

## Institute of Geography and Spatial Management

### Courses in English for international students (BACHELOR)

| Numer  | Nazwa przedmiotu  | Zajęcia       | Semestr | ECTS | Koordynator                           |
|--------|---|---------------|---------|------|---------------------------------------|
| 4137-D | <a href="#">Arts and culture in contemporary urban development</a>                                  | 24L+6FW       | autumn  | 3    | dr hab. Monika Murzyn-Kupisz          |
| 4124-D | <a href="#">Geographical Problems of Cracow</a>   | 15L           | autumn  | 2    | dr hab. A. Zborowski                  |
| 5860-D | <a href="#">Geography of Air Transportation</a> <sup>T</sup>  | 30L, S        | spring  | 3    | dr P. Trzepacz                        |
| 5853-D | <a href="#">Geography Seminar Series I</a>  | 30L, S        | autumn  | 4    | dr hab. A. Bokwa<br>dr P. Trzepacz    |
| 5854-D | <a href="#">Geography Seminar Series II</a>   | 30L, S        | spring  | 4    | dr hab. A. Bokwa<br>dr P. Trzepacz    |
| 5114-D | <a href="#">Physical Geography of Central Europe</a>  | 30L           | autumn  | 3    | dr hab. A. Bokwa                      |
| 3124-D | <a href="#">Principles of Glaciology</a>  | 14L+6S+10WF   | spring  | 3    | prof. dr hab.<br>J. Pociask-Karteczka |
| 5861-D | <a href="#">Knowledge Based Economy and Information Society from Local and Regional Perspective</a> | 8L+8S<br>+4FW | autumn  | 3    | dr hab. G. Micek                      |
| 5113-D | <a href="#">Socio-economic Geography of Central Europe</a>  | 30L, S        | autumn  | 3    | dr P. Trzepacz                        |
| 5817-D | <a href="#">Socio-economic Problems of the Małopolska Region</a>                                    | 15L           | spring  | 2    | dr hab. Andrzej Zborowski             |
| 5116-D | <a href="#">The Baltic Sea Region – Nature and Man</a>  | 15L+15S       | autumn  | 3    | dr Jarosław Działek                   |
| 6219-D | <a href="#">Information Communication Technology in Science Education</a>                           | 60L,S, FW     | autumn  | 5    | dr M. Pietrzak                        |

L - Lecture, S – Seminar, FW – Field works

#### ESRI Virtual Campus courses#

(in English, only for students with at least basic knowledge in GIS)

| Numer | Nazwa przedmiotu                | Zajęcia | Semestr | ECTS | Koordynator |
|-------|---------------------------------|---------|---------|------|-------------|
|       | <a href="#">GIS I (VC ESRI)</a> | 75E     | spring  | 3    | dr M. Troll |

E – distance learning

# -VC ESRI – Every subject described below is based on selected ESRI Virtual Campus Web courses(<http://training.esri.com>). Course content is available on-line in English (self-study). Teacher's support will be provided in English.

**Geography courses in English are open to all Jagiellonian University international students.**

To register for the courses you should contact: Katarzyna Rotter-Jarzębińska, Erasmus Departmental Co-ordinator, Institute of Geography and Spatial Management

Tel. +48 12 664 53 03, e-mail: [katarzyna.rotter@uj.edu.pl](mailto:katarzyna.rotter@uj.edu.pl)

At the JU **International Students Mobility Office** you'll receive the information about the offer of non-degree courses in foreign languages proposed by other JU units. Please consult the following web page: [http://www.dmws.uj.edu.pl/en\\_GB/erasmus-kraje-programu](http://www.dmws.uj.edu.pl/en_GB/erasmus-kraje-programu)

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## Institute of Geography and Spatial Management

