas - Create a project for sustainable development of karst areas - Explain the benefits and management of protected areas in Dinaric karst in Croatia - Evaluate the educational potential of karst and karst areas
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction: The scientific basis of the subject 2. Geospatial System of Karst 3. Relief as an element and factor in karst areas 4. Water as an element and a factor in karst areas 5. Environment and ecosystems in karst areas 6. Population and social functions as factors in karst areas 7. Role of historical and spatial development in environmental degradation and the evolution of the landscape of karst areas 8. Problems of sustainable development in karst areas in modern conditions 9. Geographical features of karst areas in Europe 10. Geographical features of karst areas in non-European continents 11. Croatian karst area 12. Croatian Dinaric karst: case studies of sustainable development issues 13. Protected areas of the Dinaric Karst: meaning and problems of sustainable management 14. Models and projects for sustainable development in karst areas 15. Didactic potential of karst and karst areas



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -			
2.8. Student responsibilities	Regular school attendance. Homework and seminar work. Leaving the seminar before the study group and to participate in thematic discussions					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0,5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	0,5	(other)	
	Tests		Oral exam	2	(other)	
	Written exam	2	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Regularity of attendance and class participation to 10 % + seminar 20 % + written exam 30 % + oral exam 40 %.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Roglić, J., 2004: <i>Krš i njegovo značenje</i> , sabrana djela, 360 str.			10	yes	
	Matas, M., 2009: <i>Krš Hrvatske: geografski pregled i značenje</i> , Hrvatsko geografsko društvo – Split, Split, 264 str.			10	yes	
	Pravdić, V., 2003: Održivi razvoj: značenje, poimanje i primjena, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 285-309.			10	yes	
	Pejnović, D., 2005: <i>Održivi razvoj naseljenosti na krškom području Hrvatske, Zbornik prvog savjetovanja Hrvatski krš i gospodarski razvoj</i> (ur. B. Biondić i J. Božičević), Centar za krš, Gospić/Zagreb, Zagreb, 19-31.			10	yes	
	Butula, S., 2003: Planiranje za održivi razvoj: značenje različitosti društvenog interesa za krajobraz, u: <i>Društvena istraživanja: održivi razvoj Hrvatske</i> , 65-66, Zagreb, 427-441.			10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Brinkmann, R., 2010: Karst and sustainability in Florida, U.S.A., u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i> , International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 25-32. Dörflinger, N., Plagnes, V., Kavouri, K., 2010: PaPRIKa a multicriteria vulnerability method as a tool for sustainable management of karst aquifers – Example of application on a test site in SW France, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i> , International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 49-56.</p> <p>Guo Fang, J. G., 2010: The resources, environment and development in Fengshan Geopark karst area, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 75-82.</p> <p>Maleković, S., Tišma, S., Farkaš, A., 2010: Capacity for managing local development in karst areas, u: <i>Sustainability of the karst environment - Dinaric karst and other karst regions</i>, International Interdisciplinary Scientific Conference (Plitvice Lakes, Croatia, 23-26 September 2009), Proceedings (Edit. by Ognjen Bonacci), IHP-VII Series on Groundwater No. 2, UNESCO, Paris, 129-136.</p>
<p>2.13. Quality assurance methods that ensure the acquisition of exit competences</p>	<p>The procedures set forth in the Rules and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - University and college student survey - Self-evaluation of teaching: updating and revising the objectives and subject content and teaching and learning strategies, assessment of learning outcomes analysis of the student's success in the tasks they perform, the colloquia, seminars, written and oral exams - Exit polls for graduates - Telephone and mail surveys after the first year of service (tracking employment after graduation and success in the profession) - Interview with companies, institutes and institutions in which students perform internships
<p>2.14. Other (as the proposer wishes to add)</p>	<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

List of required and elective courses and/or modules with class hours and ECTS credits, course: GEOGRAPHIC INFORMATION SYSTEMS

LIST OF REQUIRED COURSES									
Year of study: 1st									
Semester: 1 st (winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Introduction to Scientific Research	S. Šterc	1	0	1	0	3	required	
	Analysis in GIS	A. Toskić	1	2	3	0	9	required	
	Elective course 1	<i>see table</i>					5	required	
	Elective course 2	<i>see table</i>					5	required	
	Elective course(s)	*					8	required	

* Students select one or more courses from undergraduate or graduate university studies out of the Department of Geography, Faculty of Science, TOTAL: at least 8 ECTS

LIST OF ELECTIVE GEOGRAPHY COURSES									
Year of study: 1st									
Semester: 1 st (winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Applied Geomorphology	N. Bočić	2	1	0	0	5	elective	
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0	0	5	elective	
	Geographic Analysis of Small-Area Population	K. Bašić	2	1	0	0	5	elective	
	Factors of industry and management location	Z. Stiperski	2	1	0	0	5	elective	
	Historical GIS	B. Fuerst-Bjeliš, A. Durbešić	1	2	0	0	5	elective	
	Population of Croatia	S. Šterc	2	1	0	0	5	elective	

LIST OF REQUIRED COURSES									
Year of study: 1st									
Semester: 2 nd (summer)									



DETAILED PROPOSAL OF THE STUDY PROGRAMME

MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective
	Computer assisted statistical analysis	I. Lučev	1	0	3	0	5	required
	Real Estate Cadastre	M. Roić	3	0	1	0	5	required
	Elective course 3	<i>see table</i>					5	required
	Elective course 4	<i>see table</i>					5	required
	Elective course 5	<i>see table</i>					5	required
	Fieldwork in Geography IV	*					5	required

* According to decision of Geography Department Council

LIST OF ELECTIVE GEOGRAPHY COURSES

Year of study: 1st									
Semester: 2 nd (summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Urban-social Geography	V. Prelogović	2	1	0	0	5	elective	
	Urban Regions	V. Prelogović	2	1	0	0	5	elective	
	Military Geography	M. Pahernik	2	1	0	0	5	elective	
	Applying GIS in the analysis of census data	R. Mišetić	1	0	2	0	5	elective	
	Remote Sensing	A. Krtalić	2	0	1	0	5	elective	

LIST OF REQUIRED COURSES

Year of study: 2nd									
Semester: 3 rd (winter)*									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Visualization of spatial data in GIS	D. Spevec	1	0	3	0	7	required	
	Digital Terrain Analysis	M. Pahernik	2	0	2	0	8	required	
	Graduate seminar	*	0	5	0	0	5	required	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Elective course 6	see table						5	required
	Practice (90 hours/year)	**						5	required

* In 3rd semester student chooses master thesis mentor, consults with his mentor, prepares the concept of his master thesis and registers his master thesis theme.

** Institution where student will perform professional practice must be registered at the coordinator for Professional Practice, who will sign student's index according to the confirmation form on performed professional practice

LIST OF ELECTIVE GEOGRAPHY COURSES

Year of study: 2nd									
Semester: 3rd (winter)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Applied Geomorphology	N. Bočić	2	1	0	0	5	elective	
	Karst Geomorphology and Hydrology	N. Bočić	2	1	0	0	5	elective	
	Geographic Analysis of Small-Area Population	K. Bašić	2	0	1	0	5	elective	
	Factors of industry and management location	Z. Stiperski	2	1	0	0	5	elective	
	Historical GIS	B. Fuerst-Bjeliš, A. Durbešić	2	2	0	0	5	elective	
	Population of Croatia	S. Šterc	2	1	0	0	5	elective	

LIST OF REQUIRED COURSES

Year of study: 2nd									
Semester: 4th (summer)									
MODULE	COURSE	COURSE TEACHER	L	S	E	e-learning	ECTS	Required/elective	
	Master thesis with thesis defense	*					30	required	

