Geography and Environmental Science

Title of Course
Unit: Environmental geoinformatics

<table>
<thead>
<tr>
<th>Classes per week</th>
<th>Credit value</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>exercise</td>
</tr>
</tbody>
</table>

Prerequisites:
At least initial level GIS knowledge.

Course description:
The aim of the course is to develop the GIS knowledge gained in the undergraduate course, closely related to their themes. During the lesson one of the functions of the ArcGIS software is described, and examples of practical life will be solved.

- Comparative analysis of vector and raster files. Hybrid Systems. The possibilities and difficulties of raster - vector conversion, the review of the digitization (vectorization) methods.
- Problems and solutions to raster georeferencing.
- Problems and solutions to vector georeferencing.
- Overview and preprocessing of vector data from a CAD source (file format, drawing layers, object types). An overview of attribute data.
- Overview of official files in the CAD format used in Hungary (real estate and forestry land cadaster registers, utilities, etc.)
- Import vector database, then convert object types (e.g. line-polygon conversion).
- Attribution of objects based on different object types, with particular regard to official sources available in Hungary.
- Theoretical and practical implementation of topology improvement.
- Advanced capabilities for mapping data.
- Operations in the database, simpler programming tasks.
- Advanced features of a digital elevation model.
- Creating and pre-processing raster files from a standard (paper-based) data source.
- Criteria for evaluating open source raster maps and their use.

Instructor: Dr. Zoltán Utasi
Language of instruction: English

Readings:

Requirements and grading:
Based on raw basic data, creating a real GIS database with independent work.
### Course Description:

Atmospheric characteristics as a basic information in agricultural meteorology,

Solar energy, physical properties and basic lows of solar energy transformation in the atmosphere, features of solar climate of Hungary

Air movement in the atmosphere, role of wind speed and wind direction in agricultural production

Heat management of different soils. Temperature profiles in the soil and atmosphere

Air humidity, types of its expression, annual and daily distribution of air humidity

Soil moisture, types of its expression, time and spatial distribution of soil moisture

Precipitation types, annual distribution of Hungary

Evaporation, transpiration, potential evaporation

Micrometeorology, factors and characteristics of microclimate

Atmosphere-vegetation-soil interactions

Water resources, water balance calculations, methods of irrigation and drainage

Management and analysis of agro-climatic data base, specific indices of agro-climatology

Crop requirements, temperature and crop development

### Instructor:

Dr. László Lakatos

### Language of instruction:

English

### Semester:

2. (lecture); 3. (seminar)

### Readings:


- **Stigter, K. Applied Agrometeorology; Springer: Heidelberg/Berlin, Germany/New York, NY, USA, 2010.**

### Requirements and Grading:

- Participation on the 80% of the lectures
- Essay on a chosen subject (10-15 pages) and oral presentation (30 minutes) about another special topic.
# Geography and Environmental Science

<table>
<thead>
<tr>
<th>Title of Course Unit:</th>
<th>Atmosphere as risk and resource</th>
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<tbody>
<tr>
<td>Classes per week:</td>
<td>2+2</td>
</tr>
<tr>
<td>Credit value:</td>
<td>2+2</td>
</tr>
<tr>
<td>Type:</td>
<td>Lecture + practice</td>
</tr>
</tbody>
</table>

**Prerequisites:**
None

**Course description:**

**Content:**
- Weather and climate. Resources and risks. Spatial and temporal characteristics of atmospheric motion systems. Main circulatory objects of the atmosphere.
- Key process of dangerous weather phenomena: convection (vertical updraft). Role of convection in particular atmospheric objects.
- Characteristics of temperate zone: planetary waves, cyclones, anticyclones. Role of mesoscale formations in the intensity of weather fronts.
- Tropical cyclones (hurricanes), tornados, other mesoscale or convective systems.
- Atmosphere as a resource for water supplies, natural and cultivated vegetation cover, transport, construction and human life.
- Atmosphere as the transmitter of the majority of renewable sources of energy: solar energy, wind power. Estimation of the supplies of renewable sources of energy. Effects on hydro power and biomass.
- General features of the atmosphere as a resource in Hungary and in major climatic districts. Comparison with spatial and temporal density of other energy forms.
- Atmosphere as a risk-factor. Risks related to the physical state of the atmosphere in the decreasing order of space-time scale. The most important effects of these formations on animate and inanimate nature, on man itself and on the elements of our man-made environment.
- Droughts, severe frosts, heat waves, late spring frosts, huge convective increase of wind, constant and heavy rainfalls, sudden melt, floods, hails etc.
- Tools of scientific forecast of dangerous weather phenomena, their possibilities and constraints. Theoretical fundamentals and prospects of averting hails, dissolving clouds and gaining precipitation.
- Air quality problems of modern age in Hungary, in the developed world and in districts with backward technologies. Harmful chemical effects of polluted air.