### Courses in English for international students (MASTER)

| Numer  | Nazwa przedmiotu  | Zajęcia       | Semestr          | ECTS | Koordynator                           |
|--------|---|---------------|------------------|------|---------------------------------------|
| 4137-D | <a href="#">Arts and culture in contemporary urban development</a>                      | 24L+6FW       | autumn           | 3    | dr hab. Monika Murzyn-Kupisz          |
| 3226-D | <a href="#">Climate Change</a>  | 15L, S        | spring           | 2    | dr hab. A. Wypych                     |
| 4124-D | <a href="#">Geographical Problems of Cracow</a>   | 15L           | autumn           | 2    | dr hab. A. Zborowski                  |
| 5860-D | <a href="#">Geography of Air Transportation<sup>T</sup></a>                             | 30L, S        | spring           | 3    | dr P. Trzepacz                        |
| 2013-D | <a href="#">Geography Research Project</a>  | 15S           | autumn<br>spring | 12   | dr J. Działek<br>dr D. Wrońska-Wałach |
| 5853-D | <a href="#">Geography Seminar Series I</a>  | 30L, S        | autumn           | 4    | dr hab. A. Bokwa<br>dr P. Trzepacz    |
| 5854-D | <a href="#">Geography Seminar Series II</a>   | 30L, S        | spring           | 4    | dr hab. A. Bokwa<br>dr P. Trzepacz    |
| 5114-D | <a href="#">Physical Geography of Central Europe</a>                                    | 30L           | autumn           | 3    | dr hab. A. Bokwa                      |
| 3124-D | <a href="#">Principles of Glaciology</a>  | 14L+6S+10WF   | spring           | 3    | prof. dr hab.<br>J. Pociask-Karteczka |
| 5861-D | <a href="#">Knowledge Based Economy and Society from Local and Regional Perspective</a> | 8L+8S<br>+4FW | autumn           | 3    | dr hab. G. Micek                      |
| 5113-D | <a href="#">Socio-economic Geography of Central Europe</a>                              | 30L, S        | autumn           | 3    | dr P. Trzepacz                        |
| 5817-D | <a href="#">Socio-economic Problems of the Małopolska Region</a>                        | 15L           | spring           | 2    | dr hab. A. Zborowski                  |
| 5116-D | <a href="#">The Baltic Sea Region – Nature and Man</a>                                  | 15L+15S       | autumn           | 3    | dr Jarosław Działek                   |
| 6219-D | <a href="#">Information Communication Technology in Science Education</a>               | 60L,S, FW     | autumn           | 5    | dr M. Pietrzak                        |

L - Lecture, S – Seminar, FW – Field works

#### ESRI Virtual Campus courses#

(in English, only for students with at least basic knowledge in GIS)

| Numer | Nazwa przedmiotu                 | Zajęcia | Semestr | ECTS | Koordynator   |
|-------|----------------------------------|---------|---------|------|---------------|
|       | <a href="#">GIS II (VC ESRI)</a> | 75E     | autumn  | 3    | dr K. Ostafin |

E – distance learning

# -VC ESRI – Every subject described below is based on selected ESRI Virtual Campus Web courses(<http://training.esri.com>). Course content is available on-line in English (self-study). Teacher's support will be provided in English or Polish.

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|   |   |        |
|---|---|--------|
| WG.IG-4137-D                                | <b>Arts and culture in contemporary urban development</b>   | 3 ECTS |
| WB.IG-3226-D                                | Lectures with discussions 24 h, Field trips 6 h   |        |
| Type of class:                              | Monika Murzyn-Kupisz  |        |
| Coordinator:                                | exam  |        |
| Student work required:                      | Participation in lectures with discussions: 24 h ; Participation in two field trips: 6 h<br>Student's own work:<br>Preparation for classes (reading texts for the course): 30 h<br>Preparation of two field trip reports: 10 h ; Preparation for the final exam: 20 h<br>Total number of hours: 90 h  |        |
| Forms and conditions for receiving credits: | Participation in discussions during lectures 10% ; Field trips reports 20%<br>Final exam (in a written form) 70%<br>Attendance at lectures, participation in conversations during them and participation in the field trip are compulsory and are a prerequisite to attempt the written exam. Exam marks above 60% will be required to pass it.   |        |
| Entry requirements:                         | none  |        |
| Description:                                | <p>Following themes and topics will be included in the course:</p> <ol style="list-style-type: none"> <li>1. Introduction to the course. Meanings and interpretations of the concept of culture, cultural goods and services. Cultural production and consumption and its spatial dimension in urban studies.</li> <li>2. Culture in policies on the local, regional and state level.</li> <li>3. Creative sector and economic development of cities.</li> <li>3. Culture and new concepts of socio-economic groups in urban space.</li> <li>4. Culture and its impact on quality of life, social capital and social inclusion in cities. Culture, social participation and urban activism.</li> <li>5. The uses and functions of culture in urban regeneration. Flagship projects and events in urban space of contemporary cities.</li> <li>6. Cultural quarters as specific functional and symbolic areas within cities.</li> <li>7. Artists and their impact on functioning and transformations of contemporary urban centres.</li> <li>8. Cultural heritage – an opportunity or a burden in urban development?</li> <li>9. Cultural offer and tourism attractiveness of cities (Cultural tourism in contemporary cities).</li> <li>10. Culture and city branding/urban marketing (e.g. major cultural labels such as UNESCO, flagship cultural events).</li> <li>11. Critique of urban development policies using culture (e.g. culture as a tool of neoliberal urban policies; carnivalisation of urban space; touristification and its negative impacts on urban life and built environment).</li> </ol> |        |