* mentor according to student's choice



DETAILED PROPOSAL OF THE STUDY PROGRAMME

REQUIRED COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st
1.2. Name of the course	Introduction to Scientific Research	1.7. Credits (ECTS)	3
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+15+0 (1+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Enable students for independant scientific-research work. Introduce students with the structure and stages of the scientific-research proceeding. Train students for the appliance of standard and special research methods and techniques. Explain students the specificities of geographical methodology in research process. Teach students how to define main research aims, tasks, hypothesis, spatial laws, models, projections and conclusions. Capacitate students with the particularities of the geographical research approach.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>This course contribution to the programme is held in the definition of outer and inner research frame, in directioning the inquiry towards crucial processes in space and in the comprehension of spatial laws and objective spatial reality. Very complex context, relationship and link conditionality in geographical space, unique methodology and theoretical concept, research task definitions, individual practice in the research steps, and the recognition of spatial complexity have been validated. Also, the spatial allocate and function determination, spatial typization and regionalization, spatial modeling, projections of future changes, applicability of pertinent methodology, research epistemology comprehension etc., have been appointed.</p>		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Outcomes expected on the level of this course are linked with the high-level education in which the concerned knowledge points out the folowing abilities.</p> <ol style="list-style-type: none"> 1. The ability of spatial content observing, defining, categorizing, mapping and clarifying. 2. The research ability of spatial law consideration, discussion, detection, definition, projection and direction. 		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<ol style="list-style-type: none"> 3. Extended epistemology and coverage of the special approach. 4. Cognitive and cognition ability of revealing conditioned spatial links among complex contexts in geographical space, its causal clarification and resolvment. 5. The ability of complex methodological system appliance in interdisciplinary approach and in logically settled fundamental spatial relations. 6. Individual approach in spatial disproportion perceivment and in research task definition. 7. The ability of the empiric research which can be applicable in basic spatial plans. 8. Spatial functional organization ability in accordance with the phylosophy and logics of space. 				
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Scientific systems. 2. Sistematizations and approaches within scientific system. 3. Example of geographical research subject-matter. 4. Work definitions and atributions. 5. Approach to the research and to the paper writing. 6. Research methods and techniques. 7. Data analysis. 8. Geographical approach to the research. 9. Field work inquiries. 10. Research task definition. 11. Scientific knowledge presentation and popularising. 12. The role of research in educational system. 13. Process of scientific work publication. 14. The meaning of geographical cognitions for objective geographical reality comprehension. 15. Theme elaboration through the research proceeding. 				
<p>2.6. Format of instruction:</p>	<input checked="" type="checkbox"/> lecture <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p>This course aims to learn students how to independently enter in the research proceeding.</p>		
<p>2.8. Student responsibilities</p>	<p>Regular class attendance, passed preliminary exam, research discussion and independent research issue elaboration.</p>				
<p>2.9. Screening student work (name the proportion of ECTS credits for each</p>	<p>Class attendance</p>	<p>1</p>	<p>Research</p>	<p>1</p>	<p>Practical training</p>
	<p>Experimental work</p>		<p>Report</p>		<p>(other)</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Essay		Seminar essay		(other)	
	Tests	0.5	Oral exam		(other)	
	Written exam	0.5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, written exam and seminar essay.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	Montello, D. R., Sutton, P. C., 2006: <i>An Introduction to Scientific Research Methods in Geography</i> , SAGE Publications, London.			10		yes
	Zelenika, R., 2000: <i>Metodologija i tehnologija izrade znanstvenog i stručnog djela</i> , Ekonomski fakultet Sveučilišta u Rijeci, Rijeka.			10		yes
	Milas, G., 2009: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i> , Naklada Slap, Zagreb.			10		yes
	Mejovšek, M., 2008: <i>Metode znanstvenog istraživanja u društvenim i humanističkim znanostima</i> , Naklada Slap, Zagreb.			10		yes
2.12. Optional literature (at the time of submission of study programme proposal)	Robinson, G. M., 1998: <i>Methods and Techniques in Human Geography</i> , John Wiley & Sons, Chichester.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.					
2.14. Other (as the proposer wishes to add)	Research tasks have been assigned by students individual choice (associated with their course).					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Aleksandar Toskić	1.6. Year of the study programme	1 st
1.2. Name of the course	Analysis in GIS	1.7. Credits (ECTS)	9
1.3. Associate teachers	Luka Valozić	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+30+45+0 (1+2+3+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Capability for conducting analyses in GIS for practical purposes.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills</u> <i>Knowledge and understanding of:</i> Database creation, organization techniques and management. Methods and techniques of spatial analysis of vector-oriented data. Methods and techniques of spatial analysis of raster-oriented data. Digital relief models and digital relief analysis. Methods of spatial interpolation. Visualization of continuous and discontinuous geographic data.</p> <p><u>Cognitive abilities and skills:</u> Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Recognition and implementation of appropriate measurement practice.</p> <p><u>Practical abilities and skills:</u> Data collection, selection, processing and integration in GIS.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Applying appropriate GIS methods and techniques. Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate GIS methods and techniques. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results. <u>Generic abilities and skills:</u> Problem solving related to qualitative and quantitative geographic information. Information-technology skills: working with ArcGIS package. Graphic data processing. Data format conversions. Synchronization and integration of spatial data from various sources. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge of user - spatial data interaction Independently conduct spatial analysis on given examples Differentiate and analyse vector and raster data Know and apply the methods of transformation and overlay, display and analysis of relief Overlay error correction Knowledge how to apply methods of spatial interpolation</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Interaction between user and spatial data. Spatial analysis. 2 Selections and data mining. 3 Reclassification of vector and raster data. 4 Measurements: length, area. Polygon complexity. Slope and aspect. 5 Transformations: Buffering (vector) 6 Polygon overlay. Overlay methods. Overlay errors and their correction 7 Analysis of raster data. Methods for spatial interpolation 8 Map algebra, local operations, neighborhood operations, zonal operations 9 Overlaying, Weighted overlaying. (raster) 10 Buffering (raster) 11 Cost distance analysis 12 Digital elevation model. Display and analysis of the relief. Triangular irregular network (TIN) 13 Methods of spatial statistics. Centroid. Weighted mean center. 14 Standard deviational ellipse.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	15 Point pattern analysis. Moran's index.				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work		<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
					-
2.8. Student responsibilities	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam, oral exam results and quality of seminar essay.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.3	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1.7	(other)
	Tests	3.5	Oral exam	3.5	(other)
	Written exam		Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam and oral exam results.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Longley, P. A., Goodchild, M. F., Maguire, D. J., Rhind, D. W., 2005; 2010: <i>Geographic Information Systems and Science</i> , John Wiley & Sons., Chichester.			5	yes
	Maguire, D. J., Batty, M., Goodchild, M. (ed.), 2005: <i>GIS, Spatial analysis and Modeling</i> , ESRI Press, Redlands.			5	yes
	Maantay, J., Ziegler, J., 2006: <i>GIS for the Urban Environment</i> , ESRI Press, Redlands.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	-				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.14. Other (as the proposer wishes to
add)

-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ivana Lučev	1.6. Year of the study programme	1 st
1.2. Name of the course	Computer assisted statistical analysis	1.7. Credits (ECTS)	5
1.3. Associate teachers		1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+45+0 (1+0+3+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	At the end of this course, students should be able to independently conduct statistical analysis of the different types of data (descriptive analysis, hypothesis testing, analysis of test scores, etc.). They should be able to form a database, prepare the data and choose the correct statistical techniques to analyze the data collected from a given design, perform the analysis, and correctly interpret the results of the analysis.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Expert knowledge, competence and skills: <i>Knowledge and understanding:</i> -of research process in Geography -theoretical basis of statistical and graphic methods</p> <p>Cognitive, practical and generic competence and skills: Applying acquired knowledge in determining and solving highly complex spatial problems. Ability to understand, interpret and discuss geographical occurrences and processes. Skills necessary for evaluation, interpretation and synthesis of information and data. Skills necessary for presentation of scientific content and arguments, in oral and written form. Applying adequate statistical and graphical methods in analysis and presentation of results. Solving problems connected to qualitative and quantitative geographic data, creating a database in SPSS program. IT and technological skills.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Efficiency in independent as well as in team work. Capability to work independently at expertise improvement and professional development.</p>			
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>After successfully completed course all students will be able to:</p> <ul style="list-style-type: none"> - understand and apply basic concepts of preparing, designing and conducting scientific research., - design and conduct empirical research, - collect the data, - independently prepare the data for computer assisted statistical analysis, - create a database in SPSS program, - enter the data and conduct transformation of results needed and adequate statistical analysis, - correctly interpret results of the statistical analysis. 			
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Introduction to work with statistical package, adjusting the program parameters ; 2. Creating a database and defining the variables; 3. Preparing and entering the data; 4. Manipulating the databases; 5. Treatment of missing values; 6. Linear and non-linear transformations; 7. Functions; 8. Selection of data; 9. Descriptive statistics; 10. Testing differences between arithmetic means; 11. Measures of association, correlation coefficients, partial correlation ; 12. Contingency tables; 13. Nonparametric tests; 14. Graphic presentation of data; 15. Interpretation of the results of statistical analysis. 			
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work</p>	<table border="1" style="width: 100%;"> <tr> <td> <p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)</p> </td> <td> <p>2.7. Comments: -</p> </td> </tr> </table>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>
<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>			
<p>2.8. Student responsibilities</p>	<p>Regular class attendance (80 % of lectures and seminars), completing assignments. Written test 20 % of the grade. Written</p>			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	exam 70 % of the grade. Oral part of the exam 10 % of the grade. Completed seminar on examples of empirical research in the field of geography. Completed research that will be designed with assistance of the professor. Conducting the research, entry of collected data, statistical analysis of the data.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.5	Research	0.5	Practical training	0.5
	Experimental work		Report		(other)	
	Essay		Seminar essay	0.5	(other)	
	Tests	1	Oral exam	0.5	(other)	
	Written exam	1.5	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Tests 20 %, written exam 70 %, oral exam 10 %.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	McGrew, C. J. & Monroe, C. B., 1999: <i>An Introduction to Statistical Problem Solving in Geography</i> , McGraw-Hill.				5	yes
	Brace, N., Kemp, R., Snelgar, R., 2006: <i>SPSS for Psychologists – A Guide to Data Analysis using SPSS for Windows</i> . New York: Palgrave.				5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Petz, B., 1997: <i>Osnovne statističke metode za nematematičare</i>. Naklada Slap.</p> <p>Milas, G., 2005: <i>Istraživačke metode u psihologiji i drugim društvenim znanostima</i>. Naklada Slap, Jastrebarsko.</p> <p>Burt, J. E., Barber, G. M., Rigby, D. L., 2009: <i>Elementary Statistics for Geographers</i>, Guilford Press.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>The procedures listed in the Rules and Manual on Quality Management at the Faculty of sciences of the Zagreb University:</p> <ul style="list-style-type: none"> -university and faculty conducted student questionnaire -self-evaluation of classes: updating and revising the objectives and subject content as well as the strategies and methods of teaching; evaluating learning outcomes by monitoring and analyzing success of students in tests, tasks, seminar work, written and oral exams - exit surveys for graduates - telephone and mail surveys of graduated students after the first year of employment (tracking employment after graduation and success in the profession) -Interviews with companies, institutes and other institutions in which students completed their internships 					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Miodrag Roić	1.6. Year of the study programme	1 st
1.2. Name of the course	Real Estate Cadastre	1.7. Credits (ECTS)	5
1.3. Associate teachers	Baldo Stančić	1.8. Type of instruction (number of hours L + S + E + e-learning)	45+0+15+0 (3+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge of the theory and practice of registering real estate and rights to them Understanding the characteristics of the land that is registered in the Cadastre. Gaining knowledge about the possibilities of using the registered data.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in general and in geography. Cadastre of realities: content and purpose, data input, maintenance and management, responsibility. Identification and evaluation of resources at the local, regional and national levels especially land.</p> <p>Cognitive, practical and generic skills and abilities: Application of knowledge in determining, identifying and solving the problem of high spatial complexity. Skills in presenting scientific content and arguments in writing and orally. Application mapping geographic content. Application of appropriate maps and cartographic methods in the analysis and presentation of real estate cadastre. Solving problems related to the real estate cadastre. Information-technology skills. Work effectively, independently and in a team.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Independent work required for professional advancement and professional development.					
2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<ul style="list-style-type: none"> - Detect the features of land for the registration in the official registers - Explain how particular features of land register in the cadastre - Connect the Registers of real estate and interests - Apply knowledge acquired in real estate market - Analyze the data registered in the cadastre 					
2.5. Course content broken down in detail by weekly class schedule (syllabus)	<p>1 Basic features of the cadastre. Activity in the real estate cadastre (land). 2 Jurisdictions. Authorization. Administrative structure. 3 Cadastral parcels. The content and purpose of the cadastre. Cadastral documentation. Parts of the cadastral documentation. 4 Cadastral territorial units. Technical methods. Definition, bordering and presentation of boundaries. 5 The basis of measurement and methods. Numeration of parcels. 6 Exposure data for public review. Making cadastral documentation. 7 Technical parts. Book part. Land Registry Database. 8 Maintaining data. Implementation of changes. 9 Maintenance surveying - study. Collection of documents. 10 Recovery (revision) of the cadastre. 11 Retention of cadastral documents. Cadastral Office. Activity of cadastral offices. Data access. 12 Dual registration systems. Land book. Registration in land book. 13 Other registers (cadastres). Enter special properties of parts. Public goods, general goods and maritime domain. 14 Registers in the world. Cadastre management and accountability. Finance and pricing strategy. 15 An efficient data access. Interpretation of the data registered.</p>					
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input checked="" type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -			
2.8. Student responsibilities	Attend a class (min. 70 %), to submit the results of research, to achieve the minimum number of points on mid-term exams, written and oral exam.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of	Class attendance		Research	1	Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay		(other)	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

