KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Renewable energy	7.1.0518

Name of unit administrating study

Faculty of Oceanography and Geography

Studies

faculty	field of study		
Faculty of Oceanography and Geography	Water Management and Protection of Water Resources, Socio-economic geography with elements of GIS	type	all
		form	all
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Geography	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Geology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Spatial Management	type	first tier studies (BA), second tier studies (MA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Oceanography	type	first tier studies (BA), second tier studies (MA)
		form	full-time
		specialty	all
		specialization	all

Teaching staff

dr Mirosława Malinowska; prof. dr hab. Mirosław Miętus

Forms of classes, the realization and number of hours

Forms of classes

Wykład (to translate)

The realization of activities

lectures in the classroom

Number of hours

Wykład (to translate): 15 hours

ECTS credits

2
Lectures requiring the direct participation of the professor, ETCS credits – 1
-participation in the lecture – 15h
-participation in the exam – 1h
-consultation – 3h
Total number of hours - 19, ETCS credits – 1

-reading advised literature to follow the lecture's stream – 10
-preparatory to exam – 21
Total number of hours - 31, ETCS credits – 1

2021/2022 summer semester

Type of course

elective (to translate)

Language of instruction

english

Teaching methods

Wykład problemowy (to translate)

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

Egzamin (to translate)

Assessment methods

egzamin pisemny z pytaniami (zadaniami) otwartymi (to translate)

The basic criteria for evaluation

Gaining over 50% of points during the final test
The basic criteria for evaluation
According to the score of exam
0–50% – ndst
> 50–60% – dst
> 60–70% – dst+
> 70–80% – db
> 80–90% – db+
> 90–100 – bdb

Sposób weryfikacji założonych efektów kształcenia (DO TŁUMACZENIA)

Required courses and introductory requirements

A. Formal requirements
Background knowledge on meteorology and climatology

B. Prerequisites
Practical skill in physics and mathematic

Aims of education

Gaining knowledge on natural sources which might be used for energy production. Also, learning what kind of limitations and well as benefits are connected with using energy from renewable sources. Learning what the perspectives for renewable energy sources in Poland are. Gaining knowledge about the role of renevables in sustainable developmenta and in protection of ecosystems.

Course contents

Course contents
A1. Introduction – Why renewable energy sources are so important in contemporary world
A2. Solar energy
A3. Wind energy
A4. Hydropower and ocean energy
A5. Geothermal energy
A6. Bioenergy
A7. Renewable energy in the context of sustainable development (with special regard in Poland)

Bibliography of literature

Bibliography of literature
Climate Change 2001 – The Physical Science Basis: Working Group I Contribution to the Third Assessment Report of the Intergovernmental Panel on Climate Change.
Tremberth K., Physics of the climate.
Riso Research Center, European Wind Atlas.
World Wind Energy Association Bulletin.
US Dept. of Energy., History of hydropower
Renewable energy sources and climate change mitigation. Summary for policymakers and technical summary. Special report of the IPCC, 2011.
Renewables 2013. Global Status Report. REN21 Renewable Energy Policy Network for the 21st Century.
Energy [r]evolution. A sustainable Poland energy outlook. Report 2013. Poland energy scenario (http://www.greenpeace.org/poland/PageFiles/559373/GPI_Energy_Revolution_for_Poland.pdf).

Gospodarka przestrzenna II st. /Spatial management, MSc , K_W02, P7U_W, P7S_WG
Gospodarka przestrzenna I st.,/ Spatial management, BA, K_W03, P6U_W, P6S_WG
Geografia I st., /Geography BA, K_W06, P6U_W, P6S_WG , P6S_WK
Geografia fizyczna z geoinformacją, II st.,/ Physical geography and geoinformation Msc, K_W08, P7U_W, P7S_WK -
Geografia społeczno-ekonomiczna z elementami GIS, II st., /Socio-economic geography with elements of GIS, MSc, K_W06, P7S_WK
Oceanografia II st., /Oceanography MSc, K_W05, P7S_WK,
Oceanografia I st., /Oceanography BA, K_W05, P6S_WK,

Knowledge

Knowledge:
W_01 - Knows and understands the natural and anthropogenic conditions of the development of renewable energy sources and their importance for sustainable development and biodiversity protection in various spatial scales, the content of study: A1-A7.

Skills

Skills
K_K1 Students have knowledge of terminology referring to renewable energy resources at the level sufficient for using specialized literature in English language.
K_K11 Students can formulate and analyse basic problems related to changes in biophysical, social, economic and environmental aspects of renewable energy resources development at local, regional and global scale.
Students can distinguish the sources of renewable energy.
Students can estimate the amount of renewable energy resources.

Gospodarka wodna i ochrona zasobów wód, I st., /Water management and water resouce protection, BA, K_W05, P6U_W, P6S_WG
Geologia, I st., /Geology, BA, K_W04, P6U_W, P6S_WG
Akwakultura biznes i technologia, I st., /Aquaculture business and technology, BA, K_W01, P6U_W, P6S_WG

Social competence

Social competence
K_K03 Students show their readiness for individual and social activities, including actions aimed at protecting ecological balance and Earth's natural resources.
Students can understand needs for using energy from renewable resources.
Students can understand needs for global cooperation in the field of climate observing and climate monitoring.

Contact

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