|                             |  |        |
|-----------------------------|--|--------|
| WG.IG- -5860-D              | <b>Geography of Air Transportation</b>   | 3 ECTS |
| Typ zajęć:                  | Lecture 15h, Seminar 15h   |        |
| Koordynator:                | Piotr Trzepacz   |        |
| Zaliczenie:                 | Egzamin  |        |
| Bilans punktów ECTS:        | Contact hours – 30h ; Literature reading – 30h; Essay – 20h; Study before examination – 20h;<br>Total 100h   |        |
| Forma i warunki zaliczenia: | <ol style="list-style-type: none"> <li>(1) Obligatory attendance (seminar)</li> <li>(2) Positive mark from essay</li> <li>(3) Written test</li> </ol> <p>The written examination verifying the assumed level of knowledge, skills and personal and social competence.</p>  |        |
| Wymagania wstępne:          | None   |        |
| Pełny opis:                 | Air transport infrastructure. Air transport tradition from global perspective. Aircraft and means of transport hierarchy. Introduction to international aviation law. Legal background of liberalization and deregulation. „Open skies” concept. Air transport in Poland after 2004. Central and regional airports. Market features of air passenger transport. Carriers and alliances. Aerotropolis, aeroville – specialised settlement units serving airports. Airportenvironment interactions. Heliports. Methods of air transport impact research. Aeromobility. |        |

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|---|---|--------|
| WB.IG-3226-D                                | <b>Climate Change</b>   | 2 ECTS |
| Type of class:                              | Seminar: 14 h, lecture: 1 h   |        |
| Coordinator:                                | Zbigniew Ustrnul, Agnieszka Wypych  |        |
| Student work required:                      | Contact hours – 15 h.<br>Private study - literature – 15 godz.<br>Private study before the seminar – 10 h.<br>Private study before revision and examination – 20 h.<br>Total: 60 hours  |        |
| Forms and conditions for receiving credits: | Active attendance, group work presentation, written test. <i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                         | For master students only<br>Basic knowledge on meteorology and climatology is welcome   |        |
| Description:                                | Course outline: Causes of climate changes: astronomical and geographical theories, economic activity of man. Human impact on the composition of the atmosphere: changes of carbon dioxide and trace gases concentration – the increasing greenhouse effect and the ozone layer depletion. Recent climate changes and outlook for the future: climatic models and climate change scenarios. Regional climate changes (Krakow, Southern Poland, Central Europe) and their impact on the environment and selected branches of economy. |        |

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|---|---|--------|
| WB.IG-4124-D                                | <b>Geographical Problems of Cracow</b>  | 2 ECTS |
| Type of class:                              | lecture, 15 godzin  |        |
| Coordinator:                                | Andrzej Zborowski, Jakub Taczanowski  |        |
| Student work required:                      | Contact hours – 15h<br>Literature reading – 15h<br>Study before examination – 20h<br>Total – 50h  |        |
| Forms and conditions for receiving credits: | Exam  |        |
| Entry requirements:                         | None  |        |
| Description:                                | Natural conditions of the city location and development. An outline of Cracow's history. Demographical structure of Cracow. Basic functions of the city: Culture/science, tourism, management/ administration, industry. Urban pattern of the city and its functional zoning. The historic core and its revitalization. Cracow's transport node and the urban/municipal transport delimita. Cracow's influence zone (the urban region). |        |