**Methods:** Lectures, online illustrations, presentations.

**Instructor:** Prof. Dr. János Mika, full professor

**Language of instruction:** English

**Semester:** 3. (lecture) and 4. (practice)

**Readings:**

**Requirements and grading:**
- Participation on the 80% of the lectures
- Essay on a chosen subject (10-15 pages) and oral presentation (30 minutes) about another special topic.
<table>
<thead>
<tr>
<th>Title of Course Unit:</th>
<th>Catastrophe protection and damage recovery</th>
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<tbody>
<tr>
<td>Classes per week:</td>
<td>2</td>
</tr>
<tr>
<td>Credit value:</td>
<td>2</td>
</tr>
<tr>
<td>Type:</td>
<td>practical</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>theoretical classes of this course</td>
</tr>
</tbody>
</table>

**Course description:**

The important laws and the national organization and system of the disaster management in Hungary. The basic function of the National Directorate General for Disaster Management is protecting the lives and the property of the population living in Hungary and insuring the safe operation of the national economy and protecting the elements of the critical infrastructure. The most important works are: civil and local protection in the country and in the local governments; fire protection; industrial safety especially by hazardous material and unsafe works and participation on the chimney-sweep.

Involvement in the team-work’s training floodwater protection which is organization every three years in the selected settlement.

**Instructor:** Tamás Misik  
**Language of instruction:** english  
**Semester:** 2017/2018/2 (spring)

**Readings:**


**Requirements and grading:**

-regular participation on the classes and on the other business  
-on the basis of the quality of the poster presentation and of the quality of the presentation
<table>
<thead>
<tr>
<th>Title of Course Unit:</th>
<th>Geographical analyses of environmental systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes per week:</td>
<td>Credit value: 2</td>
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</tbody>
</table>

**Prerequisites:**
- Geographical analyses of environmental systems I.
- Geographical analyses of environmental systems

**Course description:**
The course summarizes the main environmental systems (geospheres) of Earth on a complex way:
- Lithosphere
- Hydrosphere
- Biosphere
- Pedosphere
- Beach systems
- Deserts – eolian systems
- Glacial systems
- Antropogenic system
- Erosional systems

**Instructor:** Dr. Polgári Márta

**Language of instruction:** English

**Semester:** 2017/2018/2 (spring)

**Readings:**
- Treatise on Geochemistry volumes 1-16 (9144 pp)
  Editors: Karl TurekianHeinrich Holland
  eBook ISBN: 9780080983004
  2013
  Hardcover ISBN: 9780080959757

**Requirements and grading:**
- Participation on lessons
- Homework of chosen subject (10-15 pages) and presentation (30 minutes)
### Title of Course Unit:

**Physical and chemical interactions in the geosphere**

<table>
<thead>
<tr>
<th>Classes per week:</th>
<th>Credit value:</th>
<th>Type:</th>
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<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>lecture</td>
</tr>
</tbody>
</table>

### Prerequisites:

None

### Course description:

Biogeochemical cycles provide the basic framework for investigating global change and its implications for life on earth. An understanding of biogeochemical cycles and anthropogenic impacts on them is fundamental for predicting impacts of global climate change.

The global biogeochemical cycles of many elements have been altered by human (anthropogenic) activity. Biogeochemical cycles operate on many different spatial and temporal scales.

A reservoir is a physically well-defined system. A given setting with defined physical and/or biological boundaries. Fluxes transfer matter from one reservoir to another. A flux into a reservoir is sometimes referred to as a source, a flux out of the reservoir as a sink. Material transfers. Residence times for different elements. Mass balance. Non steady state conditions. In many instances the source and sink rates are not constant with time. Box models - Reservoirs and Fluxes. Changes in the water Cycles. Features of carbon cycle. The nitrogen cycle. Sulfur cycle. Feedbacks in the Climate System.

