**Course title**  
Contemporary Challenges of Human Geography

**Studies**

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**Teaching staff:** prof. UG, dr hab. Mariusz Czepczyński

Lecture: 15 hours  
ECTS credits: 2

**Aims of education**
To know basic trends and inclinations in contemporary human geography  
To know current methods in qualitative and quantitative geographical studies  
To understand basic relations between space and humans in multiple contexts  
To become familiar with major challenges of geographical differentiations, interpretations and discourses

**Course contents**
- Defining and re-defining human geography  
- Methodological approaches in contemporary human geography  
- Geography of globalisation and territorialisation  
- Geography of leisure and pleasure  
- Moral geographies and spatial justness  
- New urban geographies  
- Relational geography  
- Geography of happiness  
- Geographical discourses of identities  
- Geography of imagination

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**Course title**  
Cultural landscape

**Studies**

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**Teaching staff:** prof. UG, dr hab. Mariusz Czepczyński

Lecture: 15 hours  
Students case study projects: 15 hours  
ECTS credits: 2

**Aims of education**
To know basic trends and inclinations in contemporary human geography  
To know current methods in qualitative and quantitative geographical studies  
To understand basic relations between space and humans in multiple contexts  
To become familiar with major challenges of geographical differentiations, interpretations and discourses

**Course contents**
- Defining landscapes  
- Landscape studies in geography  
- Culture and landscape  
- Theories of representations  
- Landscapes as text and icons  
- Everyday experiences of landscapes
• Landscapes and identities
• Media and landscapes
• Power and sacrum in landscape
• Heritage and memory
• Temporality of landscapes

Course title
Geography of places

Studies

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Teaching staff: prof. UG, dr hab. Mariusz Czepczyński

Lecture: 15 hours ECTS credits: 2

Aims of education
To know basic concepts and theories of historic and contemporary place study
To know cultural-spatial research and place interpretation methodologies
To understand the cultural relativities of places and their interpretations
To be able to analyse place in its multiple and discursive contexts

Course contents
• Place and space discourse,
• Ontology of place
• Sense of place;
• Placelessness
• Place and behaviour
• Topophilia and spirit of place
• Placemaking and imagined places
• Places of histories and memories
• Place and identity;
• Politics of places

Course title
Global climate change - Impact and adaptation

Studies

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Teaching staff: dr Janusz Filipiak

Lecture: 15 hours ECTS credits: 2
**Aims of education**
To reach a knowledge on the impact of climate change, human interference with the climate system and fundamental methods of adaptation to and mitigation of climate change.

**Course contents**
Definition of: impact, adaptation, vulnerability, mitigation and sustainable development in the context of climate change. Assessment of observed changes and responses and interactions between ecosystems and human activities in selected natural and managed systems: Oceans, Coastal systems, Freshwater resources, Terrestrial systems. Human settlements, industry and infrastructure: urban and rural processes and planning. Key economic sectors and services: transportation, energy, agriculture and food production, water, tourism and recreation, insurance. Human health and its sensitivity to climate change. Adaptation needs and options, planning and implementation. Institutional and financial arrangements: UN system, public sector, private sector. Selected regional and national case studies and strategies – National Adaptation Plans and National Adaptation and Mitigation Actions.

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**Course title**
**Global climate change – Physics of the process**

**Studies**

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**Teaching staff:** prof. dr hab. Mirosław Miętus

Lecture: 15 hours

**ECTS credits: 2**

**Aims of education**
To reach a knowledge on the role of different factors in forming the climate of the Earth, to understand impact of natural processes in changing the climate and to learn what can be the impact of human activity on climate system.

**Course contents**
Earth’s climate system
Internal and external climate drivers
Natural greenhouse effect and the role of particular components of atmosphere
Climate variability and change and the methods of detection
Reasons of climate change
Concept of radiative forcing (RF) and global potential warming (GPW)
Observed contemporary climate change in particular climate sub-systems (atmosphere/land/sea/criosphere)
Observed contemporary climate change in global scale
Observed contemporary climate change in regional scale
Attribution of observed changes
### Course title
**Human Biometeorology**

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**Teaching staff:** dr Małgorzata Owczarek