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|---|--|---------|
| WB.IG-2013-D                                | <b>Geography Research Project</b>  | 12 ECTS |
| Type of class:                              | seminar, 15 godzin   |         |
| Coordinator:                                | Jarosław Działek   |         |
| Student work required:                      | 15 hours with lecturer, 345 hour of student's own work: literature reading, preparing presentation and reports, fieldwork, analysis of results, preparing final report.  |         |
| Forms and conditions for receiving credits: | Students have to prepare 3 presentations and final report. <i>Further conditions may be established by the lecturer.</i>   |         |
| Entry requirements:                         | For master students only   |         |
| Description:                                | The aim of the course designed for foreign exchange students is to carry out an individual research project in physical or human geography. The students will learn how to prepare research project, critically assess literature, design successive stages of the research, choose methods and manage time and resources. They will collect data during field work or in laboratory, and learn how to analyze them. Students will be obliged to present successive stages of the research project, and its results in the form of the final report. |         |

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|---|---|--------|
| WB.IG- 5853-D                               | <b>Geography Seminar Series I</b>   | 4 ECTS |
| Type of class:                              | seminar, 30 godzin  |        |
| Coordinator:                                | Anita Bokwa, Piotr Trzepacz   |        |
| Student work required:                      | Contact hours with the teacher – 35 hours<br>Preparation for the practical classes – 15 hours<br>Reading of the required literature – 40 hours<br>Preparation for the final exam – 20 hours<br>Total: 105 hours of student's work   |        |
| Forms and conditions for receiving credits: | Attendance, written test, written test with questions referring to the issues presented and discussed during the seminar. <i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                         | None  |        |
| Description:                                | The course is organised only for foreign students coming to the Jagiellonian University within international exchange programmes (e.g. Socrates/Erasmus). The language of the course is English. A part of the seminar is scheduled for the lectures of foreign researchers coming to the Institute of Geography and Spatial Management, Jagiellonian University. They present the most recent issues from physical and human geography, studied currently. There is a discussion after each lecture. Other part of the seminar is organised as a combination of introductory lectures about current environmental problems (e.g. eutrophication, natural hazards), followed by the discussion based on individual input of every course's participant, who read in advance selected scientific papers about a given issue. |        |

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|--|---|--------|
| WB.IG- 5854-D                              | <b>Geography Seminar Series II</b>  | 4 ECTS |
| Type of class:                             | Lecture, seminar, 30 godzin   |        |
| Coordinator:                               | Anita Bokwa, Piotr Trzepacz   |        |
| Student work required:                     | Contact hours with the teacher – 35 hours<br>Preparation for the practical classes – 10 hours<br>Reading of the required literature – 10 hours<br>Preparation for the final exam – 20 hours<br>Total: 75 hours of student's work  |        |
| Forms and conditions for receiving credits | Attendance, written test with questions referring to the issues presented and discussed during the seminar. <i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                        | None  |        |
| Entry requirements:                        | The course is organised only for foreign students coming to the Jagiellonian University within international exchange programmes (e.g. ERASMUS+). The language of the course is English. A part of the seminar is scheduled for the lectures of foreign researchers coming to the Institute of Geography and Spatial Management, Jagiellonian University. They present the most recent issues from physical and human geography, studied currently. There is a discussion after each lecture. Other part of the seminar is organised as a combination of introductory lectures about current environmental problems (e.g. eutrophication, natural hazards), followed by the discussion based on individual input of every course's participant, who read in advance selected scientific papers about a given issue. |        |