ECTS credits is equal to the ECTS value of the course)	Tests	1	Oral exam	1	(other)	
	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	During classes: - Research and practical work - mid-term exams / quizzes (possible exemption from the written part of the exam) Final exam: - Written 50 % - Oral 50 %					
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media		
	Roić, M., 2012: <i>Upravljanje zemljišnim informacijama-katastar</i> , Sveučilišni udžbenik, Geodetski fakultet, Zagreb		10 (AGG, Kačićeva 26)	yes		
	Roić, M., 2011: <i>Katastar nekretnina</i> - interna skripta, Geodetski fakultet, Zagreb.		10	yes		
	Roić, M., Medić, V., Fanton, I., 1999: <i>Katastar zemljišta i zemljišna knjiga</i> . Skripta, Geodetski fakultet, Zagreb 1999.		10	yes		
	Official Gazette: Regulations		10	yes		
2.12. Optional literature (at the time of submission of study programme proposal)	Roić, M., 2005: <i>KATASTAR 2014 - VIZIJA BUDUĆIH KATASTARSKIH SUSTAVA</i> , Geodetski fakultet, prijevod publikacije FIG-a. Roić, M., Fjalestad, J. B., Steiwer, F., 2008: <i>Regionalna studija o katastru</i> , Državna geodetska uprava, Zagreb.					
2.13. Quality assurance methods that ensure the acquisition of exit competences	Anonymous student surveys and other methods of quality assurance system at the University of Zagreb.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Dubravka Spevec	1.6. Year of the study programme	2 nd
1.2. Name of the course	Visualization of spatial data in GIS	1.7. Credits (ECTS)	7
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+45+0 (1+0+3+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<ul style="list-style-type: none"> - acquire knowledge on possibilities of visualization of spatial data in GIS - train and qualify students to work with visualization tools - acquire knowledge and skills necessary for application of certain methods of thematic visualization 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Appropriate advanced statistics and graphic techniques. Cartographic semiotics. Visualization of continuous and discontinuous geographic data. Methods of cartographic expression.</p> <p>Cognitive, practical and generic abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition, isolation and visualization of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Data collection, selection, processing and integration in GIS. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate GIS methods and techniques. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results. Information-technology skills: working with ArcGIS package. Graphic data processing. Data format conversions. Synchronization and integration of spatial data from various sources. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - to explain and apply basic visualization and cartographic semiotics terms - to know and apply methodology of visualization of spatial data in GIS - to visualize continuous fields and discrete geographic data - to distinguish colour specifying models in accordance to medium of cartographic presentation - to select and apply relevant cartographic methods in data visualization - to use visualization tools in GIS - to create thematic maps and animations in GIS - to recognize contents that are being visualized in 3D models
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Visualization – cartographic, geovisualization. 2. Cartographic semiotics. Syntactic, semantic and pragmatic dimensions of map. 3. GIS and cartography. 4. Graphical user interface (GUI) - integration of analysis and visualization. 5. Visualization of continuous fields and discrete data. 6. Variations of size, value, texture, colour. Models for specifying colour (RGB, CMYK). 7. Methods of cartographic visualization. 8. Visualization tools in GIS. 9. Thematic maps and GIS (ArcINFO). 10. Animations in ArcGIS. 11.-12. ArcScene animation. 13.-14. ArcMap – temporal animation. 15. 3D visualization.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.6. Format of instruction:	X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -			
2.8. Student responsibilities	Regular class attendance – lectures and exercises. Making exercises and independent assignment.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1.5	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay		(other)	
	Tests		Oral exam	2.5	(other)	
	Written exam		Project	3	(other)	
2.10. Grading and evaluating student work in class and at the final exam	Regular class attendance registering. The results of oral exam and the quality of evaluated independent assignment make the final grade.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	1. Dodge, M., McDerby, M., Turner, M., 2008: <i>Geographic Visualization. Concepts, Tools and Applications</i> , John Wiley&Sons, Ltd, Chichester.			5	yes	
	2. Kraak, M. J., Ormeling, F., 2010: <i>Cartography. Visualization of Geospatial Data</i> , 3rd edition, Persons Education Limited, Harlow.			5	yes	
	3. Brewer, Cynthia A., 2005: <i>Designing Better Maps: A Guide for GIS Users</i> , Esri Press, Redlands.			5	yes	
	4. Krygier, J., Wood, D., 2011: <i>Making Maps: A Visual Guide to Map Design for GIS</i> , Guilford Press, New York.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	1. Slocum, T. A., McMaster, R. B., Kessler, F. C., Howard, H. H., 2010: <i>Thematic Cartography and Geovisualization</i> , Pearson Prentice Hall, Upper Saddle River, New Jersey. 2. Longley, P.A., Goodchild, M.F., Maguire, D.J., Rhind, D.W., 2015: <i>Geographic Information Systems and Science</i> , John Wiley&Sons, Chichester. 3. Petersen, G. N., 2009: <i>GIS Cartography. A Guide to Effective Map Design</i> , ESRI, Redlands. 4. <i>Kartografija i geoinformacije</i> , časopis Hrvatskog kartografskog društva (odabrani članci).					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	5. <i>Cartography and Geographic Information Science</i> , Journal of the American Congress on Surveying and Mapping (selected papers).
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>Procedures outlined in <i>Regulations and Handbook on the Quality Assurance</i> at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - university and faculty student survey - teaching self-evaluation: modernizing and reassessment of course's goals and content, and strategy of teaching and learning; evaluation of learning outcomes by analysis of students level of success according to Student Office data and self-records - outgoing survey: graduate university study evaluation - interview with offices, institutes, organizations and enterprises where students perform professional practice
2.14. Other (as the proposer wishes to add)	-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Mladen Pahernik	1.6. Year of the study programme	2 nd
1.2. Name of the course	Digital Terrain Analysis	1.7. Credits (ECTS)	8
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+30+0 (2+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	20
1.5. Status of the course	Required	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge about the application of GIS spatial analysis in geomorphologic research; define the concept of digital terrain analysis; acquire knowledge about the application of methods of geomorphologic research in the GIS environment; define the concept of a digital elevation model and interpolation elevation data; define methods of morphometric analysis of relief on the basis of a digital elevation model.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> Database creation, organization techniques and management. Digital relief models and digital relief analysis. Methods of spatial interpolation.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. The skills needed for evaluation, interpretation and synthesis of relevant information.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Data collection, selection, processing and integration in GIS. Applying appropriate GIS methods and techniques. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills:</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Problem solving related to qualitative and quantitative geographic information. Information-technology skills: working with ArcGIS package. Data format conversions. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>																																		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - explain the purpose and tasks of digital terrain analysis - individually apply the methods of digital terrain analysis - evaluate the results of digital terrain analysis within a spatial analysis - produce digital elevation model by interpolation elevation data - perform morphometric analysis of the area based on a digital elevation model 																																		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction to digital relief analysis 2 Overview of the development of digital terrain analysis 3 Digital analysis of the relief and Geoinformatics 4 Digital data on relief (geospatial concepts and data structures) 5 Digital terrain models DMR (realization of digital terrain models, methods of interpolation surfaces, precision and accuracy DEM) 6 - 8 Digital analysis of landforms - vector analysis (distance, direction, connectivity, neighborhood, distribution) 9 - 11 Spatial analysis of relief - raster analysis (local Functions neighborhood, zonal functions, global functions) 12 - 15 Modeling geomorphological data - geomorphometry (geomorphological models, hydrological models, climatological models, pedological models, etc.) 																																		
<p>2.6. Format of instruction:</p>	<p>X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>																																
<p>2.8. Student responsibilities</p>	<p>Attendance to class, completed exercises and assignments.</p>																																		
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Class attendance</td><td></td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>3</td></tr> </table>	Class attendance		Experimental work		Essay		Tests		Written exam	3		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td></td></tr> <tr><td>Seminar essay</td><td></td></tr> <tr><td>Oral exam</td><td>3</td></tr> <tr><td>Project</td><td>2</td></tr> </table>	Research		Report		Seminar essay		Oral exam	3	Project	2		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Practical training</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training		(other)		(other)		(other)		(other)	
Class attendance																																			
Experimental work																																			
Essay																																			
Tests																																			
Written exam	3																																		
Research																																			
Report																																			
Seminar essay																																			
Oral exam	3																																		
Project	2																																		
Practical training																																			
(other)																																			
(other)																																			
(other)																																			
(other)																																			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.10. Grading and evaluating student work in class and at the final exam	Class attendance 24 % + seminar essay 38 % + oral exam 38 %		
2.11. Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Wilson, J. P., Gallant, J. C., 2000: <i>Terrain analysis, principles and applications</i> , John Wiley & Sons.	10	yes
	Bonham-Carter, G. F., 2002: <i>Geographic Information Systems for Geoscientists</i> , Pergamon.	10	yes
	O'Sullivan, D. Unwin, D. J., 2003: <i>Geographic Information Analysis</i> , John Wiley & Sons	10	yes
Pahernik, M., 2007: Digitalna analiza padina otoka Raba, <i>Geoadria</i> 12, 1; 3-22.	10	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles from journals Croatian Geographical Bulletin, Geoadria, Polemos.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	Procedures outlined in <i>Regulations and Handbook on the Quality Assurance</i> at the University of Zagreb and the Faculty of Science: - university and faculty student survey - teaching self-evaluation: modernizing and reassessment of course's goals and content, and strategy of teaching and learning; evaluation of learning outcomes by analysis of students level of success according to Student Office data and self-records - outgoing survey: graduate university study evaluation - interview with offices, institutes, organizations and enterprises where students perform professional practice		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