**Lecture:** 15 hours  
**ECTS credits:** 2

**Aims of education**
- to explain basic terms related with meteorology relevant to human organism  
- to describe terms related with health effects of meteorological patterns  
- to explain the principles of heat exchange between human organism and environment  
- to collect and clarify various methods of assessment of biometeorological conditions  
- to be aware of hazards related to weather, climate and climate change

**Course contents**
- place of biometeorology among the other sciences  
- some examples of sources of information relating to biometeorology  
- health effects of different patterns: solar radiation, air pressure, air movement, noise, air pollution, pollen  
- the heat exchange between the human body and the thermal environment  
- selected models of human heat exchange, application of the MENEX model  
- calculating and application of selected basic biometeorological indices (such as Hill’s cooling power, Effective temperatures, Humidex, WCI, WBGT)  
- calculating and application of selected bio-thermal indices (such as: PMV, PET, PhS, PST, HSI, UTCI)  
- direct and indirect health effects of weather and climate patterns  
- the health effects of severe weather events (such as: heat waves, frosts, heavy rainfall)  
- the impact of climate change impact on human life

### Course title
**New Cultural Geography**

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**Teaching staff:** prof. UG, dr hab. Mariusz Czepczyński

**Lecture:** 15 hours  
**ECTS credits:** 2

**Aims of education**
To know basic concepts and theories of contemporary cultural geography  
To know cultural-spatial research and interpretation methods  
To understand basic relations between space and culture in multiple contexts  
To become familiar with cultural geographical problems and discourses  
To understand the cultural relativities of space and its interpretations

**Course contents**
- Defining and re-defining culture: from ethnography to cultural studies  
- Methodologies and schools in cultural geographies  
- Cultural turn – towards ‘new’ cultural geography
Course title
Political geography

Studies

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Teaching staff: prof. UG, dr hab. Jan A. Wendt; prof. visit. dr Alexandru Ilieş

Lecture: 15 hours  
Practical classes: 15 hours  

ECTS credits: 3

Aims of education
To reach a knowledge on the role of different factors in forming modern state, border and political and geographical relation in modern world. Understanding of influence social, economical and environmental factors in policy of modern multicultural society. To reach a knowledge on trans-border and euro-regional cooperation. Understanding the increasing role of classical conflicts at politics and society. To reach a knowledge on the role of gender and geopolitics in modern world (focus on Eastern and Central Europe).

Course contents
A. Lecture:
A. 1. Political geography, geopolitics and modern world.
A. 2-3. The basic theories and concepts in political geography.
A. 6. Internal and external factors of politics.
A. 7-8. Human rights, role and position of minorities (case study: Hungary, Poland, Slovakia and Romania).
A. 9. Trans border and euro-regional cooperation (case study: Hungarian-Romanian border; Polish-Russian border).
A. 10. Disparities and increasing role of feminism (case study: women position – chosen Islamic country).
A. 13. Classical conflicts (wars) of land and border XX -century (case study: Israel – Palestine; Bosnia and Herzegovina).
A. 15. The future of European Union: between regionalism and national state.

B. Classes:
B. 4-6. Geographic aspects of minorities at Central Europe. Role and importance of minorities. National and


B. 10-12. Conflicts in XXI century – factors, facts, results. Right to have an independent state (Tibet, Chechnya, Kosovo, Cataluña, Scotland, South Sudan). Geographic determinations of modern conflicts (e.g. Egypt, Libya, Tunisia, Syria, Iraq, Caliphate in Iraq and Syria, Kurdistan, Mali, Ukraine and Crimea, others – depends on students decision.


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**Course title**

**Pollution of lakes – A Paleoenvironmental Perspective**

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**Teaching staff:** prof. UG, dr hab. Wojciech Tylmann

Lecture: 15 hours  
ECTS credits: 2

**Aims of education**

The overall goals of this course are to: (1) provide students with an introduction to the concepts and techniques useful for studying the nature of past environmental change; (2) present the possibilities of using lake sediments to reconstruct pollution changes at different time scales; (3) highlight the role of interdisciplinary research in understanding environmental change in the past. The course has been designed to give opportunity for discussion on particular case studies.

**Course contents**

**Module 1: Sediments – a memory of lake ecosystems**
1. Introduction to the course (1 hour).
2. Lake sediments as environmental archives (2 hours).
3. Geochronological clock in lake sediments (2 hours).