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|--|--|--------|
|  | <b>GIS I (VC ESRI)</b>   | 3 ECTS |
| Type of class:                             | E-learning, 75 hours   |        |
| Coordinator:                               | Mateusz Troll  |        |
| Form of exam:                              | Two-part written examination with mark   |        |
| Student work required:                     | E-learning – 75 hours<br>Preparation for the final exam – 10 hours<br>Total: 85 hours  |        |
| Forms and conditions for receiving credits | Two-part written examination with mark.<br>Conditions for taking the examination: successful completion of all ESRI VC courses in a subject (confirmed by the ESRI VC certificates) before scheduled deadlines.<br>During the first part of examination student draws five exercises from chosen ESRI VC web course modules. Student have to complete minimum three of five randomly chosen exercises (60%). During the second part of examination student answers a questions selected from ESRI VC e-exams.<br>To complete this subject a student has to achieve a level of 60% for required knowledge and skills and a level of 100% for personal and social competences. |        |
| Entry requirements:                        | Geoinformatics; or another basic GIS course  |        |
| Description:                               | ESRI VC web courses chosen from ESRI Training Catalog by the student at the beginning of the winter semester. Examples of available web courses: Learning ArcGIS Spatial Analyst, Learning ArcGIS 3D Analyst, Network Analysis Using ArcGIS, Getting Started with Linear Referencing, Creating and Sharing GIS Content Using ArcGIS Online.  |        |
| Note:                                      | Distance learning (practical classes and theoretical studies)  |        |

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|--|--|--------|
|  | <b>GIS II (VC ESRI)</b>  | 3 ECTS |
| Type of class:                             | E-learning, 75 hours   |        |
| Coordinator:                               | Krzysztof Ostafin  |        |
| Form of exam:                              | One-part written examination with mark.  |        |
| Student work required:                     | E-learning – 75 hours<br>Preparation for the final exam – 10 hours<br>Total: 85 hours  |        |
| Forms and conditions for receiving credits | One-part written examination with mark.<br>Conditions for taking the examination: successful completion of all ESRI VC courses in a subject (confirmed by the ESRI VC certificates) before scheduled deadlines.<br>All ESRI VC courses have to be completed in the winter semester; the final examination will take place in the semester break (January / February).  |        |
| Entry requirements:                        | short conversation with tutor (for foreign students)   |        |
| Description:                               | ESRI VC web courses chosen from ESRI Training Catalog by the student at the beginning of the winter semester. Examples of available web courses: Data QC with ArcGIS: Automating Validation Using ArcGIS, Linear Referencing Using ArcGIS, Distance Analysis Using ArcGIS, Creating and Editing Metadata in ArcGIS; Creating and Integrating Data for Natural Resource Applications.                                 |        |
| Remarks:                                   | Distance learning (practical classes and theoretical studies). Student cannot choose selected web courses included in other obligatory courses (list of these courses will be announced at the beginning of the winter semester) or those chosen in GIS I (VC ESRI) course. A total number of hours specified in the Training Catalog (as "Duration") for web courses chosen by the student cannot be lower than 75. |        |

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|--|---|--------|
| WB.IG-3128-D                               | <b>Hydrology of High Mountains</b>  | 5 ECTS |
| Type of class:                             | Lecture 20 hours, seminar 20 hours, field works 10 hours  |        |
| Coordinator:                               | Joanna Pociask-Karteczka, Agnieszka Rajwa-Kuligiewicz   |        |
| Form of exam                               | writing exam – after credit with a seminar  |        |
| Student work required:                     | 20 hrs – seminar; Time of contact with the teacher – 50 hrs. ;<br>Reading of literature – 25 hrs.; Prepare for final exam – 25 hrs.<br>Preparing specific tasks – 25 hrs. ;<br>Total - 125 hrs. of student activity   |        |
| Forms and conditions for receiving credits | activity during seminar, oral presentation<br>- 66% of correct answers in writing exam<br><i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                        | none  |        |
| Description:                               | <ul style="list-style-type: none"> <li>-Geographical characteristics of catchments in high mountain areas</li> <li>-The significance of glaciers in river hydrology</li> <li>-Types of glacier, transformation of snow to ice</li> <li>-Mass balance and glacier movement, deformation of ice</li> <li>-Thermal regime of glaciers</li> <li>-Water in glaciers</li> <li>-River regimes in high mountains in different climatic zones</li> <li>-Floods and droughts in high mountain catchments</li> <li>-Water and human kind in the high mountains catchments</li> <li>-Headwaters of the biggest rivers in the world</li> </ul> <i>Field works: postglacial landforms and hydrographic network in the Tatra Mountains</i> |        |