### Instructor:

Dr. László Lakatos

### Language of instruction:

English

### Semester:

2017/2018/2 (spring)

### Readings:


### Requirements and grading:

- Participation on the 80% of the lectures
- Essay on a chosen subject (10-15 pages) and oral presentation (30 minutes) about another special topic.
# Vegetation as Risk and Resource

<table>
<thead>
<tr>
<th>Title of Course Unit:</th>
<th>Vegetation as risk and resource</th>
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<tbody>
<tr>
<td>Classes per week:</td>
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<tr>
<td>Credit value:</td>
<td>2</td>
</tr>
<tr>
<td>Type:</td>
<td>lecture</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Course Description:

The living world is responding to climate change. Climate change might allow exploration of new species and varieties. Food availability is having available sufficient quantities of food on a consistent basis. Projected changes in crop yields at different latitudes with global warming. Historical Increase in Extreme Events in different cultivation areas. The Risk of Heat Stress, Drought and Heavy Rains. Food access is having sufficient resources, both economic and physical, to obtain appropriate foods for a nutritious diet. Food use is the appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation. The stability of the first three dimensions of food security over time. Adapting to climate change. Farm-level adjustments that build resilience. New varieties, new crops, change planting dates. Diversify cropping systems at farm and regional scales. Develop new strategies for new pests, diseases and weeds. Improve soil resilience to drought and flooding. Expand into new sites less prone to water stress. New irrigation and drainage systems. Fruit crop frost protection (site selection, misting, air circulation). Improve cooling capacity of livestock facilities. Agriculture Adaptation (Beyond the farm). Renewable Energy on the Farm.

### Instructor:

Dr. László Lakatos

### Language of instruction:

English

### Semester:

2017/2018/2 (spring)

### Readings:


### Requirements and Grading:

- Participation on the 80% of the lectures
- Essay on a chosen subject (10-15 pages) and oral presentation (30 minutes) about another special topic.
Title of Course Unit: Waste management

Classes per week: 2  Credit value: 2  Type: theoretical

Prerequisites:
nothing

Course description:
The different is between waste and garbage. The priority succession on the waste management. Definition of the refuse and the recycling, the potential forms of the disposal. The general attitude of the hungary waste management. Demonstration of the National Waste Plan and demonstration of the statue of 2000th XLIII. from waste management and new statue of 2012th CLXXXV. from waste.
The environmental programme of European Union (chapters of waste management). The hungarian request for respite on the waste management.
Closure, liquidation and rekultivation of the landfill. The educational possibility of the waste management fundamentals. Projects, open days and citizen information. Waste of formation, the waste-conscious purchase. The prevention of the waste formation.
Economic questions and the waste of private have bearing on treatment. The definition and great importance of benchmark. The returnable, the depository and the product fee. The detailed demonstration of the hungarian landfills. The detailed function, infrastructural facilities and set-up of the home regional landfills.
The home burning of waste. The modern waste-burning, the incineration. The type and functional pattern of refuse burner. The system of waste selection in Hungary and in the world. Demonstration of the german system. The junkyard and the waste selection containers. The great important of the sorter halls.
The recycling of the organic waste materials; the methods, the process and the important rules of the composting.

Instructor: Tamás Misik

Language of instruction: english

Semester: 2017/2018/2 (spring)

Readings:

Requirements and grading:
-regular participation on the classes and on the other business
-on the basis of the quality of the poster presentation and of the quality of the presentation
### Title of Course
The geography of globalization

<table>
<thead>
<tr>
<th>Classes per week:</th>
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<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>lecture</td>
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</tbody>
</table>

### Prerequisites:
Intermediate English language skills.

### Course description:
The purpose of this subject is to show the revised ideas on space and spatialities in consequence of the development of communication, the spreading of technical civilisation and after all the fulfillment of globalisation and to introduce into the related research possibilities.

The aim of the course is to survey new problems and paradigms about space implicated by globalisation. Economic geography has to concentrate on a borderless hyper-market where the role of computer-based communication is crucial. Beside globalisation at micro-regional and local level localisation is an important counter-process: the building and management of local identity.