ELECTIVE COURSES

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Applied Geomorphology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of the course are to provide students with knowledge and skills related to the application of geomorphological research. The emphasis is on exploring and evaluating features and principles of action of recent geomorphological processes and landforms, their mapping and graphical presentation.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> - Be familiar with the sources and methods applied geomorphological research - Understanding of the earth's surface systems including features, terms, processes, and changes - Ability to conduct fundamental research morphostructural and exogenously-morphological features of the relief - Ability to plan, organize and implement applied geomorphological research, engineering - geomorphological mapping and making geomorphological studies - The ability to evaluate lanscape, particularly with regard to the protection of geodiversity and tourist exploitation - An understanding of the fundamental principles of geomorphological regionalization 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills</u> <i>Knowledge and understanding of:</i> The research process in general and in geography. Digital relief models and digital relief analysis. Methods of cartographic expression.</p> <p><u>Cognitive, practical and generic abilities and skills:</u> Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Mapping of geographic data, georeferencing. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the purpose, tasks and the division of applied geomorphology Independently apply the approaches and methods of the applied geomorphology used in the preparation of geomorphic studies To explain the characteristics of recent geomorphological processes and their impact on the types and forms of relief To explain the distribution and characteristics of slope, fluvial, coastal and karst processes in engineering geomorphology Evaluate the relief forms and processes from various aspects, especially in terms of environmental protection and tourism Apply appropriate mapping and measurement procedures in practice Make a geomorphological regionalization of the area on several levels Make an example geomorphological studies</p>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Applied Geomorphology - definition, objectives, tasks and division, Fundamentals of geomorphology of Croatia 2 Introduction into making of geomorphological studies 3 Sources of data in applied geomorphological research 4 Field work in geomorphology 5 Landscape as system (ESS) - features, factors, changes 6 Basic knowledge of geology for geomorphological research 7 Morphometric and morphographic methods in applied geomorphological research 8 Structural-geomorphological research 9 Slopes and slope processes 10 Fluvial processes 11 Coasts and coastal processes 12 Karst and karst processes 13 Evaluation methods of landscape and landforms, Geoheritage and geotourism 14 Engineering-geomorphological mapping and applied geomorphological map 15 Geomorphological regionalization 		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p><input type="checkbox"/> independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	-	
2.8. Student responsibilities	Attendance to class, completed exercises and field work.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	1 (other)
	Tests		Oral exam	2 (other)
	Written exam	1	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 10 %; Written exam 30 %; Essay 30 %; Oral exam 30 %.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Marković, M., 1983, <i>Osnovi primijenjene geomorfologije</i> , Geoinstitut, posebno izdanje, Knjiga 8, Beograd.		10	yes
	<i>Uputstva za izradu detaljne geomorfološke karte 1:100 000</i> (Grupa autora)		5	yes
	Fookese, P. G., Lee, E. M., Griffiths, J. S., 2007: <i>Engineering Geomorphology – theory and practice</i> . Whittles publishing, Dunbeath, 281 pp (selected chapters).		5	yes
	Regolini-Bissig, G., Reynard, E. (Eds), 2010: <i>Mapping Geoheritage</i> . Institut de géographie, Université de Lausanne (selected chapters).		1	CD
2.12. Optional literature (at the time of submission of study programme proposal)	Fookese, P. G., Lee, E. M., Griffiths, J. S., 2007: <i>Engineering Geomorphology –theory and practice</i> . Whittles publishing, Dunbeath, 281 pp. Allison, R. J. (Eds), 2003: <i>Applied Geomorphology</i> . John Wiley&Sons LTD.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.14. Other (as the proposer wishes to
add)

-



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Neven Bočić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Karst Geomorphology and Hydrology	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>The main objectives of this course are that students learn basic knowledge on karst geomorphology and hydrography with application to the significant karst areas of the world and focus on the Dinaric karst that is part of Croatia.</p> <p>The specific objectives are:</p> <ul style="list-style-type: none"> Understanding of the conditions and processes of karstification Understanding the specifics of karst hydrography Recognition of surface and underground karst landforms, and an understanding of their origin Knowledge about geomorphologic - hydrographical features of Croatian karst and important karst areas in the world Understanding the importance of karst areas, identifying specific problems and the ability of their solutions The ability to evaluate karst areas Understanding the threats and protection of karst areas and the ability to find solutions in line with sustainable development 		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p><u>Professional knowledge, abilities and skills</u></p> <p><i>Knowledge and understanding of:</i></p> <ul style="list-style-type: none"> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Methods of cartographic expression. <p><u>Cognitive, practical and generic abilities and skills:</u></p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. Recognition and isolation of objects and processes crucial for the stability of geosystems. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Functioning effectively as an individual and as a team member.</p>		
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Explain the concept, history, research and distribution of karst in Croatia and the world In selected cases to extract and interpret the factors that affect the karst process Explain the specificity of karst hydrography and its relation to the geomorphology of karst Field work and cabinetmaking determine surface and underground karst relief forms Distinguish types of karst in Croatia and abroad, and their special values Evaluate the significance of karst areas Provide effective measures for the protection and management of karst areas with the concept of sustainable development Apply basic geomorphological research methods and protection of karst</p>		
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 Introduction, history of study of karst 2 Terms and geomorphological processes in karst 3 Karst hydrography (Part 1) 4 Karst hydrography (Part 2) 5 Karst Geomorphology - grikes 6 Karst Geomorphology - dolines 7 Karst Geomorphology - large depressions and poljes 8 Karst Geomorphology - karst plateau 9 Speleological objects - the origin and typology 10 Karst sediments and residual hills 11 Fluviokarst, glaciokarst and coastal karst 12 Morphogenesis and typology of karst 13 Threats and protection of karst 14 Croatian karst - an overview 15 Significant karst areas in the world 		
<p>2.6. Format of instruction:</p>	<p>X lectures</p>	<p>X independent assignments</p>	<p>2.7. Comments:</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)	-	
2.8. Student responsibilities	Attendance to class, completed seminars, independent assignments and field work			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	(other)
	Tests		Oral exam	2 (other)
	Written exam	1	Project	1 (other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance 20%; Written exam 20%; Oral exam 40%; Project 20%.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Ford, D., Williams, P., 2007: <i>Karst Hydrogeology and Geomorphology</i> . 562 pp, John Wiley & Sons, Chichester, West Sussex, England.		10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	White, W. B., 1988: <i>Geomorphology and Hydrology of Karst Terrains</i> . Oxford university press, New York-Oxford. Herak, M., Stringfield, V. T., 1972: <i>Karst – Important Karst Regions of the Northern Hemisphere</i> . Elsevier publishing company, Amsterdam-London-New York. Gines, A., Knez, M., Slabe, T., Dreybrodt, W., 2009: Karst rock features – karren sculpturing. <i>Carsologica</i> 9, Založba ZRC SAZU, Postojna.			
2.13. Quality assurance methods that ensure the acquisition of exit competences	University students survey Self-evaluation of teaching: updating and revising the objectives of the course content and teaching strategies, learning and assessment of learning outcomes Interview with companies, institutes and institutions in which students perform their work practices Other procedures required by the University and the Faculty about the internal quality assurance			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Ksenija Bašić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Geographic Analysis of Small-Area Population	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+15+0 (2+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	General objective is to comprehend population as the maker and the user (consumer) of the space, both in quantitative indicators as well as in qualitative aspects. Accordingly, students are expected to acquire knowledge and skills to gather and use relevant data to make qualitative population study of a particular area or place, that includes the analysis of changes in the past, presentation of the actual situation and projection for the interval for which regional plan is being made.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in general and in geography. Database creation, organization techniques and management. Methods of cartographic expression.</p> <p>Cognitive abilities and skills: The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Practical abilities and skills: Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>	
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Understanding the significance of demographic aspects in regional planing. Knowledge of the basic units in population research. Knowledge of the data sources on population. Knowledge and application of the basic methods in analysing dynamic and structural features of population. Knowledge and application of the basic methods of population projection.</p>	
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 The objectives and course content, learning outcomes; concept and work plan; evaluation of the achievements of students. 2 Demographic aspects in regional planing. 3 Notion and distinguishing features of the geographic analysis of small-area population in regional planing. 4 Basic units in population research and data sources. 5 Distribution of population and population density. 6-7 Total population change. 8 Natural change of population. 9 Mobility of population. 10 Age and sex composition of population. 11 Socio-economic composition of population. 12 Cultural and anthropological composition of population. 13 Synthetic indicators of demographic resources. 14 Projections of small-area population. 15 Population policies.</p>	
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)</p>
		<p>2.7. Comments:</p>
		<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.8. Student responsibilities	Regular class attendance. Independent project of geographic analysis of chosen small-area population.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance		Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	3	(other)
	Tests		Oral exam	2	(other)
	Written exam		Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Positive project evaluation is a requirement for taking oral examination.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Breznik, D., 1988: <i>Demografija: analiza, metode, modeli</i> , Naučna knjiga, Beograd.			10	yes
	Nejašmić, I., 2005: <i>Demogeografija: stanovništvo u prostornim odnosima i procesima</i> , Školska knjiga, Zagreb.			10	yes
	Nejašmić, I., 2008: <i>Stanovništvo Hrvatske: demogeografske studije i analize</i> , Hrvatsko geografsko društvo, Zagreb.			10	yes
	Plane, D. A., Rogerson, P. A., 1994: <i>The geographical analysis of population with applications to planning and business</i> . Wiley, New York			5	yes
	Wertheimer-Baletić, A., 1999: <i>Stanovništvo i razvoj</i> , Mate, Zagreb.			10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Nejašmić, I., 1991: <i>Depopulacija u Hrvatskoj: korijeni, stanje, izgledi</i> , Globus, Zagreb.				
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.				
2.14. Other (as the proposer wishes to add)	-				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Zoran Stiperski	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Factors of industry and management location	1.7. Credits (ECTS)	5
1.3. Associate teachers	Jelena Lončar	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, course: Spatial Planning and Regional Development	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The objective is to introduce students with development of location theory, most significant theoreticans and development of doctrins in industry location. The goal is also to get insight in the role and significance of natural and technical factors in choosing location, structural changes in industry and criteria for location selection, as in spatial models and basics of spatial economy. One of the main goals is also knowing place and significance of spatial economy in economic and development policy, industrial organisation and corporative structure and strategy.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities, and skills:</p> <p><u>Knowledge and understanding of:</u> The research process in geography. Theoretical basis in regional and spatial planning. Human geographic factors in spatial planning, especially population, settlements, form of population distribution, and economic factors. Subjects and factors of regional development. Models of regional development. The role of local and state government in regional development.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p><u>Cognitive, practical and generic abilities and skills:</u> Recognition and isolation of objects and processes crucial for spatial and regional planning. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Abilities needed for the field work. The ability to interpret and discuss geography-related problems and processes. Problem solving related to qualitative and quantitative geographic information The skills needed for evaluation, interpretation, and synthesis of relevant information. The skills needed for presenting scientific contents and arguments in written and oral form. Problem solving related to qualitative and quantitative geographic information. Autonomous continuous professional improvement needed in professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - understanding of theoretical bases in location theory - interpreting the role of natural and other factors in selection of individual and group industry location - differentiate factors of contemporary requirements and needs in industry location - recognize and argument solutions of geospatial problems especially industry location - explain problems and validity of other science disciplines in the same field of work.
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Historical development of doctrins and location theories in industry J. H. Von Thünen: Origins of space economy, Model of concentric circles Predecessors of A.Weber: Historical and theoretical frame of Weber theory emergence Andreas Predohl: Marginalism and industry location, Supstitution of factors in industry location Tord Palander: Goals and methods in Palander's theory August Loesch: Basic problematics of A. Loesch theory 2. Afterwar development of theories and doctrins of industry location War and after war period Contribution of French authors to location theory Development of theories and doctrines of industry location between 1957and 1970 3. Response of industry location construction on practical concepts in locational decision making The role and significance of natural factors in location selection Structural changes in industry and criteria for location selection Choosing new places for one single industrial firm location Significance of firm size and its influence in new places of location selection Influence of technical integration and specialization on location in industry 4. Significance and location of industry in regional planning and programming Industry location and problem of undeveloped regions Industry location in depressive regions