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| WB.IG- 5114-D                              | <b>Physical Geography of Central Europe</b>  | 3 ECTS |
| Type of class:                             | lecture, 30 hours  |        |
| Coordinator:                               | Anita Bokwa  |        |
| Student work required:                     | Contact hours with the teacher– 35h ; Literature reading – 30h;<br>Study before examination – 20h;<br>Total: 85 hours  |        |
| Forms and conditions for receiving credits | Written test during the examming session. <i>Further conditions may be established by the lecturer.</i>  |        |
| Entry requirements:                        | none   |        |
| Description:                               | <p>The course is organised only for foreign students coming to the Jagiellonian University within international exchange programmes (e.g. Erasmus+).</p> <p>Content: The concept of Central Europe in historical, political and geographical perspective. Geology and geomorphological units of Central Europe. The role of orogeneses and glaciations in the formation of the present landscape of the region. Mineral resources. Soils and vegetation of Central Europe. Water balance, ground waters and mineral waters of Central Europe. Main factors controlling the climate of Central Europe, climate diversity of the region. Extreme climatic and hydrological phenomena. National and international systems of nature protection. The significance of the natural environment of Central Europe for the economical development of the region.</p> |        |

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| WB.IG- 5817-D                              | <b>Socio-Economic Problems of the Małopolska Region</b>  | 2 ECTS |
| Type of class:                             | Lecture, 15 hours  |        |
| Coordinator:                               | Andrzej Zborowski  |        |
| Zaliczenie:                                | Written exam   |        |
| Student work required:                     | Contact” hours with teacher – 15 h<br>Readings – 25 h<br>Preparation for the exam – 20 h<br>Total: 60 h  |        |
| Forms and conditions for receiving credits | Written exam   |        |
| Entry requirements:                        | none   |        |
| Description:                               | Region’s location. Geographic environment and forms of its protection. Short history of Małopolska. Basic structures and socio-economic issues. Settlement system and its features with transportation network of Małopolska. Basic functions of region: agriculture, industry, water management, tourism. |        |

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|--|--|--------|
| WB.IG-5116-D                               | <b>The Baltic Sea Region – Nature and Man</b>  | 3 ECTS |
| Type of class:                             | Lecture 15 hours, seminar 15 hours   |        |
| Coordinator:                               | Jarosław Działek   |        |
| Zaliczenie:                                | exam   |        |
| Student work required:                     | Time of contact with the teacher – 30 hrs.<br>Reading of literature – 20 hrs.<br>Prepare for final exam – 15 hrs.<br>Total - 65 hrs. of student activity   |        |
| Forms and conditions for receiving credits | Examination: final written exam. <i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                        | none   |        |
| Description:                               | Physical geography of the Baltic. Life in the Baltic. Eutrofication of the Baltic Sea. Industrial emissions and toxic pollutants. The environmental impact of pollutants. Environmental policy and cooperation in the Baltic Region. The prospect of sustainable society. Local and regional development. Nations and religions in the Region. |        |