The new word “glocalisation” (globlocalisation) comes from the globalisation-localisation opposite concepts. The apparently opposite concepts dissolve and harmonize as follows: Integration into the global processes with the preservation of identity and values accumulated up to the present. The main topics are as follows:

1. The definition of globalization
2. A historical approach of recent globalization
3. Economy and globalization
4. Politics in a global context
5. The cultural effect of globalization
6. Globalism – an ideology
7. The environmental side of globalization
8. Counter-globalization

### Instructor:
Csaba Patkós, PhD

### Language of instruction:
English

### Semester:
Spring

### Readings:

#### Compulsory readings:

#### Recommended readings:
Students must attend lectures and create an organized personal course diary containing relevant information on each main course topics. Additionally a 2500 words long essay should be written in English in one of the above themes. Both works contribute to the final grade given by tutor at the same rate (50-50%).
Geography and Environmental Science

Title of Course Unit: Regional and spatial development

Classes per week: 2  Credit value: 3  Type: lecture

Prerequisites: Intermediate English language skills.

Course description: The aim of the course is to introduce students to the stunning world of geography-sensitive socio-economic development theories and their implementation in different environments. The main topics are as follows:

1. Definition and bases of regional development
2. Theories of local and regional development
3. Development with exogenous resources
4. Mobilising indigenous potential
5. Population and development
6. Technology and development
7. The regional policy of the European Union
8. Government and governance in development – institutionalization
9. Asset Based Community Development
10. The EU’s LEADER approach

Instructor: Csaba Patkós, PhD

Language of instruction: English

Semester: Autumn

Readings:

Compulsory readings:


Recommended readings:


Requirements and grading: Students must attend lectures and create an organized personal course diary containing relevant information on each main course topic. Additionally a 2500 words long essay should be written in English in one of the above themes. Both works contribute to the final grade given by tutor at the same rate (50-50%).
The name of the subject: ANALYSIS OF THE CONNECTION BETWEEN SPACE AND SOCIETY, PRACTISE

Code: NMT_GG112G3

Number of credits: 3

The type of the subject: practice – 2 hours / week

The method of the examination: practical mark

The date of the subject: 2nd term

Previous studies: -

Description of the subject:

The aim of the subject is to inform students about the system of social spatial regional scientific disciplines, knowledge and methods. We live in a concrete, physical space and another human, social, economic space and relationships so that to do some research work and to understand spatial aspects is more important nowadays.

The short themes of the course:

- Scientific theoretic problems in Regional Science.
- Classification of the spaces.
- Verticums and hierarchy, special social level systems.
- Horizontal space distribution and the specoalities of the typization of environs.
- Centrum and peripheria.
- Specialities of the Spatial System.
- Forms of the spatial connections.
- Spatial movements: migration and the effect factors of inhabitant movements, general modell of the spatial enlargement increasing.
- The most important Spatial categoies in the Society.
- About the spatial point of view of the economic analysis.
- Types of the statistical data in case of the Spacial point of view.
- One region and more regions’s compare analysis.

Competency that can be get under this course:

- to understand the system of the society
- the ability of knowledge in system in case of the Society.
- ability to recovers different causes of social problems and connections
- knowledge to keep connections with another people, creativity, cooperation and solving social problems.

Education:

- Because we have only 2 or 3 foreign students, the practicals will be hold on one day together, in D-building in April. The teacher will write to student through Neptun-system to organize the practicals.
- The lecture will be given by Anna Dobos PhD.
- Please minimum 2 students appear during practicals.
ANALYSIS OF THE CONNECTION BETWEEN SPACE AND SOCIETY, PRACTISE
Teacher: Anna Dobos PhD.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Themes</th>
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<tbody>
<tr>
<td></td>
<td>Classification of the spaces.</td>
</tr>
<tr>
<td></td>
<td>Verticums and hierarchy, special social level systems.</td>
</tr>
<tr>
<td></td>
<td>Horizontal space distribution and the specialities of the typization of environs.</td>
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<tr>
<td></td>
<td>Centrum and peripheria.</td>
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<tr>
<td></td>
<td>Specialities of the Spatial System.</td>
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<td>Types of the statistical data in case of the Spacial point of view.</td>
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<tr>
<td></td>
<td>One region and more regions’s compare analysis.</td>
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<tr>
<td></td>
<td>Giving the mark of this subject</td>
</tr>
</tbody>
</table>

About this course:
- Students need to take part in these practicals in active position during consultation and speaking the scientific basis and scientific social problems and cases.

References:


and other articles from ELSEVIER journals

Responsible person for the subject: Dr. Patkós Csaba PhD.