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Industry location in agglomerations</p> <p>5. Space in economics Contents and division of space in economics Location models: individual location models, models of group locations: industrial zones, industrial complexes; Specific location relevant validity</p> <p>6. Spatial models Concept and types of spatial models Goals and tasks of spatial models Principles of topology in space</p> <p>7. Basics of polycentric system Poles of development as organ of economic and spatial expansion Axes of development Theory of threshold</p> <p>8. Place and significance of spatial theory in economic and development policy Case study: Policy of development and layout of textile industry in the world Case study: Policy of development and layout of steel industry Case study: Policy of development and layout of automobile industry</p> <p>9. Industrial clusters and economic development Location and clusters, Starting industrial clusters, Identification of industrial clusters, Small clusters and growth policy, Analysis of industrial clusters</p> <p>10. Industrial districts (fields) Definition and emergence Multisector analysis Infrastructure</p> <p>11. Industrial organization Environment and organizational structures Location and organization</p> <p>12. Corporative structure and strategy Competition and strategy: Monopoly Multinational (international) corporations Restructuring of companies Corporative form and space Geographic concentration of economic activities</p> <p>13. Innovations National business systems Location and innovation Innovation networks, regions and globalization</p> <p>14. Regional economy and location component of development</p>
--	---



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Regional economy – definition Markets and company location analysis Location of production Agglomeration (cluster) economies Life cycle of product 15. Work force: Regional labor market				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments:
	-				
2.8. Student responsibilities	Regular class attendance, passed preliminary exam, reserach discussion and independent research elaboration.				
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests		Oral exam	1	(other)
	Written exam	2	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	The final grade is determined on the basis of the seminar evaluation, colloquium results, written and oral exams. All elements of evaluation except colloquium must be positive.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	McDermott Taylor; Michael, 2009: <i>Industrial organisation and location</i> , Cambridge University Press, London, New York, New Rochelle, Melbourn, Sidney.			5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Blair, J. P., Carroll, M. C., 2009: <i>Local Economic Development; Analysis, Practices and Globalization</i> , Sage. L. Angeles, London, N.Delhi, Singapore. Boglicino, F., Pinata, M., 2011: <i>Engines of growth. Innovation and productivity in industry groups</i> , Structural and Economic Dynamics. Bodas Freitas, I. M., Marques, R. A., De Paula e Silva, E. M., 2012: <i>University-industry collaboration and innovation in emergent and mature industries in new industrialized countries</i> , Research Policy.				



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Edwards, E. M., 2007: <i>Regional and urban Economics and Development; Theory and Methods</i>, Auerbach Publications.</p> <p>Strauss-Khan, V., Vives, X., 2009: Why and where do headquarters move?, <i>Regional science and Urban economics</i>, 39, 168-186.</p> <p>Zdrilić, I., Puvača, M., Roso, D., 2010: <i>Utjecaj globalizacije na promjene u načinu poslovanja i organizacijskoj strukturi</i>, Ekonomski vjesnik.</p>
<p>2.13. Quality assurance methods that ensure the acquisition of exit competences</p>	<p>University student questionnaire survey;</p> <ul style="list-style-type: none"> - Self-evaluation of the class: updating and revising class goals and content and strategies of teaching, learning, and evaluating learning outcomes; - Questionnaire survey for graduated students; - Other procedures prescribed by the University and Faculty acts on internal quality assurance.
<p>2.14. Other (as the proposer wishes to add)</p>	<p>-</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Borna Fuerst–Bjeliš Anamarija Durbešić	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Historical GIS	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+30+0+0 (1+2+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Exploring possibilities of GIS applications in research and reconstruction of changes and processes over longer time periods. Introduction to specific data sources documenting past periods (quantitative and qualitative), their use in GIS and their analysis. Modelling positive and negative processes leading to changes in the environment and the cultural landscape design and preparation of plans and projects for rehabilitation of degraded land and reducing effects of anthropogenic disturbances with the ultimate goal to improve living conditions.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	Familiarization with the process of scientific work in general and in geography, specific statistical and graphical methods. Application of knowledge to determination, identification and solving the problem of the high spatial complexity. Ability of interpretation and discussion of relevant and current geographic phenomena and processes. Developing of skills needed for evaluation, interpretation and synthesis of information and data, skills in presenting scientific content and arguments in writing and orally. Mapping geographic content, geo-referencing. Application specific statistical and graphical methods in the analysis and presentation of results. Application of thematic maps and cartographic methods to analysis and presentation of results. Application of specific GIS techniques. Solving problems related to qualitative and quantitative geographic information. Information-technology skills. How to work effectively, independently and in a team. Independent work required for professional advancement.		
2.4. Learning outcomes expected at the level of the course (4 to 10 learning	Using a variety of sources and processing in GIS. Synchronization and integration of spatial data from various sources Analysis of the data obtained in order to explore cultural landscape and environmental changes. Ability to identify and separate		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

outcomes)	phenomena and processes critical to the stability geo-system. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. The ability to interpret and discuss actual geography-related problems and processes		
2.5. Course content broken down in detail by weekly class schedule (syllabus)	1	Introductory lesson. Explaining concepts of GIS and Cultural Landscape	
	2	Lecture: Basic Concepts. Workshop: Vectorization of polygons and geocoding maps (repetition of basic skills in GIS)	
	3	Lecture: GIS analysis of the cultural landscape (modes of evaluating the cultural landscape through the tangible and intangible elements). Workshop: Individual design projects.	
	4	Workshop: Vectorization of selected data	
	5	Workshop: Vectorization of selected data	
	6	Workshop: Vectorization of selected data	
	7	Workshop: Preparing the presentations of the obtained data and their exchange among students	
	8	Lecture: Correlation and interdependence of physical-geographic features. Workshop: Analysis of interdependence of physical-geographic features	
	9	Lecture: Intangible elements in the analysis of cultural landscape. Workshop: Cartographic representation of distribution of settlements and their connection to the population census data base.	
	10	Lecture: Methods of data analysis. Workshop: Layers convergence and first analysis	
	11	Lecture: GIS in the analysis of field data. Workshop: Creating a plan of field research in GIS	
	12	Lecture: Preparation of field research. Workshop: Creating a plan of field research in GIS	
	13	Lecture: Development and protection assessment guidelines. Workshop: GIS in making the development and protection assessment guidelines	
	14	Lecture: Types and trends of landscape change. Workshop: Defining the types of landscape change and tracking trends	
	15	Lecture: Final synthesis of materials. Workshop: GIS in development assessment guidelines	
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -
	2.8. Student responsibilities		
Regular class attendance, completion of the project and one seminar essay (oral / written)			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1	Research		Practical training	
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam		Project	2	(other)	
2.10. Grading and evaluating student work in class and at the final exam	Class participation and discussion activities, seminar execution, oral exam and project.					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Gregory, I. N., Ell, P. S., 2007: <i>Historical GIS, Technologies, Methodologies and Scholarship</i> , Cambridge University Press.			5	yes	
	Knowles, A. K., 2002: <i>Past Time, Past Place - GIS for History</i> , ESRI Press, Redlands, California.			5	yes	
	Knowles, A. K., 2008: <i>Placing History, How Maps, Spatial data and GIS Are Changing Historical Scholarship</i> , ESRI press, Redlands, California.			5	yes	
2.12. Optional literature (at the time of submission of study programme proposal)	<p>Harley, J. B., 2001: <i>The New Nature of Maps</i>, The John Hopkins University Press, Baltimore.</p> <p>Fuerst-Bjeliš, B., Lozić, S., Cvitanović, M., Durbešić, A. 2011: Promjene okoliša središnjeg dijela Dalmatinske zagore od 18. stoljeća, u: <i>Zagora između stočarsko-ratarske tradicije te procesa litoralizacije i globalizacije: zbornik radova</i> (ur. Matas, M i Faričić, J.), Zadar - Dugopolje, 19 - 21. listopada 2010., Sveučilište u Zadru, Kulturni sabor Zagore, Split, Matica hrvatska Split, 117-129.</p> <p>Fuerst-Bjeliš, B., Durbešić, A., 2013: Littoralization and Behind: Environmental Change in Mediterranean Croatia. U: <i>The Overarching Issues of the European Space/Grandes Problemática do Espaço Europeu. Strategies for Spatial (Re)planning based on Innovation, Sustainability and Change/ Estratégias de (Re)ordenamento Territorialnum Quadro de Inovação, Sustentabilidade e Mudança</i> (ur. Pina, H., Martins, F., Ferreira, C.), Fundação Universidade do Porto – Faculdade de Letras da Universidade do Porto, 136-147.</p>					
2.13. Quality assurance methods that ensure the acquisition of exit competences	University student survey, self-assessment, continuous review, other procedures of the internal quality assurance required by the University and the Faculty.					
2.14. Other (as the proposer wishes to add)	-					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Stjepan Šterc	1.6. Year of the study programme	1 st and 2 nd
1.2. Name of the course	Population of Croatia	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Introduce students with the basic demographic indicators, processes and trends in the population development of Croatia.</p> <p>Insight students with the contemporary demographic state of Croatia and the terms in which it appeared.</p> <p>Develop epistemology in accordance with the particularities od Croatian demographics out of the theory of demographical transition frame.</p> <p>Insight the students with the destructional war impacts on the population structures and on the population development of Croatia.</p> <p>Explain students the meaning of Croatian demographics in contemporary spatial processes and relations.</p> <p>Introduce students with the demographic perspective sand projection proceeding in Croatia.</p> <p>Introduce students with the strategies and models of population revitalisation in Croatia.</p> <p>Explain students the role and meaning of geographical population inquiries in different forms of planning (regional, spatial, social).</p> <p>Enable students for independant scientific-research work.</p> <p>Develop the understanding of population's primary impact and action in Croatian spatial reality.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Knowledge, abilities and skills: consideration, understanding and cognition of-</p> <p>Geographical theoretical and methodological concept and system.</p> <p>Logics and functional spatial organization on the surface of Earth.</p> <p>Model projectioning of spatial relations.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Cognitive, graphic, cartographic, calculative method applicability. Geographical space structure as the basal for all forms of planning. Strategic meaning of geographical space and its spatial laws. Social (civilizational) structures in the spatial organization function. Order of conditionality in space. Corelation of natural ground and social superstructure in geographical space. Common and regional spatial organization concept. Regional, spatial and social planning in geographical space. Functional and sustainable spatial organization. Strategic meaning of geographical scientific approach.</p> <p>Cognitive abilities and skills: Spatial law spotting, defining and predictioning. Spatial disproportion understanding and explaining. Interpretation, discussion and annotation of relevant geographical spatial processes, relationships, links and models. Ability of written and oral geographic scientific content and approach consideration and explication.</p> <p>Practical abilities and skills: Understanding of spatial logics. Geographical contex, process, relationship and link mapping. Pertinent calculative and graphic method appliance in the consideration and explication process. Cartographic method and prediction appliance in the geographical law consideration, explication and devolution.</p> <p>Operational abilities and skills: Individual searching and database selection. The research task suggestion. Construction of research case study.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<p>Knowledge, abilities and skills: consideration, understanding and cognition of: Theoretical and methodological concept of population geography system. Logics and population functional organization in Croatia. Model projectioning of demographic relations in Croatian geographical space. Demographic space structure as the basal for all planning.</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Methodological system in population inquiries. Strategic meaning of population for complete development of Croatia. Corelation of natural ground and population in Croatia. Common and regional spatial organization concept of Croatia. Functional and sustainable population organization. Strategic meaning of population scientific approach.</p> <p>Cognitive abilities and skills: Spotting, defining, resolving and predictioning of spatial laws which came into existance through the population acting. Demographic spatial disproportion understanding and settlement. Interpretation, discussion and annotation of relevant demographic spatial processes, relationships, links and models. Ability of written and oral demographic scientific content and approach consideration and explication.</p> <p>Practical abilities and skills: Understanding of spatial logics. Demographic content, process, relationship and link mapping. Pertinent calculative and graphic method appliance in the consideration and explication process. Cartographic method and prediction appliance in the demographic law consideration, explication and devolution.</p> <p>Operational abilities and skills: Individual searching and database selection. The research task suggestion. Construction of research case study.</p>
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. Demographic aspects of Croatian development. 2. Spatial distribution and regional differences of the Croatian population. 3. Development and population movement in Croatia. 4. Intercensus and general population movement of Croatia. 5. Natural population movement of Croatia. 6. Population spatial mobility in Croatia. 7. Biodiyamic features of Croatian population. 8. Economic and social structures of Croatia. Ethnical and religious composition. 9. Population composition and movement predictions (prognosis) and projections of Croatia. 10. Contemporary demographic trends in Croatia. Natural decrease, depopulation and dying out.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	11. Demographic resources and potentials of Croatia. 12. Population substitution in Croatia. 13. Revitalisation models of Croatian population. 14. Population as the fundament for development and planning. 15. Criterion of population policy in Croatia.				
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work		<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> work with mentor <input type="checkbox"/> (other)		2.7. Comments: This course especially accents students discussions and development of its cognitive abilities.
2.8. Student responsibilities	Regular class attendance, passed preliminary exam, reserach discussion and independent research elaboration.				
2.9. Screening student work (<i>name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course</i>)	Class attendance	1	Research		Practical training
	Experimental work		Report		(other)
	Essay		Seminar essay	1	(other)
	Tests	1	Oral exam	1	(other)
	Written exam	1	Project		(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance and discussion in research groups, tests, seminar essay, written and oral exam, mentor instructions.				
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media
	Šterc, S., 1991: The general demographic cross section of the Republic of Croatia, <i>Geographical Papers</i> , 8, 1 -38.			10	yes
	Nejašmić, I., 2008: <i>Stanovništvo Hrvatske – demogeografske analize i studije</i> , Hrvatsko geografsko društvo, Zagreb.			10	yes
	Šterc, S., Komušanac, M., 2012: Neizvjesna demografska budućnost Hrvatske-izumiranje i supstitucija stanovništva ili populacijska revitalizacija...? <i>Društvena istraživanja</i> , 117 (god.21., br. 3), 693-714.			10	yes
	Wertheimer-Baletić, A., 2007: Depopulacija, starenje stanovništva i populacijska politika u Hrvatskoj, <i>Rad HAZU</i> , 45, 73-120.			10	yes