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| WG.IG-6219-D                | <b>Information Communication Technology in Science Education</b>  | 5 ECTS |
| Typ zajęć:                  | direct contact with teacher: 60 h (conversational lecture – 22 h, field workshop – 10 h, laboratory class – 14 h, visiting VIII International Academic High School – 14 h)  |        |
| Koordynator:                | Małgorzata Pietrzak   |        |
| Zaliczenie:                 | Form of credit: transmedia project<br>Permission for exam: active participation in class, positive mark from e-portfolio.   |        |
| Bilans punktów ECTS:        | direct contact with teacher: 60 h<br>student's independent work:<br>blended-learning: 10 h; on-line team-working: 5; project preparation: 15 h<br>3 podcasts from fieldwork 30 h; 3 lessons scenario 30 h SUM: 150 h of student work  |        |
| Forma i warunki zaliczenia: | Training effects evaluation methods: e-portfolio, learning snapshots, webquesting, reports, transmedia project participation (student has to be a prosumer).<br>All reading assignments and e-portfolio are to be completed before the class meeting for which they are assigned.<br>All writing assignments (learning snapshots, webquesting, reports from school) are to be completed on the class meeting.<br>Transmedia project must be submitted or presented on or before the due date.<br>To receive a credit for this course a student have to achieve a level of 70% for required knowledge and skills and a level of 100% for personal and social skills  |        |
| Wymagania wstępne:          | Teaching skills   |        |
| Pełny opis:                 | The purpose of the course is to prepare students to effectively teach post-secondary science. Course <i>Transmedia in Science Education</i> combines field practice, laboratory experiments, creative techniques and ICT techniques in a student-created film narrative. Course prepare students for integrated nature science teaching at the secondary level. Students of geography, and especially future teachers, need to simultaneously acquire skills in field observation, laboratory analysis, literature search, conducting questionnaire surveys, or analysis of digital data in various formats. Holistic perception of any phenomena and the use of various sources of information are a starting point for implementing transmedia in geography education. Using a range of media devices, transmedia present organized content and can thus be treated as an education strategy. The course consists in transmedia storytelling representing the main cognitive theme. The main plot, (the narrative), is structured around the observation of urban landscape of Krakow, located in the valley of the Vistula River, on horst hills, an upland and foothills. A non-linear multiplatform narrative consists of seven interrelated non-hierarchical plots while the relations between the plots form the 'tissue' of the film. Students will independently choose to watch particular plots and add new parts of the film (create prequels and sequels). Application of transmedia in education requires critical thinking about modern media and current technologies and teaches the skill of using the media both as a recipient and a creator ( <i>prosumer</i> ). Such approach inherently involves co-operation, involvement as well as creation and sharing of ideas and communication on social networking services. |        |

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| WG.IG-E-GP-526                             | <b>Transport and Land Use</b>   | 6 ECTS |
| Type of class:                             | Lectures – 30 h, Seminar/Laboratory – 30h, Field seminar – 10h  |        |
| Coordinator:                               | Piotr Trzepacz  |        |
| Form of exam:                              | Written test – examines knowledge, skills and personal and social competences   |        |
| Student work required:                     | Attending lectures – 30h<br>Attending seminar/laboratory – 30h<br>Attending field seminar – 10h<br>e-learning – 30h<br>reading – 30h<br>Essay elaboration – 20h<br>Preparation to exam – 20h<br>Total: 170h   |        |
| Forms and conditions for receiving credits | Exam: Written test.<br>Conditions of admission to the exam: completion and positive marks for all tasks, verified attendance at lectures, seminars and field seminar<br>Lecture: obligatory attendance<br>Seminar/laboratory: obligatory attendance, presentation of a chosen topic, individual tasks, group project<br>Field seminar: obligatory attendance, active participation in a discussion<br>Final note is the result of 4 areas of evaluation: <ul style="list-style-type: none"> <li>• tasks completion – 0-25 points</li> <li>• essay – 0-25 points</li> <li>• exam – 0-25 points - positive mark is mandatory to complete the course</li> <li>• group project – 0-25 points</li> </ul> |        |
| Entry requirements:                        | none  |        |
| Description:                               | Transport research and practice. Review of transport research methods. Transport infrastructure in the environment and socio-economic space. Transport infrastructure location patterns. Legal limitations towards transport infrastructure location. Planning transport infrastructure in different spatial planning systems. Spatial organization of transport on different spatial scales (global, regional, local). Transport impact on land use changes and urban development. Transport as metropolitan function. Critical infrastructure.  |        |