Teacher: Dr. Dobos Anna PhD.
The name of the subject: Modern Research Methods in Geography - practise

| Code: NMT_GG100G2 | Credit: 2 |

The type of subject (lecture/practise) and numbers /week: practise, 2/30

methods for valuation: practise mark

The place of the subject (which term/semester): 1st semester/term

Frequency: in every 1st semester/term

Language of this subject (if non-Hungarian): English

Former subjects: -

Description of the subject

The aim of this course:

- The „Modern Research Methods in Geography” subject is inside our Educational system because students will be able to get new information using national and international publications, journals, electronic websites, libraries, and modern scientific methods in fields and GIS methods. Students can know new physical geographical, social and economic geographical information and investigation methods during this course. After that they will be able to structure their scientific papers, Diplomas and etc.
- This subject can prepare students to the requirements of writing and structuring MSc Diploma while they can study lot of new information about modern physical, social and economical geographical research methods.
- This subject can develop the knowledge, logical ability, complex thinking, problem solving, structure, grammar and writing ability. This subject can develop our students very well in such an ability and capability which are good basis for creating new settlement development plans, touristic plans or another publications and scientific paper.
- The lecturer want that students can use these knowledge of modern research methods, developed abilities and capabilities during another lectures, practices and their every days.
- The aim of this subject is to show the modern research methods in Geography (Physical, Social and Economic Geography), the national and international requirements for publications, structuring scientific papers, and oral presentations.

Developing competitions:

- During this course, our students will study new information of national and international publication habits, requirements of oral presentations, requirements of MSc Diploma, the modern field works (investigation of Quaternary sediments, soil descriptions based on FAO (2006) soil description method, geomorphological mapping procedure, meteorological stations) in Physical Geography; and Social and Economic Geographical research methods (creating database, creating different maps and diagrams, SWOT analysis, valuation of scientific data, etc.).
- The logical thinking, ability of complex problem solving, writing skills and ability of oral preentation will develope during this course. The lecturer will tone practical thinking, complex knowledge of Geographical research methods and problem solvings.
• After this course, students will able to use their new knowledge of field works, maps, soil investigations, etc. to analyse physical, social and economic geographical conditions of settlements and valuating of settlement development palns.
• Students can give better performance in writing skills, structuring of scientific papers and oral presentations. They will able to work with different scientific databases, to valuate them and to use field research methods during their own research work.
• This subject built former topographical, physical geographical and socio-economic geographical knowledges and experiences of former field trips during BSc courses.

Content and planned lessons/tasks:
• We will deal with the following themes during our courses: references in publications, publications and oral presentations in modern Earth science, databases for thematic maps, built up different database, geomorphological mapping, field work for kowing of Quaternary sediments, OSL investigations, landscape development analysis, soil description methods based on Hungarian and WRB soil classification system (FAO 2006, 2014), meteorological data, OMSZ database, drainage/water databases, land-use changes and analysis based on Military Survey Maps, Arcanum database, natural and cultural heritage (unique landscape values) in settlements (HS 20381/2009), Modern Research Methods in Social and Economic Geograpgy (interviews, questionaries, SWOT analysis, etc.) and valuation of potential resources in settlements.
• During this course, our students will work on own scientific theme based on a choosen settlement while they will able to develope their knowledge of different kinds of research methods.

<table>
<thead>
<tr>
<th>Date</th>
<th>Titles for practices</th>
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<tbody>
<tr>
<td>19/09/2016.</td>
<td><strong>Knowledge of Physical Geography:</strong></td>
</tr>
<tr>
<td></td>
<td>• topographic site for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• geological conditions for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• relief conditions/geomorphological characters for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• soil conditions for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• drainage system for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• climatic conditions for the investigated settlement</td>
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<tr>
<td></td>
<td><strong>Kowlegde of Social and Economic geography:</strong></td>
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<tr>
<td></td>
<td>• landscape and settlement history</td>
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<tr>
<td></td>
<td>• social conditions for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• economic conditions and possibilities for the investigated settlement</td>
</tr>
<tr>
<td></td>
<td>• natural and cultural heritage in the investigates settlement</td>
</tr>
<tr>
<td></td>
<td>• potential resources for the investigated settlement</td>
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<tr>
<td></td>
<td>• proposals for development strategy in the investigates settlement, SWOT analysis, settlement development plan</td>
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<tr>
<td></td>
<td>giving letures .....during practices ......based on a choosen settlement in Hungary (Cserépfalu).</td>
</tr>
<tr>
<td></td>
<td>➢ <em>student publication and oral presentation (ppt-presentation).</em></td>
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<tr>
<td></td>
<td>➢ <em>to choose a suitable settlement for investigating.</em></td>
</tr>
<tr>
<td>26/09/2016.</td>
<td>References in the modern geographical publications:</td>
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<tr>
<td></td>
<td>• websites, journals, and possibilities for looking for references,</td>
</tr>
<tr>
<td></td>
<td>• applied libraries in websites thorough our University Library.</td>
</tr>
</tbody>
</table>
- Electronic Open Access Journals in websites and books in Library.
- Journals and articles: Guide for Authors, Article Structure, Essential title age information, Abstract, Keywords, Math formula, Electronic artwork, Tables and Figures, References, Research data. – in different Hungarian and foreign journals.