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	<p>1. Gelo, J., Akrap, A., Čipin, I., 2005: <i>Temeljne značajke demografskog razvoja Hrvatske (bilanca 20. stoljeća)</i>, Ministarstvo obitelji, branitelja i međugeneracijske solidarnosti, Zagreb.</p> <p>2. Wertheimer-Baletić, A., 2004: Depopulacija i starenje stanovništva – temeljni demografski procesi u Hrvatskoj, <i>Društvena istraživanja</i> 72-73, 631-651.</p> <p>3. Nejašmić, I., 1991: <i>Depopulacija u Hrvatskoj – korijeni, stanje, izgledi</i>, Globus, Zagreb.</p> <p>4. Friganović, M. A., Šterc, S., 1993: Demogeografski razvoj i populacijska politika Republike Hrvatske, <i>Društvena istraživanja</i> 1, 151-165.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	Among classical ways of student evaluation, independent research works with mentors instruction have been especially evaluated and revolted on the level of potential student involvement in scientific and professional meetings.		
2.14. Other (as the proposer wishes to add)	Croatian population has been, through history, developing under special terms, and nowadays it becomes strategic issue of Croatian contemporary spatial and demographic improvement.		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban-social Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Society, emphasised throughout transformations in the spatial structure of the city (functional, social and morphological transformations). Particular objectives of the course are: synthesis of contemporary theory and methodology on transformations of the spatial structure of the city, which are induced by the interaction of different economic, social, cultural and political factors on global, regional and local scale. On the number of examples from various cities around the world and in Croatia, problems of a transformation of the urban-social structure will be discussed and explained. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of transformations of an urban-social structure.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish and explain approaches in the research of a social space of the city - apply theories and models of the urban-social structure, particularly the theory of the sustainable urban development - explain development of urban planning in Croatia and in the selected countries, and a contemporary development of the cities in the context of the economic transformations - explain cultural and social context of a transformations within the Croatian and the cities in selected countries - conduct a research on one of the selected topic: socio-spatial differentiation, segregation, inner-city migrations, revitalisation and gentrification in the city (using GIS) - make a researched based solution for the problems of the socio-spatial structure of the city - write a report/essay on a topic related to a changes within the socio-spatial structure of the city
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 INTRODUCTORY LECTURE – Goals and aims of the course; Approaches in the research of the social space (positivism, behaviourism, structuralism, post-structuralism); Socio-spatial dialectic; City as a stage of social, economic, cultural and political changes</p> <p>2 THEORIES AND MODELS OF URBAN-SOCIAL STRUCTURE – Chicago school and social ecology; Burgesses’ model; Hoyts’ model; Hariss-Ullmans’ model; Other theories and models</p> <p>3 URBAN PLANNING AND POLICY – Emergence of urban planning; Urban planning in selected countries (USA, Western Europe, Post-socialist cities, Croatia); Theory of sustainable urban planning; Urban-social structure and urban planning</p> <p>4 ECONOMIC CONTEXT OF TRANSFORMATIONS IN THE CITY – Pre-capitalist and pre-industrial city; Industrial city (Fordism, Keynesianism); Contemporary city (Post- fordism, Post-industrial society; Globalisation)</p> <p>5 CULTURAL CONTEXT OF TRANSFORMATIONS IN THE CITY – What is a culture? Relation culture – city; Post-colonial theory; Space, power and culture; Post-modernism and city</p> <p>6 SOCIAL CONTEXT OF TRANSFORMATIONS IN THE CITY – Morphogenesis; Morphology of the city (housing, types of buildings); Socio-demographic characteristics of the city; Social topography</p>



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>7 SOCIO-SPATIAL DIFFERENTIATION AND SEGREGATION IN THE CITY – Segregation (USA, Western Europe, Post-socialist cities, Croatia); Social polarisation</p> <p>8 SOCIO-SPATIAL STRUCTURE OF THE CITY – PROBLEMS OF DEVELOPMENT – Poverty; Homelessness; Unemployment; Social exclusion; Environmental quality</p> <p>9 SOCIO-SPATIAL STRUCTURE OF THE CITY – INSTITUTIONAL FRAMEWORK – Socio-spatial structure and public institutions; Public vs. Private; Social Justice and the City (importance of David Harvey’s research)</p> <p>10 HOUSING AND INNERCITY MIGRATIONS – Housing areas in the city; Housing market; Types of inner-city migrations; Life-cycles in the city</p> <p>11 REVITALISATION AND GENTRIFICATION 1 – Definition and meaning of the notions (revitalisation, gentrification); Emergence of revitalisation and gentrification in the city; Rent gap theory; Consumption theory; Revitalisation and gentrification in selected cities (USA, Western Europe, Post-socialist cities, Croatia)</p> <p>12 REVITALISATION AND GENTRIFICATION 2 – Field work 1 (revitalised/gentrified areas in Zagreb)</p> <p>13 QUALITY OF LIFE IN THE CITY – Definition and meaning of the notion; Objective and subjective indicators of a quality of life in the city; Spatial levels of the analysis (city, district, neighbourhood)</p> <p>14 COGNITIVE ELEMENTS IN THE CITY – City image; Mental maps; Other approaches in a research of the city image</p> <p>15 CONCLUDING LECTURE – Field work 2 (urban-social structure of Zagreb)</p>																																			
2.6. Format of instruction:	<p>X lectures</p> <p>X seminars and workshops</p> <p><input type="checkbox"/> exercises</p> <p><input type="checkbox"/> on line in entirety</p> <p><input type="checkbox"/> partial e-learning</p> <p>X field work</p>	<p>X independent assignments</p> <p><input type="checkbox"/> multimedia and the internet</p> <p><input type="checkbox"/> laboratory</p> <p>X work with mentor</p> <p><input type="checkbox"/> (other)</p>	<p>2.7. Comments:</p> <p>Two fieldworks:</p> <p>a) Revitalised/gentrified areas in Zagreb (Cvjetni trg, Zavrtnica-Radnička-Vukovarska-Heinzeloza);</p> <p>b) Urban-social structure of Zagreb</p>																																	
2.8. Student responsibilities	<p>Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork. GIS analysis of a selected topic.</p>																																			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	<table border="1"> <tr><td>Class attendance</td><td></td></tr> <tr><td>Experimental work</td><td></td></tr> <tr><td>Essay</td><td></td></tr> <tr><td>Tests</td><td></td></tr> <tr><td>Written exam</td><td>2</td></tr> </table>	Class attendance		Experimental work		Essay		Tests		Written exam	2		<table border="1"> <tr><td>Research</td><td></td></tr> <tr><td>Report</td><td>1</td></tr> <tr><td>Seminar essay</td><td></td></tr> <tr><td>Oral exam</td><td>1</td></tr> <tr><td>Project</td><td></td></tr> </table>	Research		Report	1	Seminar essay		Oral exam	1	Project			<table border="1"> <tr><td>Practical training</td><td>1</td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> <tr><td>(other)</td><td></td></tr> </table>	Practical training	1	(other)		(other)		(other)		(other)		
Class attendance																																				
Experimental work																																				
Essay																																				
Tests																																				
Written exam	2																																			
Research																																				
Report	1																																			
Seminar essay																																				
Oral exam	1																																			
Project																																				
Practical training	1																																			
(other)																																				
(other)																																				
(other)																																				
(other)																																				
2.10. Grading and evaluating student work in class and at the final exam	<p>Written evaluation, oral examination.</p>																																			
2.11. Required literature (available in the	Title		Number of	Availability via																																