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| WG.IG-3124-D                               | <b>Principles of Glaciology</b>  | 3 ECTS |
| Type of class:                             | 14 hrs. lectures, 6 hrs. seminars, 10 hrs. field works in the Tatra Mts.   |        |
| Coordinator:                               | Joanna Pociask-Karteczka, Piotr Kłapyta  |        |
| Form of exam:                              | Writing exam, after credit with a field works in the Tatra Mts.  |        |
| Student work required:                     | Time of contact with the teacher – 30 hrs.<br>Reading of literature – 20 hrs.<br>Prepare for final exam – 15 hrs.<br>Preparing specific tasks – 10 hrs.<br>Total - 75 hrs. of student activity   |        |
| Forms and conditions for receiving credits | A final test – after credit with a field works in the Tatra Mts.<br>For obtaining a good minimum evaluation (3,0) 60% of knowledge and skills is required and demonstration of 100% of assumed social and interpersonal competences.   |        |
| Entry requirements:                        | none   |        |
| Description:                               | Types of glacier, geography of glaciers, mass balance, transformation of snow to ice, structure of ice, physical properties of ice, deformation of ice, importance of temperature to glacier characteristics controls on glacier temperature thermal regime and spatial variations in temperature, water in glaciers, glacier motion, mechanisms of movement, factors controlling movement, surges, glaciers and human activity.<br>Field works: glacial morphology in the Tatra Mountains |        |

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| WG.IG- 5861-D                              | <b>Knowledge based economy and information society from local and regional perspective</b>   | 3 ECTS |
| Type of class:                             | Ćwiczenia terenowe, 4h, Konwersatorium 8h, Wykład 8h   |        |
| Coordinator:                               | Grzegorz Micek   |        |
| Form of exam:                              | written exam   |        |
| Student work required:                     | 8 hours lecture, 8 hours - seminar, 4 hours - field trip<br>Time of contact with the teacher – 20 hrs.<br>Preparing a presentation – 25 hrs.<br>Prepare for final exam – 20 hrs.<br>Preparing specific tasks – 10 hrs.<br>Total - 75 hrs. of student activity  |        |
| Forms and conditions for receiving credits | Completion requirements - five pillars: case study presentations; reading of assigned material; participation in discussion; field study visits, written exam  |        |
| Entry requirements:                        | none   |        |
| Description:                               | <p>Contents outline:</p> <ol style="list-style-type: none"> <li>1. Terminology (knowledge-based economy, digital economy, e-economy; information society, digital society) – lecture</li> <li>2. Spatiality in the information society - the death of distance? Discussion</li> <li>3. Information technologies and the “new economy” debate – lecture</li> <li>4. Geographies of Internet and electronic commerce – lecture + case studies of companies and projects</li> <li>5. Changing nature of work and skills in the E-economy (telework) – lecture</li> <li>6. Paradox of a double-edged geography – local ecosystems of the global digital economy – lecture</li> <li>7. Peripheral regions and the ‘Digital Divide’ – case study presentations + discussion</li> <li>8. Regional innovation systems – the Polish response to the lack of innovativeness and to the digital divide? Lecture</li> <li>9. Analysis of regional innovation systems and strategies in Poland – case study presentations + discussion</li> <li>10. Local and regional projects of development of information society in Poland (e-school, e-government, e-health, e-museum etc.) – case study presentations + discussion</li> <li>11. Field study visits: Local and regional response to the ‘Digital Divide’</li> </ol> |        |

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| WB.IG-5113-D                               | <b>Socio-Economic Geography of Central Europe</b>   | 3 ECTS |
| Type of class:                             | Wykład, 30 godzin   |        |
| Coordinator:                               | Piotr Trzepacz  |        |
| Form of exam:                              | exam  |        |
| Student work required:                     | Contact hours – 16h<br>Literature reading – 30h<br>Study before examination – 24h<br>Total 70h  |        |
| Forms and conditions for receiving credits | Written exam. <i>Further conditions may be established by the lecturer.</i>   |        |
| Entry requirements:                        | none  |        |
| Description:                               | Central Europe – identification problems. Political borders changes as factor organizing socio-economic space. Demographic processes in Central Europe. Migrants in Central Europe. National and ethnic minorities in Central Europe. Conditions of socioeconomic development. Central Europe as electoral space. Central Europe after two decades of transition. Central European countries and the European Union enlargement. Transborder cooperation. |        |

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