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>10/10/2016</td>
<td>Field investigation methods for Quaternary sediments, OSL investigations, Geomorphological mapping during field works. – Analysis for Landscape Development, Methods for relief valuation.</td>
</tr>
<tr>
<td>17/10/2016</td>
<td>Soil description methods based on Hungarian and FAO soil classification system, Meteorological data, data from the Hungarian Meteorological Service (OMSZ), Water databases in Hungary.</td>
</tr>
<tr>
<td>24/10/2016</td>
<td>Military Survey Maps, CLC 1990, CLC 2012 – Investigation of Land-use system since 18th century to nowadays, settlement history analysis based on the Arcanum Database.</td>
</tr>
<tr>
<td>31/10/2016 – 1/11/2016</td>
<td>AUTUMN HOLIDAY FOR STUDENTS AND</td>
</tr>
<tr>
<td>14/11/2016</td>
<td>Investigation methods in Social Geography.</td>
</tr>
<tr>
<td>21/11/2016</td>
<td>Investigation methods in Economic Geography. Exploring of local potential resources.</td>
</tr>
</tbody>
</table>
| 28/11/2016 | Students’ presentation about their investigations based on a chosen settlement (ppt-presentation, 15 minute oral presentation)  
Deadline for the 15 page student publication (222. room in D-building). |
| 5/12/2016 | Students’ presentation about their investigations based on a chosen settlement (ppt-presentation, 15 minute oral presentation) |
| 12/12/2016 | Valuation of student works. |

Organization of Education:
- Practices will hold at D-building of Eszterházy Károly University (Leányka Street 6.) between 10.00 – 11.40 a.m. in Monday in 222. room.
- There will be field works during our practices too so that field clothes recommended to wear during these field trips. We recommend for students to appear 3 minutes before the practices at room 222, D-building.

Conditions for good marks:
- Students need to appear in the practices (look at Educational Orders). They need to structure a 15 page publication about a chosen settlement and to give a student 15 minutes ppt-oral presentation about their investigated settlement.
- Students can get good mark when they could do their duty during this term. Students can get mark of (2) when they can reach 51% of our requirements.
- Students will get their marks based on the following system: (5 – jeles): 100 – 90%, (4 – jó): 89 – 77%, (3 – közepes): 76 – 64%, (2 – elégséges): 63 – 51%.
- The student’s 15 page publication, oral presentation and field works will be qualified by the associated professor.
- Students will get their marks in the last week of this educational term/semester.
- Methods for valuation:
Minimum expectation that students appear in practices during the educational term (look at Educational Orders), they will structure a 15 page publication about a chosen settlement and an 15 minute oral presentation.

- The requirements will be valuated by the college associate professor and the marks will be closed in the last week of this educational term.

- **Requirements during this term:**
  - Students will work on the complex description and landscape factor valuation of a chosen settlement parallel to our practices / lectures.
  - There will go to field works during our practices as well, the date of field works will be harmonized by the college associate professor.
  - Students give an oral presentation in 28/11/2016 or 5/12/2016. The deadline for the student publication will be in 28/11/2016.

- **Oral examination:**
  - We have not got an oral examination in this subject.

**References:**
- References will discussed with students based on a chosen settlements for the investigation.

**Director of Specialisation:** Prof. dr. János Mika, professor, Head of Department of Environmental Sciences and Landscape Ecology, mikaj@ektf.hu

**Responsible person for this subject:** Dr. Antal Tóth, college associate professor, Deapartment of Social Geography and Region Development, tantal@ektf.hu

**Lecturer:** Dr. Anna Dobos, college associate professor, Department of Environmental Sciences and Landscape Ecology, dobos.anna@uni-eszterhazy.hu

**Place where students can speak with the lecturer:**

Dr. Anna Dobos – Monday: 8.00 – 9.00, or Tuesday: 10.00 – 11.00; D-building (Leányka Street 6.) Room 222.