DETAILED PROPOSAL OF THE STUDY PROGRAMME

library and via other media)		copies in the library	other media
	Green, R. P., Pick, J. B., 2006: <i>Exploring the Urban Community: A GIS Approach</i> , Pearson Prentice Hall, Upper Saddle River.	5	yes
	Knox, P., Pinch, S., 2006: <i>Urban Social Geography: An Introduction</i> , Pearson Education Limited, Harlow.	5	yes
	Pacione, M., 2009: <i>Urban Geography: A Global Perspective</i> , Routledge, London (selected chapters).	5	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Atkinson, R., Bridge, G. (ur.), 2005: <i>Gentrification in a Global Context: The New Urban Colonialism</i> , Routledge, London (selected chapters). Paddison, R. (ur.), 2001: <i>Handbook of Urban Studies</i> , Sage, London (selected chapters).		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Vedran Prelogović	1.6. Year of the study programme	1 st
1.2. Name of the course	Urban Regions	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	The main objective of the course is to enable students to understand complex relations City – Surroundings, emphasised throughout transformations in the spatial structure of the surroundings (functional, social and morphological transformations). A particular objective of the course is: synthesis of contemporary theory and methodology on the transformations of the urban regions. On the number of examples from various urban regions around the world and in Croatia, problems of a development and the importance of the research with possible application in the field of regional and urban planning will be discussed. Special attention within this course is given to: writing of report, reading of selected texts related to the different aspects of a transformations and a development of the urban regions.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills</p> <p><i>Knowledge and understanding of:</i> Theories and methodology in geography. The research process in general and in geography. Appropriate advanced statistics and graphic techniques. Concept of sustainable development.</p> <p>Cognitive abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Mapping of geographic data, georeferencing. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p> <p>Generic abilities and skills: Problem solving related to qualitative and quantitative geographic information. Functioning effectively as an individual and as a team member. Continuous professional development.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - distinguish types of the urban regions - explain and apply models and methods in the research of the urban regions - explain the development of urban regions in Croatia and in the world, within the context of regional and urban planning, particularly in the developed countries (Germany, United Kingdom, USA etc.) - select an urban region in Croatia and to conduct a research – analyse functional, morphological and social transformations, size, population development and migrations (using GIS) - write a report/essay on a topic related to transformations in the urban regions of Croatia
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1 INTRODUCTORY LECTURE – Goals and aims; Students obligations; Schedule of written and oral exams; Definitions of main notions and terms 2 CITY AND SURROUNDINGS – City and its surroundings; Emergence of urban regions; Suburbanisation 3 TYPES OF URBAN REGIONS – Morphological urban regions; Socioeconomic urban regions; Selected examples from the world and Croatia 4 THEORIES AND MODELS OF URBAN REGIONS – Hay-Hall model; Model of urban cycles; Soja’s model 5 METHODS IN THE RESEARCH OF URBAN REGIONS – Analyses of the settlement (urban) network 6 URBAN REGIONS IN EUROPE 1 – Emergence of urban regions in Europe; United Kingdom (MELA – Metropolitan Economic Labour Areas, SMELA – Standard Metropolitan Labour Areas), Germany (Stadtregion, Verdichtungsräume, Ballungsgebiete); Randstad Holland in the Netherlands; Examples from a selected countries 7 URBAN REGIONS IN EUROPE 2 – European urban regions and regional policy; Management of monocentric and polycentric urban regions; ESPON (European Spatial Planning Observation Network) 8 URBAN REGIONS IN USA – Emergence of urban regions; Metropolitan Statistical Area; Micropolitan Statistical Area 9 DEVELOPMENT OF THE URBAN REGIONS IN A SELECTED COUNTRIES OF THE WORLD – Canada; Japan; Less



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	developed countries 10 URBAN REGIONS AND GLOBALISATION – Influence of the globalisation on a development of the urban regions; Global urban system; Mega-cities 11 URBAN REGIONS IN CROATIA 1 – Emergence and development of the urban regions in Croatia; Models in the research of the urban regions; Size and structure of the urban regions 12 URBAN REGIONS IN CROATIA 2 – Population development; Socioeconomic changes; Residential suburbanisation 13 URBAN REGIONS IN CROATIA 3 – Migrations – in-immigration, daily commuting (migrations) 14 URBAN REGIONS IN CROATIA 4 – Urban regions within the context of the regional and urban planning 15 FIELD WORK – selected examples of the(sub) urbanization in the Urban region of Zagreb					
2.6. Format of instruction:	X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning X field work	X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory X work with mentor <input type="checkbox"/> (other)	2.7. Comments: Field work in the Urban region of Zagreb at the end of a semester,			
2.8. Student responsibilities	Regular class attendance. Writing of the report. Oral presentation of the written report within the thematic discussions. Active participation on the fieldwork.					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	2	Research		Practical training	1
	Experimental work		Report		(other)	
	Essay		Seminar essay	1	(other)	
	Tests		Oral exam	1	(other)	
	Written exam		Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	Written evaluation, oral examination.					
2.11. Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media
	Hall, P., 2002: <i>Urban and Regional Planning</i> , Routledge, London.				5	yes
	Herrschel, T., Newman, P., 2002: <i>Governance of Europe's City Regions: Planning, Policy and Politics</i> , Routledge, London.				5	yes
	Vresk, M., 1990: <i>Grad u regionalnom i urbanom planiranju</i> , Školska knjiga, Zagreb.				10	yes
	Selected articles from Croatian and international geographic journals.					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

2.12. Optional literature (at the time of submission of study programme proposal)	<p>Hall, P., Pain, K. (ur.), 2006: <i>The Polycentric Metropolis: Learning from Mega-City Regions in Europe</i>, Earthscan, London.</p> <p>Hoggart, K. (ur.), 2005: <i>The City's Hinterland: Dynamism and Divergence in Europe's Peri-Urban Territories</i>, Ashgate, Aldershot.</p> <p>Taylor, P. J., 2004: <i>World City Network: A Global Urban Analysis</i>, Routledge, London.</p>		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Mladen Pahernik	1.6. Year of the study programme	1 st
1.2. Name of the course	Military Geography	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+15+0+0 (2+1+0+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquire basic knowledge about the military-geographical analysis of space. Emphasize interdependence analysis function of the various geographic factors for military-geographical analysis of space and the analysis of the impact of military operations in space (militarism). Analyze the significance of the idea of global geostrategy. Develop an interest in the continuous monitoring of military geographic problems in the world.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills Knowledge and understanding of: The research process in general and in geography. Methods of cartographic expression.</p> <p>Cognitive abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. The ability to interpret and discuss actual geography-related problems and processes. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form.</p> <p>Practical abilities and skills: Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Generic abilities and skills: Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>					
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - explain the goals and tasks of military geography - independently apply the methods of the military-geographical terrain analysis - evaluate the results of analysis of the impact space on modern military action - make requests for information about geographic space needed for military geographic analysis 					
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>1 Introduction to Military Geography: Concept, development and distribution of military geography. 2 Military meaning study area. 3 Military geographic area categories. 4-5 Definition of basic military geographic categories; battlefield, battlefield, military geographic focus, geographic orientation of the military and others. 6-7 Evaluation of military geographic elements and factors. 8-9 Military geographic judgment impact natural geographic factors in military operations. 10-11 Military geographic judgment the influence of socio-economic factors on military operations. 12 The interaction of geographical and military factors in space. 13-15 Military geographical analysis of particular historical battles and military operations.</p>					
<p>2.6. Format of instruction:</p>	<p>X lectures X seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p><input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: -</p>			
<p>2.8. Student responsibilities</p>	<p>Attendance to class, completed seminars.</p>					
<p>2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)</p>	<p>Class attendance Experimental work Essay Tests Written exam</p>	<p>1</p>	<p>Research Report Seminar essay Oral exam Project</p>	<p>2 2</p>	<p>Practical training (other) (other) (other) (other)</p>	
<p>2.10. Grading and evaluating student work in class and at the final exam</p>	<p>Class attendance 20 % + seminar essay 40 % + oral exam 40 %.</p>					