**Module 2: Methods of reconstructions – a paleolimnological toolkit**
4. Environmental proxy data in sediments and their interpretation (2 hours).
5. Calibration of proxy data – toward quantitative reconstructions (2 hours).

**Module 3: Case studies – pollution-related problems investigated using paleolimnological approach**
6. Eutrophication – tracking the causes and symptoms of land-use change and over-fertilization (2 hours).
7. Acidification – inferring the consequences of industrial pollution and acidic precipitation (2 hours).
8. Heavy metals and persistent organic pollutants – history of environmental pollution (2 hours).
### Course title
**Renewable energy**

#### Studies
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**Teaching staff:** prof. dr hab. Mirosław Miętus, dr Miroslawa Malinowska

Lecture: 15 hours

**ECTS credits:** 2

#### Aims of education
To reach a knowledge on natural resources of climate and natural environment which might be use for energy production. And to learn what kind of limitations and well as benefits are connected with using energy from renewable resources. To learn what are the perspectives for renewable energy resources in Poland.

#### Course contents
- Introduction – Why renewable energy resources are so important in contemporary world
- Solar energy
- Wind energy
- Hydropower and ocean energy
- Geothermal energy
- Bioenergy
- Renewable energy in the context of sustainable development (with special regard in Poland)

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### Course title
**Statistics in Physical Geography**

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**Teaching staff:** dr Michał Marosz

Lecture: 15 hours  
Class: 30 hours

**ECTS credits:** 4

#### Aims of education
The course participants shall acquire knowledge concerning: using basis statistical methods in physical geography, the choice of proper statistical methods depending on the data type, the ability of interpretation of statistical data and the results of statistical procedures. Also, they will gain the ability to use R programming in the solution of statistical problems.
Course contents
A. Lectures
A.1. Statistical research – theoretical principles
A.2. Presentation of outcomes
A.3. Statistical series
A.4. Analysis of the population structure
A.5. Mean and dispersion measures (classical and quantile-based)
A.6. Correlation analysis
A.7. Regression models
A.8. Time series analysis – trend, dynamics indices, seasonal variations
B. Classes
B.1. Basic statistical measures, data presentation techniques
B.2. Correlation and regression analysis
B.3. Time series analysis
B.4. Introduction to probability

Course title
Synoptic Climatology - applications

Studies

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Teaching staff: dr Michał Marosz

ECTS credits: 3

Aims of education
The course participants shall know the basics of atmospheric processes occurring in synoptic scale. Also, they shall acquire abilities in the Synoptic Climatology methodology – atmospheric circulation typologies and the means to investigate the relations between atmospheric circulation and environment characteristics. Acquiring basic skills in R programming and the utilisation of CPT (Climate Predictability Tool) software.

Course contents
A. Lectures
A.1 Synoptic climatology – theoretical background
A.2 Atmosphere Dynamics – wind principles
A.3 General circulation of the atmosphere, Air masses, Synoptic features of SLP field
A.4 Mid-latitude cyclones development
A.5 Classification techniques, examples of existing classifications (manual, hybrid)
A.6 Case study of Synoptic Climatology application
B. Classes
B.1 Geostrophic wind
B.2 SLP features in synoptic scale, geostrophic flow
B.3 Computer assisted classifications
B.4 Investigation of the relations atmospheric circulation vs. environment – selected applications
**Course title**

**Tourism at Central and Eastern Europe**

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**Teaching staff:** prof. UG, dr hab. Jan A. Wendt; prof. visit. dr Alexandru Ilies

Lecture: 15 hours

**ECTS credits:** 2

**Aims of education**

Understanding the basic factors of tourism development. Developing skills to create plans for excursions. Major environmental and anthropogenic values of Central and Eastern Europe Regions. Indication of the impact of tourism on the environment and man.

**Course contents**

- The basic theories and concepts in tourism geography
- Internal and external factors of developing tourism
- Natural and anthropogenic values in tourism geography
- Tourists infrastructure in Central and Eastern Europe
- Tourism geography of Central Europe (Poland, Hungary, Slovakia, Czech Republic)
- Tourism geography of Baltic countries
- Tourism geography of former Soviet Union countries (Belarus, Ukraine)
- Tourism geography of Romania, Moldova and Bulgaria
- Tourism geography of former Yugoslavian countries and Albania (EU members and non EU members)
- Tourism geography of Russia
- The impact of tourism on the environment, economy and society