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	Title	Number of copies in the library	Availability via other media
2.11. Required literature (available in the library and via other media)	Collins J. M., 1998: <i>Military Geography: For Professionals and the Public</i> , Potomac Books	5	yes
	Glassner, M., 1993: <i>Political Geography</i> , John Wiley. New York.	5	yes
	Pahernik, M. Kereša, D., 2007: Primjena geomorfoloških istraživanja u vojnoj analizi terena - indeks zaštitnog potencijala zemljišta. // <i>Hrvatski geografski glasnik</i> . 69, 1; 41-56	10	yes
	<i>Atlas Europe</i> , Leksikografski Zavod "Miroslav Krleža", Zagreb, 1997.	10	yes
2.12. Optional literature (at the time of submission of study programme proposal)	Relevant articles from journals Croatian Geographical Bulletin, Geoadria, Polemos.		
2.13. Quality assurance methods that ensure the acquisition of exit competences	In accordance with the Rule book and Manual of quality management at the University of Zagreb and the Faculty of Science.		
2.14. Other (as the proposer wishes to add)	-		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Roko Mišetić	1.6. Year of the study programme	1 st
1.2. Name of the course	Applying GIS in the analysis of census data	1.7. Credits (ECTS)	5
1.3. Associate teachers	-	1.8. Type of instruction (number of hours L + S + E + e-learning)	15+0+30+0 (1+0+2+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquiring knowledge about the possibilities of GIS in the analysis of census data. Training students in the skills of designing, planning and performance analysis of census data by using GIS and cartographic drafting and graphics based on census data. Introduction to alternative sources of data and compared through the use of GIS.		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in general and in geography. Database creation, organization techniques and management. Appropriate statistics and graphic techniques. Methods of cartographic expression.</p> <p>Cognitive, practical and generic abilities and skills: Ability to recognize spatial relevant problems and to examine possibilities of their analysis and solving using GIS. Applying knowledge in determining, defining and solving spatial problems of high complexity. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Data collection, selection, processing and integration in GIS. Applying appropriate statistic and graphic methods and techniques in analysis and in the presentation of the results. Applying appropriate GIS methods and techniques.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Ability of cartographic visualization and applying appropriate maps and cartographic methods and techniques in analysis and in the presentation of the results. Information-technology skills: working with ArcGIS package, working with SPSS package. Graphic data processing. Data format conversions. Synchronization and integration of spatial data from various sources. Using thematic maps for visual presentation of research results. Functioning effectively as an individual and as a team member. Continuous professional development.</p>			
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - knowledge of spatial units in the population study - know the sources of population data - be able to independently search for and select demographic literature and data sources - know the basic methods of analysis of dynamic and structural characteristics of the population - create a separate set of thematic maps demo geographic content, processes, connections and relationships in GIS 			
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<ol style="list-style-type: none"> 1. From the history of the census; 2. The structure of the census, and the main group of data; 3. Spatial-administrative dimension variables from census data; 4. Variables and indicators of the main socio-demographic characteristics of census data (number of population, natural and mechanical movement of the population); 5. Variables and indicators of the main socio-demographic characteristics of census data (biological structure, cultural and anthropological structure of the population); 6. Variables and indicators of major socioeconomic characteristics of census data; 7. Variables and indicators about marriage, families, households and dwellings in the census data; 8. Comparability of time series of census data; 9. Comparability of census data with alternative data sources; 10. Techniques of organizing data using relational databases required for the application of GIS; 11. Presentation of census data at different levels of spatial coverage; 12. Examples of analysis of census data by applying GIS in selected socio-demographic variables (number of population); 13. Examples of analysis of census data by applying GIS in selected socio-demographic variables (natural and mechanical movement of the population); 14. Examples of analysis of census data by applying GIS in selected socioeconomic variables. 15. Examples of analysis of census data by applying GIS in selected variables on marriage, family, homes and apartments. 			
<p>2.6. Format of instruction:</p>	<p>X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other) </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <p>2.7. Comments:</p> <p style="text-align: center;">-</p> </td> </tr> </table>	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p style="text-align: center;">-</p>
<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	<p>2.7. Comments:</p> <p style="text-align: center;">-</p>			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<input type="checkbox"/> field work			
2.8. Student responsibilities	Attendance to class, completed seminars.			
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	0.5	Research	Practical training
	Experimental work		Report	(other)
	Essay		Seminar essay	1 (other)
	Tests		Oral exam	(other)
	Written exam	2	Project	(other)
2.10. Grading and evaluating student work in class and at the final exam	Class attendance, written exam, seminar and practical training.			
2.11. Required literature (available in the library and via other media)	Title		Number of copies in the library	Availability via other media
	Peters, A., MacDonald H., 2004: <i>Unlocking the Census with GIS</i> , Esri Press.		5	yes
	Dale, A., Fieldhouse, E., Holdsworth, C., 2000: <i>Analysing Census Microdata</i> , A Hodder Arnold Publication.		5	yes
2.12. Optional literature (at the time of submission of study programme proposal)				
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>The procedures set forth in the Rules and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - university and college student survey - self-evaluation of teaching: updating and revising the objectives and subject content and teaching and learning strategies, assessment of learning outcomes by analyzing student performance based on the data and the Student Administration Office's own records - exit polls: evaluation of graduate studies - interview with offices, departments, institutions and companies in which the students perform internships 			
2.14. Other (as the proposer wishes to add)	-			



DETAILED PROPOSAL OF THE STUDY PROGRAMME

1. GENERAL INFORMATION			
1.1. Course teacher	Andrija Krtalić	1.6. Year of the study programme	1 st
1.2. Name of the course	Remote Sensing	1.7. Credits (ECTS)	5
1.3. Associate teachers	Andrija Krtalić	1.8. Type of instruction (number of hours L + S + E + e-learning)	30+0+15+0 (2+0+1+0)
1.4. Study programme (undergraduate, graduate, integrated)	Graduate University Study in Geography, Course: Geographic Information Systems	1.9. Expected enrolment in the course	15
1.5. Status of the course	Elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	1
2. COUSE DESCRIPTION			
2.1. Course objectives	<p>Students through lectures acquire knowledge about the following topics: Overview and definition of remote sensing. Features of the physical fields that are used in remote sensing. Sensors and systems for recording, the impact of platforms and environments. Usable characteristics of sensors. Electro - optical digital matrix cameras, line scanner, thermal cameras, multi-spectral cameras, hyper spectral scanner. Spatial resolution, modulation transfer function, the minimum discriminable contrast, the minimum resolved temperature difference, calibration. Synthetic aperture radar, interferometric and polarimetric mode, usable features. Improving of images. Enhancement, ranking and reduce the amount of features. The method of principal components. Unsupervised classification. Supervised classification. Evaluation of the classification results. Registration and geocoding. Joining of images. Using of softwares for remote sensing in geosciences. Analysis and evaluation of interpretation results. Confusion matrix.</p> <p>Students through practical work on exercise neet to acquire proficiency in the following skills: Using of software tools (TNTlite, ImageJ and MultiSpec) for remote sensing. Improving the images. Geometric transformations, joining of images, geocoding. Feature enhancement. Segmentation. Transformation of images in principal components (PCA). Unsupervised and supervised classification. Interpretation of multispectral images (visible, infrared, thermal). Interpretation of hyper spectral and radar images.</p>		
2.2. Course enrolment requirements and entry competences required for the course	-		
2.3. Learning outcomes at the level of the programme to which the course contributes	<p>Professional knowledge, abilities and skills <i>Knowledge and understanding of:</i> The research process in geography. Theoretical basis of remote sensing in regional and spatial planning, characteristic of remote sensing, principles, methods and technology of data acquiring and interpretation of images. Software tools for remote sensing.</p>		



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>Cognitive, practical and generic abilities and skills: Applying knowledge in determining, defining and solving spatial problems of high complexity. The skills needed for evaluation, interpretation and synthesis of relevant information. The skills needed for presenting scientific contents and stances in written and oral form. Applying mapping of geographical contents, georeferencing. Applying corresponding maps and cartographical methods in analysis and presentation of the results. Applying corresponding skills needed for acquiring and interpretation of creation conclusions which include relevant socially, scientific and ethical theme. Problem solving related to qualitative and quantitative geographic information. Information-technology skills. Functioning effectively as an individual and as a team member. Autonomous continuous professional improvement needed in professional development. Applying skills of learning needed for entire-life education.</p>
<p>2.4. Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</p>	<ul style="list-style-type: none"> - know and distinguish the features of physical fields which were base of remote sensing, characteristics of remote sensing features in different wavelength regions (multi-spectral, radar, hyper spectral, thermal), principles, methods and technology of the recording, interpretations - apply knowledge and understanding of the scene based on multisensory recordings, data processing and interpretation by addressing selected problems within the independent assignments in the remote sensing - applying initial skills for interpretation of multisensory, multispectral and hyper spectral images - independently drawing the conclusions about the quality and reliability of interpretation - publicly present selected problem and its solution through the example from remote sensing - identify areas, methods and techniques where necessary lifelong learning - used independently one of leading software tool for remote sensing
<p>2.5. Course content broken down in detail by weekly class schedule (syllabus)</p>	<p>LECTURES</p> <ol style="list-style-type: none"> 1. Introduction, review and definitions. 2. Features of physical fields which are using in remote sensing. 3. Sensors and systems for aerial image acquisition, impact of platform and environment, effectiveness. Electro - optical digital sensors, line scanners, matrix CCD cameras, thermal cameras, multi-spectral cameras, hyper spectral scanner; usable features. 4. Spatial resolution, modulation transfer function, the minimum discriminable contrast, the minimum resolved temperature difference, calibration. Synthetic aperture radar, interferometric and polarimetric mode, usable features. 5. Interpretation techniques in remote sensing. 6. Subjective interpretation, characteristics and limitations. 7. Interactive interpretation with partially automated functions. 8. Improving of images. Enhancement, ranking and reduce the amount of features.



DETAILED PROPOSAL OF THE STUDY PROGRAMME

	<p>9. Method of principal components 10. Segmentation. 11. Automatic classification. Supervised classification. 12. Registration and geocoding. 13. Joining of images. 14. Using software tools for remote sensing. 15. Presentation of independent assignments.</p> <p>EXERCISES</p> <p>1. Digital multispectral camera, thermo vision camera, hyper spectral scanner. 2. Software tools for remote sensing. 3. Improving of images. 4. Geometric transformation, joining of images, geocoding. 5. Feature enhancement. 6. Segmentation. 7. Transformation of images in principal components (PCA). 8. Unsupervised and supervised classification. 9. Interpretation of multispectral images (visible, infrared, thermal). 10. Interpretation of hyper spectral and radar images.</p>					
2.6. Format of instruction:	<p>X lectures <input type="checkbox"/> seminars and workshops X exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work</p>	<p>X independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)</p>	<p>2.7. Comments: Lectures are interactive and combined with exercises that are purely computational, working with digital images. Independent assignments are made on the basis of the obtained individual practical tasks.</p>			
2.8. Student responsibilities	<p>Observation of class attendance and making exercises. The final grade is made on the basis of test, written exam, oral exam results and quality of seminar essay.</p>					
2.9. Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the	Class attendance	0.2	Research		Practical training	0.15
	Experimental work		Report		(other)	
	Essay		Seminar essay	0.35	(other)	
	Tests	0.3	Oral exam	3	(other)	



DETAILED PROPOSAL OF THE STUDY PROGRAMME

course)	Written exam	1	Project		(other)	
2.10. Grading and evaluating student work in class and at the final exam	<ul style="list-style-type: none"> - Systematic monitoring the presence and active participation in all the activities during the semester. - Oral examination when submitting the results of exercises (mandatory). - Oral examination when submitting the results of independent assignments (mandatory). - Problem-solving at the colloquia by writing (optional, not mandatory). - Problem-solving on the written part of the exam (mandatory, if a student has not passed the colloquia). - Oral examination (mandatory). 					
2.11. Required literature (available in the library and via other media)	Title			Number of copies in the library		Availability via other media
	1. Krtalic, A., Bajic, M., 2013: <i>Remote sensing</i> , lectures - handwriting			10		yes
2.12. Optional literature (at the time of submission of study programme proposal)	<ol style="list-style-type: none"> 1. Tutorial: Fundamentals of Remote Sensing (http://www.nrcan.gc.ca/earth-sciences/geography-boundary/remote-sensing/fundamentals/1430). 2. Oluić, M., 2001: <i>Snimanje i istraživanje Zemlje iz svemira, sateliti, senzori, primjena</i>, HAZU i GEOSAT, Zagreb 3. Lillesand, T.M., Kiefer, R.W., 1994: <i>Remote sensing and image interpretation</i>, 3.ed, John Wiley and Sons, New York. 					
2.13. Quality assurance methods that ensure the acquisition of exit competences	<p>The procedures mentioned in the Rules and the Manual of Quality Management at the University of Zagreb and the Faculty of Science:</p> <ul style="list-style-type: none"> - University's and faculty's student polls - Self-evaluation of teaching: updating and revising the objectives and subject content and teaching and learning strategies, assessment of learning outcomes by analysis of students' efficacy on the basis of data from Student Administration Office. - Exit polls for graduates - Interviews with companies, institutes and institutions in which students perform internships. 					
2.14. Other (as the proposer wishes to add)	-					